Appendix 2
Abbreviations and Acronyms

For

Information Management and Communications Support (IMCS)

Certain terms, acronyms, and abbreviations used in this contract are listed and defined below. This section is informational only. If and to the extent any definition contained below conflicts with any other portion of the contract, the other portion of the contract shall prevail.

45 SW	45th Space Wing
A&E	Architectural and Engineering
A/G	Air-to-Ground
aAAO	Associate Account Authorization Official
AACR2	Anglo-American Cataloguing Rules
AC	Access Control
ACA	Associate Contractor Agreement
ACL	Access Control List
AEC	Automatic Exposure Control
AER	Azimuth, Elevation, and Range
AF	Air Force
AFB	Award Fee Board
AFFARS	Air Force Federal Acquisition Regulation Supplement
AFMAN	Air Force Manual
AFMC	Air Force Material Command
AFSPC	Air Force Space Command
AMS	Acquisition Management System
ANI/ALI	Automatic Number Identification/Automatic Location Identification
ANSI	American National Standards Institute
AO	Authorizing Official
AOE	Area of Emphasis
ARC	Ames Research Center
ARF	Assembly and Refurbishment Facility
ARRI	Arriflex Camera
ARS	Administrative Radio System
ASA	American Standards Association
ASI	Asynchronous Serial Interface
ASCII	American Standard Code for Information Interchange
ASCS	Agency Security Configuration Standards
ASQ	American Society for Quality
ASQC	American Society for Quality Control
ASRS	Automated Support Requirements System
ASUS	Agency Security Update System
ATM	Asynchronous Transfer Mode
ATO	Authority To Operate
ATOTS	Advanced Transportable Optical Tracking System
ATSC	Advanced Television Systems Committee
ATV	Asset Transition Value
ATXS	ATM Transmission System
A/V	Audio/Visual
AWG	American Wire Gage

AZ	Azimuth
B/U	Back Up
BCDS	Broadband Communications Distribution System
BCI	Baseline Configuration Imaging
BICSI	Building Industry Consulting Service International
BIM	Base Interface Module
bps	Bits Per Second
BSP	Betacam Superior Play
C&A	Certification and Accreditation
C&T	Communications and Tracking
CAD	Computer Aided Design Computer Aided Drafting
CAD-RMS	Computer Aided Dispatch - Report Management System
CAM	Control and Acquisition Module
CAMS	Circuit Assignment Management System
CAS	Code Activated Switch
CASB-CMA	Cost Accounting Standards Board – Cost of Money - Facilities
CBA	Collective Bargaining Agreement
CBACS	Common Badging and Access Control System
CBT	Computer Based Training
CCAFS	Cape Canaveral Air Force Station
CCB	Configuration Control Board Change Control Board
CCC	Complex Control Center
CCD	Charged Coupled Device
CCF	Converter Compressor Facility
CCSMO	Cape Canaveral Space Management Office
CCTV	Closed-circuit television
CCU	Camera Control Unit
CD	Compact Disk
CD&SC	Central Distribution and Switching Center
CDL	Commercial Driver's License
CDR	Critical Design Review
CDVS	Combined Data/Video Switch
CEE	Collaborative Engineering Environment
CES/CEV	Civil Engineering Squadron / Environmental Flight
CFP	Customer Face Plate
CFR	Code of Federal Regulations
CIAO	Central Industry Administrative Office
CID	Configuration Identification Document
CIF	Central Instrumentation Facility
CIL	Critical Items List
CIO	Chief Information Officer
CITE	Cargo Integrated Test Equipment
CITSM	Center IT Security Manager

CLASS	Custom Local Area Signaling Service
CLIN	Contract Line Item Number
CLS	Contingency Landing Site
CM	Configuration Management
Cm	Centimeters
CM&S	Communications Maintenance and Storage
CMDS	Configuration Management Data System
CMMI	Capability Maturity Model Integration
CMR	Communications Material Review
CO	Central Office
CO	Contracting Officer
COAM	Customer Owned and Maintained
CoF	Construction of Facilities
COF	Center Operations Facility
CoFR	Certificate of Flight Readiness
COLD	Computer Output Laser Disk
COMSEC	Communications Security
CONUS	Continental United States
COOP	Continuity of Operations Plan
CORRS	CWDM Optical Remultiplexer and Regenerating System
COTR	Contracting Officer's Technical Representative
COTS	Commercial Off-the-Shelf
CP	Check Print (no color or density corrections)
CR	Change Request
CRF	Canister Rotation Facility
CSLA	Contract Service Level Agreement
CSN	Central Summing Network
CSR	Customer Service Request
CSR	Computer Sciences Raytheon
CSC	Customer Support Center
CSU	Customer Service Unit
CT	Crawler Transporter
CTC	Camera Terminal Cabinet
CTV	Compatibility Test Van
CV	Contract Value
CWDM	Course Wave Division Multiplexers
CX	Complex
CXT	Cross Connect Terminal
CY	Calendar Year
CYS	Copies
D/N	Dupe Negative
DART	Damage Assessment and Recovery Team
DART	Days Away From Work, Restricted Work Activity, and Job Transfer Rate
DBM	Milliken Camera
DCAA	Defense Contract Audit Agency

DCMA	Defense Contract Management Agency
DD	Data Depository
DEG	Degree
DFRC	Dryden Flight Research Center
DFUM	Directorate Facilities Utilization Manager
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name System
DO	Delivery Order
DOAMS	Distant Objective Attitude Measurement System
DoD	Department of Defense
DOE	Department of Energy
DOL	Day of Launch
DOL	Department of Labor
DOLILU	Day-Of-Launch Initialization Load Update
DOT	Department of Transportation
DPAS	Defense Priorities and Allocation System
dpi	Dots per Inch
DR	Disaster Recovery
DR	Data Requirement
DR	Discrepancy Report
DRA	Document Release Authorization
DRD	Data Requirement Description
DRL	Data Requirements List
DRS	Direct Radio System
DS	Digital Signal
DSL	Digital Subscriber Line
DSU	Data Service Unit
DTE	Data Transmission Equipment
DTMF	Dual Tone Multi-Frequency
DTV	Digital Television
DV	Digital Video
DVD	Digital Versatile Disc
DVR	Digital Video Recorder
DVTS	Digital Video Transmission System
ECN	Equipment Control Number
ECWG	Export Control Working Group
EDC	Engineering Data Center
EDRS	Electronic Drawing Review System
EDW	Employee Data Warehouse
EET	End-to-End Test
EI	End Instrument
EIADD	Engineering Imagery Acquisition Distribution Document
ELF	Extremely Low Frequency
ELV	Expendable Launch Vehicle
EMA	Electromagnetic Measurement and Analysis

EMC	Electromagnetic Compatibility
EMI	Electromagnetic Interference
EML	Electromagnetic Laboratory
EMS	Electronic Meeting System
ENG	Electronic News Gathering
Eng.	Engineering
EO	Engineering Order
	Executive Order
EOM	End of Mission
EP	Engineering Print (with timing)
EPA	Environmental Protection Agency
EPRT	Expected Problem Resolution Time
ER	Eastern Range
ESMD	Exploration Systems Mission Directorate
ESR	Engineering Support Request
ESS	Electronic Security Surveillance
EUT	Equipment Under Test
EWSD	Electronicious Whal System Digital
EXP	Exposure
Ext.	Extension
f/s	Frames per Second
FAA	Federal Aviation Administration
FAR	Federal Acquisition Regulation
FAST	Federal Automotive Statistical Tool
FBI	Federal Bureau of Investigations
FCA	Frequency Control and Analysis
FCO	Flight Control Officer
FDDI	Fiber Data Distribution Interface
FDO	Fee Determination Official
FEP	Front-End Processor
FICA	Federal Insurance Contributions Act
FIPS	Federal Information Processing Standard
FIRMR	Federal Information Resources Management Regulations
FISMA	Federal Information Security Management Act
FLSA	Fair Labor Standards Act
FMEA	Failure Modes and Effects Analysis
FOD	Foreign Object Debris
FOT	Fiber Optic Terminal
FOTS	Fiber Optic Transmission System
FOV	Field of View
FOWB	Fiber Optic Wideband
FP	Film Productions
FPL	Florida Power and Light
fps	Frames Per Second
FR	Frame Relay

FRC	Federal Record Center
FRR	Flight Readiness Review
FSUA	Facility Space Utilization Database
FTS	Federal Telecommunications System
FUTA/SUTA	Federal and State Unemployment Tax Act
FY	Fiscal Year
G&A	General and Administrative
GAO	General Accounting Office
GB	Gigabyte
GBL	Government Bill of Lading
Gbps	Gigabit Per Second
GCAIP	Ground Camera Ascent Imagery Project
GDC	General DataComm
GFE	Government Furnished Equipment
GFP	Government Furnished Property
GFY	Government Fiscal Year
GH2	Gaseous Hydrogen
GHz	Gigahertz
GIDEP	Government/Industry Data Exchange Program
GIS	Geographic Information System
GMIP	Government Mandatory Inspection Point
GMT	Greenwich Mean Time
GORR	Ground Operations Readiness Review
GOTS	Government off the Shelf
GOWG	Ground Operations Working Group
GPA	Group Processor Assembly
GPC	Government Purchase Card
GPO	Government Printing Office
GPS	Global Positioning System
GSA	General Services Administration
GSE	Ground Support Equipment
GSFC	Goddard Space Flight Center
GSI	Government Source Inspection
GSTDN	Ground Spaceflight Tracking and Data Network
GUI	Graphical User Interface
HASBL	Hasselblad Camera
HASBL EL	Hasselblad Camera, Electric
HD	High Definition
HDRS	High Data Rate System
HDSL	High Bit Rate Digital Subscriber Line
HDTV	High-Definition Television
He	Helium
HMA	Hypergol Maintenance Area
HMF	Hypergolic Maintenance Facility

HOSC	Huntsville Operations Support Center
HP	Hewlett Packard
HQ	Headquarters
HSB	Hypergolic Support Building
HSBLD	Hasselblad Camera
HSBLD EL	Hasselblad Camera, Electric
HTML	Hyper-Text Markup Language
HUL	Hulcher Camera
HUL DF	Hulcher Camera Double Frame
HVAC	Heating, Ventilation, and Air Conditioning
I/F	Interface
I/F	Image to Frame
I/O	Input/Output
IAF	Image Analysis Facility
IATO	Initial Authority to Operate
ICAS	Institutional Computerized Archival System
ICD	Interface Control Document
ICE	Integrated Collaborative Environment
ID/IQ	Indefinite Delivery/Indefinite Quantity
IDNX	Integrated Digital Network Exchange
IDS	Intrusion Detection System
IEEE	Institute of Electrical and Electronic Engineers
IEMP	Integrated Enterprise Management Program
IF	Intermediate Frequency
IFLOT	Intermediate Focal Length Optical Tracker
IFMP	Integrated Financial Management Program
IG	Inspector General
IGOR	Intercept Ground Optical Recorder
IMCS	Information Management and Communications Support
IMS	Inventory Management System
IN	Internegative Print
IOC	Initial Operational Capability
IOMI	Integrated Operations and Maintenance Instruction
IOP	Internal Operating Procedure
IP	Internet Protocol
IP	Interpositive Film Print
IPA	Interpositive Film Print, A-Wind
IPO	Integration Project Office
IPSEC	Internet Protocol Security
IPT	Integrated Product Team
IRIG	Inter-Range Instrumentation Group
IS	Information Security
ISBN	International Standard Book Number
ISC	Institutional Services Contract
ISDN	Integrated Switched Digital Network

ISO	International Organization for Standardization
IT	Information Technology
IT&C	Information Technology and Communications Directorate
ITAR	International Traffic in Arms Regulations
ITSM	IT Security Manager
JDMTA	Jonathan Dickinson Missile Tracking Annex
JDP	Joint Documented Procedure
JHB	Joint Handbook
JOP	Joint Operating Procedure
JOSA	Joint Operating and Support Agreement
JPL	Jet Propulsion Laboratory
JSC	Johnson Space Center
KARS	Kennedy Area Recreational Services
KAS	KSC Applications System
Kbps	Kilobit per Second
KCCS	Kennedy Complex Control System
KEDS	Kennedy Engineering Documentation System
KFRL	Kennedy Forward Return Link
KICS	KSC Integrated Console Schedule
KIIS	Kennedy Integrated Imagery System
KIS	KSC Internet System
KMAN	Kennedy Metropolitan Area Network
KNET	Kennedy Institutional Network
KNPD	Kennedy NASA Policy Directive
KNPR	Kennedy NASA Procedural Requirements
KPRD	Kennedy Program Requirements Document
KSC	Kennedy Space Center
KSCNF	KSC News Facility
KSCTV	KSC Public Affairs Television
KSERP	Kennedy System Engineering Review Panel
KTM	Kineto Tracking Mount
Ku	Ku frequency band
kW	Kilowatt
LACB	Landing Aids Control Building
LAN	Local Area Network
LaRC	Langley Research Center
LBV	Low Bandwidth Video
LC	Launch Complex
LCC	Launch Control Center Launch Commit Criteria
LCCWG	Launch Commit Criteria Working Group
LCWG	Launch Countdown Working Group
LED	Light Emitting Diode

LETF	Launch Equipment Test Facility
LOA	Launch Operations Area
LOCC	Launch Operations Control Center
LOS	Loss of Signal
LOV	Limit/Loss of View
LPLWS	Launch Pad Lightning Warning System
LPS	Launch Processing System
LRR	Launch Readiness Review
LSE	Launch Support Equipment
LSP	Launch Services Program
MAC	Move, add, or change
MAN	Metropolitan Area Network
MB	Megabyte
Mb (Mbit)	Megabit
Mbps	Megabits per Second
MDF	Main Distribution Frame
MESC	Medical and Environmental Support Contract
MHz	Megahertz
MIDDS	Meteorological Interactive Data Display System
MILA	Merritt Island Launch Area
MIP	Mandatory Inspection Point
MIS	Management Information System
ML	Mobile Launcher
MLP	Mobile Launch Platform
mm	Millimeter
MOA	Memorandum of Agreement
MOD	Mission Operations Directorate
MOPIC	Motion Picture
MOSB	Multi Operations Support Building
MOTS	Mobile Optical Tracking System
MOU	Memorandum of Understanding
MPL	Motion Picture Laboratory
MPN	Manufacturer Part Number
MPPF	Multi-Payload Processing Facility
MS	Microsoft
MSDS	Material Safety Data Sheet
MSFC	Marshall Space Flight Center
MSR	Multi-service Switch Routing
MWO	Maintenance Work Order
N/A	Not Applicable
N/R	Not Required
NAIS	NASA Acquisition Internet Services
NAMS	NASA Account Management System
NARA	National Archives and Records Administration

NASA	National Aeronautics and Space Administration
NASCOM	NASA Communications Network
NASCOP	NASA Communications Operating Procedures
NASIRC	NASA Incident Response Center
NCAD	NASA Consolidated Active Directory
NCB	Network Configuration Board
NCC	Network Control Center
NDC	NASA Data Center
NDE	Non-Destructive Evaluation
NE	Non Exempt
NEC	Negotiated Estimated Cost
NEC	National Electrical Code
NEF	NASA Electronic Forms
NEFS	NASA Electronic Forms System
NEMS	NASA Equipment Management System
NESS	NF1018 Electronic Submission System
NF	NASA Form
NFPA	National Fire Protection Association
NFS	NASA FAR Supplement
NIMS	Network Information Management System
NISN	NASA Integrated Services Network
NIST	National Institute of Standards and Technology
NITR	NASA IT Requirement
nm	Nanometer
NOMAD	NASA Operational Messaging and Directory
NORS	NASA On-line Registration System
NOSC	NASA On-line Supply Catalog
NPD	NASA Policy and Directives
NPDMS	NASA Property Disposal Management System
NPPS	NASA Payroll/Personnel System
NPR	NASA Procedural Requirements
NRZ-L	No Return Zero-Level
NSAP1	Network Services Assurance Plan1
NSAP2	Network Services Assurance Plan2
NSMS	NASA Supply Management System
NSN	National Stock Number
NSP	Network Security Perimeter
NSP-CCB	Network Security Perimeter Configuration Control Board
NSR	NISN Service Request
NSSTC	National Space Science and Technology Center
NSTS	National Space Transportation System
NTE	Not To Exceed
NTP	Network Time Protocol
NTSC	National Television Standards Committee
O&C	Operations and Checkout

O&M	Operations and Maintenance
O/E	Optical to Electrical
OASIS	Reference Model for an Open Archival Information System
OC	Optical Carrier
OCC	Operations Control Center
OCI	Operations Control Instructions
OCLC	On-Line Computer Library Center
OCSO	Organization Computer Security Official
OD	Operations Document
ODC	Other Direct Cost
ODIN	Outsourcing Desktop Initiative for NASA
OEO	Optical to Electrical to Optical
OHF	Occupational Health Facility
OIG	Office of the Inspector General
OIS	Operational Intercommunications System
OIS-D	Operational Intercommunications System Digital
OIS-Q	Operational Intercommunications System Quintron
OJT	On-the-Job Training
OMB	Office of Management and Budget
OMD	Operations and Maintenance Documentation
OMI	Operation and Maintenance Instruction
OMRSD	Operations Maintenance Requirements Specification Document
OPF	Orbiter Processing Facility
OPR	Office of Primary Responsibility
OPS	Offnet Processor Subsystem
OR	Operations Requirements
OSB	Operational Support Building
OSB2	Operational Support Building Number 2
OSCU	Optic System Control Unit
OSHA	Occupational Safety and Health Administration
OTV	Operational Television
OTV-D	Operational Television Digital
PADD	Photographic Acquisition Distribution Document
PAFB	Patrick Air Force Base
PAMIS	Printing and Microimaging Information System
PAO	Public Affairs Office
PAWS	Paging and Area Warning System
PBR	Policy Based Routing
PC	Personal Computer
PCC	Photo Control Center
PCC	Processing Control Center
PCO	Program Controlled Output
PCO	Plessy Corning Optronics
PCM	Pulse Code Modulation
PDF	Portable Document Format

PDL	Ponce DeLeon
PDS	Premise Distribution System
PHSF	Payload Hazardous Servicing Facility
PIA	Privacy Impact Analysis
PIV	Personnel Identity Verification
PM	Program Manager
PMN	Program Model Number
PMS	Performance Measurement System
POA&M	Plan of Action & Milestones
POCC	Payload Operations Control Centers
POCS	Photo Optical Control System
POP	Program Operating Plan
POTS	Plain Old Telephone Service
PPBE	Program, Planning and Budget Execution
PRCB	Program Requirements Control Board
PRD	Program Requirements Document
PRI	Primary Rate Interface
PRP	Personnel Reliability Program
PRR	Payload Readiness Review
PS	Photosonic Camera
PSAP	Public Safety Answering Point
PSCN	Program Support Communications Network
PSCRD	Program Support Communications Requirements Document
psi	Pounds Per Square Inch
PSLA	Project Service Level Agreement
PTCR	Pad Terminal Connection Room
PTP	Point-to-Point
PTZ	Pan, Tilt, Zoom
PWS	Performance Work Statement
QA	Quality Assurance
QAE	Quality Assurance Evaluator
QC	Quality Control
QMS	Quality Management System
R&D	Research and Development
R&M	Reliability and Maintainability
RAB	Registration Accreditation Board.
RADIUS	Remote Authentication Dial In User Service
RAID	Redundant Array Inexpensive Disks
RAM	Random Access Memory
RAS	Reradiating Antenna System
RCDD	Registered Communication Distribution Designer
RCP	Radio Control Panel
RCRA	Resource Conservation and Recovery Act
RCU	Remote Control Unit

REV	Revision
RF	Radio Frequency
RFI	Radio Frequency Interference
RFIC	Request For Information/Clarification
RFID	Radio Frequency Identification
RFP	Request For Proposal
RFQ	Request for Quotation
RFS	Request for Service
RMAS	Remote Monitoring and Alarm System
RMS	Report Management System
ROCC	Range Operations Control Center
ROI	Range Operating Instruction
ROM	Read-Only Memory
ROM	Rough Order of Magnitude
RPS	Record and Playback Subsystem
RPSF	Rotation, Processing and Surge Facility
RRB	Risk Review Board
RS	Recommended Standard
RSA	Records Staging Area
RSU	Remote Service Unit
RTLS	Return To Launch Site
RTU	Remote Terminal Unit
RX	Receiver
S&MA	Safety and Mission Assurance
S/W	Software
SAA	System Assurance Analysis
SAN	Storage Area Network
SATERN	System for Administration, Training, and Educational Resources for NASA
SBIR	Small Business Innovative Research
SBU	Sensitive But Unclassified
SCA	Service Contract Act
SCADA	Supervisory Control And Data Acquisition
SCAPE	Self-Contained Atmospheric Protective Ensemble
SCD	Scheduled Completion Date
SD	Standard Definition
SDI	Serial Data Interface
SDLC	System Development Life Cycle
SDTI	Serial Digital Transport Interface
SE	Sustaining Engineering
SEI	Software Engineering Institute
SE&I	System Engineering and Integration
SEWP	Solutions for Enterprise-wide Procurement
SF	Standard Form
SLF	Shuttle Landing Facility
SLSL	Space Life Sciences Lab

SNMP	Simple Network Management Protocol
SOLAR	Site for On-line and Learning Resources
SONET	Synchronous Optical Network
SOP	Standard Operating Procedure
SOW	Statement of Work
SP	Special Publications
SPA	Shuttle Processing Area
SPECSINTACT	Specifications-Kept-Intact
SPOC	Space Processing Operations Contract
SR	Service Request
SR	South Repeater
SR&QA	Safety, Reliability, and Quality Assurance
SRAS	Secure Remote Access Services
SRB	Solid Rocket Booster
SSC	Stennis Space Center
SSL	Secure Sockets Layer
SSME	Space Shuttle Main Engine
SSPF	Space Station Processing Facility
STD.	Standard
STDN	Spaceflight Tracking and Data Network
STI	Scientific and Technical Information
STS	Space Transportation System
S-VHS	Super Video Home System
TAL	Transoceanic Abort Landing
TB	Test Board
TBD	To Be Determined
TC	Technical Control
TCC	Television Control Center
TCDT	Terminal Count Demonstration Test
TCIR	Total Case Incident Rate
TCRS	Training and Certification Record System
TCS	Transportable Communication System
TIFF/.tif	Tag Image File Format
TIM	Technical Interchange Meeting
TO	Technical Order
TO	Task Order
TPS	Thermal Protection System
TSR	Telephone Service Request
TT	Trouble Ticket
TTC	Telephone Terminal Cabinet
TTC	Temporary Test Configuration
TV	Television
TX	Transmitter
U.S.C.	United States Code

UHF	Ultra-High Frequency
um	Micrometer
UPS	Uninterruptible Power Supply
UPS	United Parcel Service
USB	Unified S-Band
UTC	Universal Time Code
VAA	Vehicle Assembly Area
VAB	Vehicle Assembly Building
VABR	Vertical Assembly Building Repeater
VAFB	Vandenberg Air Force Base
VASS	ViTS Automated Scheduling System
VAX	Virtual Address Extension
VCR	Video Cassette Recorder
VDL	VHF Data Link
VDMS	Voice Distribution Management System
VHF	Very High Frequency
VIP	Very Important Person
VITC	Video Teleconference
ViTS	Video Teleconferencing System
VLAN	Virtual Local Area Network
VoIP (VOIP)	Voice Over Internet Protocol
VoTS	Voice Teleconferencing System
VPF	Vertical Processing Facility
VPN	Virtual Private Network
VPP	Voluntary Protection Program
WAN	Wide Area Network
WBS	Work Breakdown Structure
WBTS	Wideband Transmission System
WDM	Wavelength Division Multiplexer
WebTADS	Web Time and Attendance Distribution System
WFF	Wallops Flight Facility
WINS	Windows Internet Naming Service
WLI	Workload Indicator
WR	Western Range
WSC	White Sands Complex
WUC	Work Unit Code
WYE	Work Year Equivalent

Appendix 3
Definitions

For

Information Management and Communications Services (IMCS)

45th Space Wing (45 SW) – The Air Force's 45 SW is the DoD executive agent and single manager of Range facilities at Cape Canaveral Air Force Station, Patrick Air Force Base, and downrange stations. The 45 SW's mission is to develop, operate and manage Eastern Range facilities and, as host agency, provide support services to all launch/user activities.

Acceptance Testing – The testing of a system, subsystem, assembly or subassembly in an operating environment, to ensure that the performance of the aggregate is not compromised by the integration of the newly developed or modified asset.

Accreditation – The official management decision given by a senior agency official to authorize operation of an information system and to explicitly accept the risk to agency operations (including mission, functions, image, or reputation), agency assets, or individuals, based on the implementation of an agreed-upon set of criteria.

Availability – The percentage of a scheduled service delivered to the user. Availability is measured as: 100 ∗ (number of scheduled service time in a reporting period – the time the scheduled service was not provided during a reporting period) / (number of scheduled minutes in a reporting period). This equals the percentage of scheduled service delivered to the user during a reporting period.

Cape Canaveral Air Force Station (CCAFS) – The geographic area of the Station encompasses approximately 24.7 square miles (15,804 acres) and is located on the Atlantic Coast between Port Canaveral, Florida and the National Aeronautics and Space Administration (NASA), Kennedy Space Center (KSC). It includes Air Force, NASA, NOTU, and other tenants/customers.

Certification – The process of determining and attesting to a required level of value, performance and readiness.

Charging Rule Set – Instructions and guidelines for the contractor to help in assigning the correct customer fund source to the work being performed.

Commercial Off the Shelf (COTS) Software – Software that is commercially available and maintained by a vendor. Custom software maintained by the Government or the contractor is not COTS software.

Configuration Control – The discipline of processing changes to the configuration baseline to ensure that the changes are adequately described, assessed, approved by a proper authority, and closed upon verification of implementation.

Configuration Control Board (CCB) – A functional body whose chairperson is solely responsible for the approval or disapproval of configuration changes within the limits of the Board's authority.

Configuration Management Data System (CMDS) – A KSC centralized computer data system for maintaining the design configuration identification and change tracking for ground support facilities, systems, and equipment end-items.

Contracting Officer (CO) – The individual appointed by the contracting activity for procuring and/or administering a contract. The CO is the only person authorized to direct contractor performance, execute amendments to the contract, and contractually obligate the Government.

Contracting Officer Technical Representative (COTR) – A Government official who has been appointed by the Contracting Officer (CO) who has the responsibility in managing the technical aspects of the contract and monitor the contractor's technical performance and delivery of the final products and/or services. Pursuant to NFS 1842.270, the COTR is not authorized to initiate procurement actions or in any way that cause a change to the contract or increase the Government's financial obligations. The CO is the only Government official authorized to direct contractor performance, execute modifications to the contract, and contractually obligate the Government.

Contract Specialist – The individual within the contracting office, who performs the day-to-day administration of the contract. The contract specialist may also be the CO.

Coordination – This definition contains typical functions associated with the interaction with the internal and external service providers, other contractors, and the customer as necessary to meet customer service requirements. These functions include:

a) Supporting the development of customer requirements.

b) Providing service status.

c) Obtaining customer feedback.

d) Providing consultation for reporting and resolving service problems.

e) Operations coordination (e.g., airspace interference, radio-frequency interference).

f) Interagency coordination.

Contractor – The term "contractor" as used herein refers to both the prime contractor and any subcontractors. The prime contractor has a contract with the Government directly. The prime shall ensure that subcontractors comply with the provision of this contract.

Corrective Action – Action taken to correct or prevent the recurrence of a nonconformance.

Countdown (Range Users) – The detailed Range User countdown is prepared by the Range User to supplement the general countdown in the Operation Requirements (OR). The countdown is used by support personnel during the operation.

Critical Item – A Category 1, 1S, or 2 single failure point (See NSTS 22206).

Critical Items List (CIL) – A listing comprised of all critical items, meeting the requirements of NSTS 22206, identified as a result of performing the Failure Modes and Effects Analysis (FMEA).

Criticality Level 1S – A single failure in a safety or hazard monitoring system that could cause the system to fail to detect, combat, or operate when needed during the existence of a hazardous condition and could result in loss of life or flight hardware.

Customer – Anyone who receives a service or product from this contract.

Customer Fund Source – A unique category of funding associated with a specific customer.

Customer Owned And Maintained (COAM) – A system or application built, operated, maintained, and/or managed by a KSC Government or contractor organization, outside of the IMCS contract.

Customer Managed Network – A computer network built, operated, maintained, and/or managed by a KSC Government or contractor organization, outside of the existing KNET institutional network system.

Damage Assessment and Recovery Team (DART) – A team of personnel called in to assist the Hurricane Ride-Out Team and continue the recovery effort, bring up infrastructure, establish operations, and open KSC/CCAFS after a hurricane has passed. The team consists of personnel with trades and skills necessary to restore the infrastructure, relieve existing Ride-Out Team, perform damage assessment, and sustain the recovery effort. It also includes managers of critical facilities or high-value mission critical equipment necessary for immediate operations.

Data Center – A central facility that contains a number of computers that host IT applications. Typically, this type of facility has redundant power, air conditioning, and network connections. At KSC, the data center currently only has limited redundancy.

Data Requirement Description – A detailed description of a required data item including purpose, content, format, references, maintenance requirements, submittal requirements, and other pertinent information.

Demarcation – KSC shared interface with internal or external customers.

Design Review – Review of a configuration end-item's actual design to ensure that the design satisfies the authorized configuration requirements before design release for procurement and implementation commitments.

Development – The process whereby new hardware and software capability is introduced into a system. Development encompasses those activities required to create new systems or enhance existing systems beyond their as-built capabilities and performance. It includes the functions of product design, product fabrication or programming, product specification testing and acceptance, and product integration and test.

Disaster Recovery – Is the process of regaining access to the data, hardware, and software necessary to resume critical business operations as expeditiously as possible after natural or human-induced disaster.

Documentation – This definition contains typical functions associated with the preparation of technical documents. This information is available in both a hard copy and electronic format and complies with the policies and requirements set forth by NASA. These functions include:

(a) Configuration control of document changes.

(b) Record and provide change processing and implementation status of services.

(c) Providing technical reports and requirements documents.

(d) Providing design documents.

(e) Providing system configuration documents.

(f) Providing technical plans and procedures.

(g) Storing technical documentation.

(h) Providing documentation services for Government generated documents.

Efficiencies – Processes, techniques, or approaches that meet the requirements defined by the contract terms and conditions, and the PWS while requiring fewer resources than currently expended.

Engineering Imagery Acquisition Disposition Document (EIADD) – A plan that details how the contractor will support each program imaging requirement.

Electronic Security System (ESS) – The system that manages the surveillance, access control, and alarm systems for KSC facilities.

End-to-End – Used to delineate the boundaries of a system. In the context of this contract, end-to-end means the two-way path from the spacecraft to the ground antenna through the ground systems, the communications systems, to the user system, such as a control center or payload processing facility.

End-to-End Testing – The testing, in an operational environment, to ensure that data flows from each one end to the other end of a defined end-to-end system and meets documented performance and data flow and data accuracy requirements and data interface agreements.

Enhancements – Processes, techniques, or approaches which are over and above the requirements defined by the contract terms and conditions, and the PWS.

Excess – A classification assigned to Government property for which there is no requirement at a particular operational level.

Facility – The location where various mission services, data services, and Center unique services are performed.

Failure Modes and Effect Analysis (FMEA) – The analysis of the potential failure modes in a system to determine effects on system operation, personnel safety, and flight hardware; and to classify each failure mode according to severity.

First Level Troubleshooting – Receipt of trouble calls, problem isolation and resolution of minor problems (e.g., lost password, software question), dispatch of problem reports to the proper maintenance agency, and customer follow-up.

Foreign Object Debris (FOD) – Any item in an environment that does not belong. Examples include any item at the Pad that has the potential to be liberated during launch and strike the vehicle, and in a communications room, FOD includes trash, wire scraps, excess material, etc.

Functional Area – The organization having responsibility for the actual performance of a given service, whether it is performed in-house or by contract.

Geographic Information System (GIS) – A computerized relational database management system for capture, storage, retrieval, analysis, and display of spatial (locationally defined) data. GIS software applications allow users to develop linkages between graphical and non-graphical data.

Government Off-the Shelf (GOTS) Software – Software typically developed by or for a Government Agency. This software is delivered to the contractor for installation on equipment; however, the contractor does not have sustaining responsibility the software.

Government-Furnished Equipment (GFE) – Equipment or property in the possession of, or directly acquired by, the Government and subsequently made available to the contractor. This includes all property or equipment owned by or leased to the Government, acquired by the Government, or acquired with Government funds.

Government-Industry Data Exchange Program (GIDEP) – A cooperative effort to exchange research, development, design, testing, acquisition, and logistics information among Government and industry participants. GIDEP is used to notify participants of actual or potential problems on discrete parts, components, materials, manufacturing processes, test equipment, or safety conditions. It includes the use of ALERT and SAFE-ALERT Reports.

Hazard – The presence of a potential risk situation whereby environment, personnel errors, design characteristics, procedural deficiencies, or subsystem malfunctions may result in loss of personnel capability, loss of system, or loss of life. (See NSTS 5300.4)

Hazardous Operation (Hazardous Tasks) – Any operation involving activities that could result in exposure/injury/loss of life to operating personnel and/or damage to systems/equipment or have an environmental impact.

Home Run Wiring – A wiring technique in which wires are connected to a single termination point run directly to a central location without connecting to intermediate points.

In-Family – Term for classifying work to be performed by the contractor that does not need Government approval prior to implementation. In-family work is routine and repetitive in nature. It is normally associated with a provisioning of a standard service.

Integration – The addition of a hardware, firmware or software product to an existing system, subsystem, assembly or subassembly.

Interface – The point or area where a relationship exists between two or more parts, systems, programs, functions, persons, or procedures where physical and/or functional compatibility is required.

Kennedy Metropolitan Area Network (KMAN) – A network composed of primary and secondary Gigabit switches that provides redundant inter-facility high speed connectivity for internal routers.

KSC Integrated Control Schedule (KICS) – The implementing schedule for Shuttle operations. Published Monday through Friday (weekends as required) in a 96-hour/11-day format to include, but not be limited to, all work in the following categories: hazardous tasks, current and near term flow critical path activities, tasks requiring non-dedicated support, tasks requiring Launch Processing System (LPS) support, and management visibility items as specified by NASA management.

Launch Scrub – A failed launch attempt or launch delay, which occurs after the Range terminal count (launch minus 360 minutes) is initiated. The duration of the delay is not considered, one change of date is considered one scrub, regardless of the delay.

Launch Slip – A change in launch date, which occurs prior to the initiation of the Range terminal count.

Life-Cycle Costs – A form of economic analysis that considers the total cost of owning, operating, and maintaining a building over its useful life. Life-cycle costs are the sum of the present value of the following: investment costs, less salvage value, at the end of the study period; non-fuel operation and maintenance costs; replacement costs, less salvage costs, of the replaced building systems; and energy costs.

Lockout – The placement of a device in accordance with an established procedure to ensure the equipment being controlled cannot be operated until the device is removed.

Logistics – This definition contains typical functions associated with the provision of logistics support used to deliver services listed in the statement of work.

Maintenance – Actions taken to ensure system longevity of assets used to deliver the services in the statement of work.

Maintenance Agreement – An agreement with an outside service provider to repair or replace a system, components, or software. Maintenance agreements may include upgrades, system monitoring, and/or technical support.

Maintainability – The measure of the ability of an item to be retained in, or restored to, a specified condition when the maintenance is performed by personnel having specified skill levels, using prescribed procedures and resources, at each prescribed level of maintenance and repair. A characteristic of design that permits hardware to be serviced, inspected, and repaired with a minimum expenditure of maintenance resources.

Material – Property that may be consumed or expended during the performance of a contract, component parts of a higher assembly, or items that lose their individual identity through incorporation into an end-item. Material does not include equipment, special tooling, and special test equipment. (See FAR 45.101)

Material Safety Data Sheet (MSDS) – Written or printed material that provides the health and safety information about a specific item; i.e., chemical composition, physical properties, fire and explosion hazards, health hazards, reactivity data, spill or leak procedures, occupational protective measures, special precautions, and transportation data. As a minimum, contains all information required by the Occupational Safety and Health Administration (OSHA).

Mishap – An unplanned event involving (or potentially involving) injury or death to persons, damage to or loss of property or equipment, or mission failure; categorized (in accordance with NPR 8621.1) as follows:

(a) **Close Call.** An undesirable and unexpected event resulting in no personal injury or illness, personal injury or illness requiring only first aid, and/or

(b) **Type A Mishap.** A mishap causing death, hospitalization (within 30 days from the same mishap) of three or more persons for other than observation, and/or damage to equipment or property resulting in a loss of $1,000,000 or more*.

(c) **Type B Mishap.** A mishap resulting in permanent disability to one or more persons, inpatient hospitalization of one or two persons, and/or property damage or mission failure resulting in a loss of $250,000 or more but less than $1,000,000*.

(d) **Type C Mishap.** A mishap causing occupational injury or illness that results in a case involving day(s) away from work and/or damage to equipment or property or mission failure resulting in loss of $25,000 or more but less than $250,000*.

(e) **Type D Mishap.** A mishap consisting of personal injury requiring medical treatment of more than first aid but without any property damage or mission failure costing $1,000 or more but less than $25,000. (Personal occupational hearing loss in excess of 25 decibels in either ear is classified as an incident.)

* Mishaps resulting in damage to aircraft, space hardware, or ground support equipment that meet these criteria are included, as are test failures in which the damage was unanticipated.

Moves, Adds or Changes (MAC) – A Request to move, add to or change a service. It is a type of work order.

National Institute of Standards and Technology (NIST) – An organizational element of the Department of Commerce (DOC) responsible for custody, maintenance, and development of the national standards of measurement and provision of the means and methods for making measurements consistent with those standards.

Network Interface – The point of demarcation for outbound data (e.g., telemetry data), between a tracking complex and the NASA Integrated Services Network (NISN). Also the point of demarcation for inbound data (e.g., command data) between the user and NISN.

NISN Service Request (NSR) – a Request for Service initiates the NISN to provide a service that was forecasted in the PSCRD.

Nominal Support Requirement – The nominal timeframe in which IMCS personnel are expected to provide active, live support for services.

Office of Primary Responsibility (OPR) – An organization with overall responsibility for the development of, and subsequent changes to, designated documents.

On-Time Launch – A launch, which takes place within the established launch window on the date published on the Range schedule.

Operations Analysis – This definition contains typical functions associated with the assessment of the current performance of the ground systems and the impacts of additional loading to those services as listed in the statement of work. These functions include:

(a) End-to-end system performance monitoring, recommending appropriate changes to eliminate potential system bottlenecks and overloads; and short-term and long-term trend analysis.

(b) Risk analysis and management.

(c) Assessment of technical, schedule, and cost factors involved with the operation of systems.

(d) Analysis and evaluation of tracking resource, spacecraft, and telecommunications parameters and recommending ground system configurations to improve link margins.

(e) System operability and review of operation procedures, recommending or effecting changes to minimize data, voice, or video outages.

Operations Directive (OD) – The OD is prepared by 45 SW according to 45 SWI 99-101 and UDS Handbook and is the official support that will be provided the Range User to meet the requirements of the OR. The OD provides (1) a basis for test scheduling, (2) a commitment of Range support, (3) support operating instructions, and (4) a briefing document for supervisory persons.

Operations Directive Annex – The OD annex is prepared by the 45 SW and is the official 45 SW response to the OR annex. The OD annex is a complete detailed description of the support that will be provided the Range User to meet the requirements in the OR annex.

Operations Requirements (OR) – The OR is prepared by the Range User as outlined in 45 SWI 99-101 and is a complete detailed description of the requirements necessary to accomplish a specific test or series of tests in the program described in the PRD. When support is required from another Range, the appropriate number of copies is added to the distribution page of the OR by the Program Support Management Division.

Operations Requirements Annex – The OR annex is prepared by the Range User and is a complete detailed description of the requirements necessary to accomplish a subsystem test or a special minor test related to the overall test in the OR. Reference to the OR may

be made in the annex. An annex may not refer to another annex. The OR annex may be submitted with the OR at any time subsequent to submission of the OR.

Operations Requirements Extract (ORE) – The ORE is prepared by the 45 SW and is a complete detailed description of the requirements in the OR to be supported by another national or service Range.

Out-of-Family – Out-of-family work is any changes that affect the system baseline design and/or system architecture. An architecture change is the addition of new capability, change in system topology, system modification, or system software change. Changes in topology include first-time provision of a standard service to a facility.

Performance Work Statement (PWS) – The performance-based description of tasks or services to be performed and/or end products to be delivered by the contractor. The PWS also defines facilities, property, and support to be provided to the contractor by the Government.

Photo Acquisition Disposition Document (PADD) – A plan that identifies all requirements and provides internal instructions with regard to planning and executing multimedia imaging support for DoD/USAF.

Primitive Process – The lowest level process in a functional decomposition. It typically represents a single window, dialogue, screen, report, data field, or batch process.

Program Planning, Budget and Execution (PPBE) Plan – An annual plan developed by the Government, which provides budget and workforce estimates, along with an outline of the work on which the estimates are based. Generally the plan covers the succeeding five years with the first year having a monthly cost phasing plan and the remaining four years having only annual estimates.

Program Requirements Document (PRD) – The PRD is a detailed description of technical and administrative operating requirements desired from support organizations. PRDs document specific support requirements and not procedures or implementation actions. There are multiple PRDs in use at KSC and CCAFS.

Program Support Plan (PSP) – The PSP is prepared by the 45 SW according to the UDS Handbook, Document 501-89, and 45 SWI 99-101, and is the official response to the PRD. The PSP outlines the planned support that will be provided the Range User to meet the requirements in the PRD.

Project Manager (PM) – The Government technical representative having overall responsibility for budgeting for and funding contract support, defining technical requirements, identifying priorities, and providing this information to the CO. The contractor's counterpart is responsible for the overall management and coordination of the contract and acts as the central point of contact for the Government.

Property Administrator (PA) – An appointed representative of the CO authorized to administer contract provisions pertaining to Government property.

Property Control Program – The contractor's written policies and procedures for controlling each type of Government asset in its possession in accordance with FAR Part 45 and the provisions of the contract.

Quality Assurance (QA) – A planned and systematic pattern of all actions necessary to provide confidence that adequate technical requirements are established; products and services conform to established technical requirements; and satisfactory performance is achieved.

Quality Control (QC) – Those actions taken by a contractor to control the production of outputs to ensure that they conform to the contract requirements of timeliness, accuracy, appearance, completeness, consistency, and conformity to appropriate standards and specifications.

Range Users – Elements of the Department of Defense (DoD), other federal agencies, or civilian organizations authorized to use Range resources.

Real Time – An event, test, task, operation, etc. is underway at the present time rather than at some point in the future.

Requirements Document – A document that specifies the requirements that are to be met.

Risk - The probability, severity, and uncertainties of experiencing an undesired event.

Risk Assessment – An engineering and operational analysis which identifies risks, failure modes, and potential hazards.

Root Cause – A fundamental deficiency that results in a nonconformance and must be corrected to prevent recurrence of the same or a similar nonconformance.

Rough Order of Magnitude (ROM) – An estimate of the level of effort required to accomplish a configuration change or a project or task(s) based on minimal available data.

Safety – Freedom from those conditions that could cause injury to, or the death of, personnel and/or damage to, or the loss of, equipment or property.

Scheduling – This definition contains typical functions associated with the commitment of resources. These functions include:

(a) Scheduling of resources needed to provide a service.

(b) Providing notification to customers of service availability and providing resolution of any conflicts.

(c) Maintain schedule and resource utilization history databases.

Sensitive Information – Unclassified information that requires protection due to the risk and magnitude of loss or harm that could result from the inadvertent or deliberate disclosure, alteration, or destruction of information. This includes information for which improper use or disclosure could adversely affect the ability of an agency to accomplish its mission, proprietary information, records about individuals requiring protection under the Privacy Act, and information not releasable under the Freedom of Information Act. This is not the same as the National Security Agency (NSA) term "Sensitive, But Unclassified Information."

Service – The performance of all activities necessary to deliver customer products.

Service Request – A customer request for a service.

SpecsIntact (Specifications-Kept-Intact) – An automated specification processing system that uses standard master guide specifications for the preparation of facility construction project specifications.

Standards and Limits – The upper and lower bounds of the system configuration and system performance parameters.

State-of-the-shelf – Technology items that are proven and readily available for purchase. Generally these items are considered mainstream versus state-of-the-art.

Subcontractor – A company that provides on-site labor to support to the prime contractor to meet the requirements of the PWS.

Subsystem – A collection of hardware, software and procedures, which perform an identifiable task in support of one or more systems.

Supervisory Control and Data Acquisition (SCADA) – SCADA systems are generally used to perform data collection and control at a higher level. Some SCADA systems only monitor without doing control, these systems are still referred to as SCADA systems. An example would be a system that monitors equipment room parameters such as temperature, under floor water, or power and initiates an action or auto-dials phone numbers when preset limits are exceeded.

Support Products – Sets of data containing time-ordered parameters used to configure link equipment. These data sets consist of telemetry, radiometric, antenna pointing, and command parameters. Support products also include software support files containing project files, configuration files, site unique files, and equipment setup tables.

Surveillance Plan – The plan defining the process, reviews, and documentation used to monitor technical performance metrics and to report the cause, impact, and corrective action required to resolve variations from contracted technical performance.

Sustaining Engineering – Sustaining engineering includes changes and modifications to systems to provide additional service capacity, add features to software, reduce operational risk, replace obsolete hardware and software, or consolidate services

System – Any combination of components, assemblies, or sets joined together to perform a specific operational function(s).

System Assurance Analysis (SAA) – An integrated reliability and safety analysis that combines criticality assessment, Failure Modes and Effects Analysis (FMEA), Single Failure Point Analysis (SFPA), Critical Items List (CIL), and Hazard Analysis (HA) into one document.

Systems Engineering – Systems engineering is the management of engineering processes to ensure end-to-end integration and improve service delivery

System Maintainability – The implementation of a design which improves the identification of a failure and eases the replacement of the faulty assembly.

System Operability – The implementation of the human-machine interface, which minimizes operator errors and equipment setup time.

Tagout – The placement of a device in accordance with an established procedure to ensure the equipment being controlled cannot be operated until the device is removed

Test Team – A collection of personnel communicating via OIS, telephones, and radios to accomplish a processing, launch, or landing function. There are test teams at KSC, JSC, GSFC, MSFC, MILA, and CCAFS.

Testing – The process by which the presence, quality, performance or genuineness is determined

Tool – Hardware, firmware or software that serves as an aid to accomplishing a task.

Training – This definition contains typical functions associated with ensuring the preparation of personnel to perform the functions necessary to provide the services as listed in the statement of work. These functions include:

(a) Customer training on applications or services.

(b) Certification of personnel on operational consoles.

(c) Maintenance and operations training.

(d) Mission-specific training.

Universal Documentation System (UDS) – The Range Commanders' Council (RCC) Handbook 501-89 describes mandatory documentation to be used by the National Ranges and their users. The system provides a formal, common method of language and format for stating requirements and preparing support responses. The UDS encompasses documentation generated by user agencies, which state program, mission or test requirements and those response documents generated by the support agencies to define the support to be provided.

Validation Testing – The testing of a newly developed or modified asset (system, subsystem, assembly, subassembly or lowest replaceable element) to ensure that all requirements of the specification have been met. Additionally, this can mean testing done for an item to prove or certify that it is ready to support.

Vendor – A company which provides the prime contractor equipment, materials, supplies, or maintenance agreements to support the requirements of the PWS.

Verification Testing – The testing of a newly developed or modified asset (system, subsystem, assembly, subassembly or lowest replaceable element), to ensure that of the asset conforms to the specification.

Verify – To confirm the accomplishment of an operation, either by witnessing the actual operation or by inspecting the completed operation, depending on the nature of the work being performed.

Waiver/Deviation – Granted use or acceptance of an article that does not meet specified requirements. A waiver is given or authorized after the fact; a deviation is given or authorized before the fact.

War Driving – The act of searching for wireless network access points by a person moving throughout a building (or in a moving vehicle to cover larger areas) using a Wi-Fi equipped computer to detect the signals.

Appendix 4
Applicable Policies and Procedures

For

Information Management and Communications Support (IMCS)

The contractor shall comply with the following documents in performance of the IMCS contract:

NASA DIRECTIVES

Document #	**Title**
NPD 1040.4A	NASA Continuity of Operations
NPD 1382.17G	NASA Privacy Policy
NPD 1383.1B	Release and Management of Audiovisual Products and Services
NPD 1383.2A	NASA Assistance to Non-Government, Entertainment-Oriented Motion Picture, Television, Video and Multimedia Productions/Enterprises, and Advertising
NPD 1420.1	NASA Forms Management
NPD 1440.6G	NASA Records Management
NPD 1490.1G	NASA Printing, Duplicating, and Copy Management
NPD 1600.2D	NASA Security Policy
NPD 1600.3	Policy on Prevention of and Response to Workplace Violence
NPD 1820.1B	NASA Environmental Health Program
NPD 2190.1A	NASA Export Control Program
NPD 2200.2B	Management of NASA Scientific and Technical Information
NPD 2521.1	Communications Material Review
NPD 2530.1E	Monitoring or Recording of Telephone or Other Conversations
NPD 2540.1F	Personal Use of Government Office Equipment Including Information Technology
NPD 2570.5D	NASA Electromagnetic (EM) Spectrum Management
NPD 2800.1A	Managing Information Technology
NPD 2810.1C	NASA Information Security Policy
NPD 2820.1C	NASA Software Policy
NPD 4100.1A	Supply Support and Material Management Policy
NPD 4200.1B	Equipment Management
NPD 4300.1B	NASA Personal Property Disposal Policy
NPD 6000.1B	Transportation Management
NPD 8500.1	NASA Environmental Management
NPD 8700.1C	NASA Policy for Safety and Mission Success
NPD 8710.1D	Emergency Preparedness Program
NPD 8710.2D	NASA Safety and Health Program Policy
NPD 8710.5C	NASA Safety Policy for Pressure Vessels and Pressurized Systems
NPD 8720.1B	NASA Reliability and Maintainability (R&M) Program Policy

NPD 9501.1H	NASA Contractor Financial Management Reporting System
NPR 9501.2D	NASA Contractor Financial Management Reporting
NPR 1040.1	NASA Continuity of Operations (COOP) Planning Procedure Requirements
NPR 1441.1D	NASA Records Retention Schedules
NPR 1450.10D	NASA Correspondence Management and Communications Standards and Style
NPR 1600.1	NASA Security Program Procedural Requirements
NPR 1620.1	NASA Security Procedural Requirements
NPR 2190.1	NASA Export Control Program
NPR 2200.2B	Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information
NPR 2210.1A	External Release of NASA software
NPR 2570.1	NASA Radio Frequency (RF) Spectrum Management Manual
NPR 2800.1	Managing Information Technology
NPR 2810.1A	Security of Information
NPR 2820.1C	NASA Software Policy
NPR 4100.1D	NASA Materials Inventory Management Manual
NPR 4200.1D	NASA Materials Inventory Management Manual
NPR 4200.2B	Equipment Management Manual for Property Custodians
NPR 4300.1A	NASA Personal Property Disposal Procedural Requirements
NPR 6000.1G	Requirements for Packaging, Handling and Transportation for Aeronautical and Space Systems, Equipment, and Associated Components
NPR 6200.1B	NASA Transportation and General Traffic Management
NPR 7120.5C	NASA Program and Project Management Processes and Requirements
NPR 7120.7	NASA Institutional Infrastructure and Information Technology - Program and Project Management Requirements
NPR 7123.1A	NASA Systems Engineering Processes and Requirements
NPR 8000.4	Risk Management Procedural Requirements
NPR 8553.1	NASA Environmental Management System (EMS)
NPR 8621.1B	NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping
NPR 8715.2	NASA Emergency Preparedness Plan Procedural Requirements
NPR 8715.3B	NASA General Safety Program Requirements

NPR 8735.1A	Procedures for Exchanging Parts, Materials, and Safety Problem Data Utilizing the Government-Industry Data Exchange Program and NASA Advisories
NPR 8735.2A	Management of Government Quality Assurance Functions for NASA Contracts

NASA STANDARDS

Document #	**Title**
NASA-GB-8719.13	NASA Software Safety Guidebook
NASA-STD-2202	Software Formal Inspections Standard
NASA-STD-2801	NASA Strategy for Windows NT Domain
NASA-STD-2802	Intracenter Networking Architecture, Standards and Products
NASA-STD-2803	Intranet Strategy
NASA-STD-2804 (Rev.: K)	Minimum Interoperability Software Suit
NASA-STD-2805 (Rev.: K)	Minimum Hardware Configurations
NASA-STD-2806	Network Protocol
NASA-STD-2807	The NASA Directory Service Architecture, Standards, and Products
NASA-STD-2808	Interoperability Profile for NASA E-Mail Clients
NASA-STD-2810	UNIX Interoperability
NASA-STD-2812	Intranet Functional Requirements
NASA-STD-2813	NASA Firewall Strategy, Architecture, Standards and Products
NASA-STD-2814A	NASA Integrated Information Technology Architecture
NASA-STD-2815	NASA Electronic Messaging Architecture, Standards and Products
NASA-STD-2817	Computer-Aided Engineering, Design and Manufacturing Data Interchange Standard
NASA-STD-2818	Digital Television Standards for NASA
NASA-STD-2819	Collaborative Tools Standards
NASA-STD-2820	Encryption and Digital Signature Standards
NASA-STD-5005	Ground Support Equipment
NASA-STD-8719.11 (Rev.: Baseline (Change 3))	NASA Safety Standard for Fire Protection
NASA-STD-8719.13	NASA Software Safety Standard
NASA-STD-8719.7	Facility System Safety Guidebook
NASA-STD-8719.9	Standard for Lifting Devices and Equipment
NASA-STD-8729.1 (Rev.: Baseline)	Planning, Developing, and Managing an Effective Reliability and Maintainability (R&M) Program

NASA-STD-8739.5	Fiber Optic Terminations, Cable Assemblies, and Installation
NASA-STD-8739.8	Software Assurance Standard

KSC DIRECTIVES

Document #	**Title**
KNPD 1150.24 (Rev.: BASIC-1)	KSC Councils, Boards and Working Groups
KNPD 1216.1 (Rev.: A)	Smoke-Free Workplace
KNPD 1420.1 (Rev.: BASIC-1)	KSC Forms Management Program
KNPD 1440.1 (Rev.: B)	KSC Records Management and Vital Records Program
KNPD 1490.2 (Rev.: BASIC-1)	Printing, Duplication, Micrographics and Office Copier Services
KNPD 1590.2 (Rev.: BASIC-1)	KSC Bulletin, Bulletin Boards & Hallway Displays
KNPD 1600.3	Use of Alcoholic Beverages on Kennedy Space Center (KSC) Property
KNPD 1800.1 (Rev.: BASIC-2)	Environmental Health Program
KNPD 1800.2 (Rev.: A-1)	KSC Hazard Communication Program
KNPD 1810.1 (Rev.: BASIC-1)	KSC Occupational Medicine Program
KNPD 1860.1 (Rev.: BASIC-1)	KSC Radiation Protection Program
KNPD 2240.1 (Rev.: BASIC-1)	KSC Library and Archives
KNPD 2810.1 (Rev.: BASIC)	Appropriate Use of NASA Information Technology (IT) Resources
KNPD 3792.1 (Rev.: BASIC-1)	KSC Employee Assistance Program (EAP) Policy
KNPD 6000.2 (Rev.: BASIC)	Commercial Transportation Corridors
KNPD 8500.1 (Rev.: BASIC)	KSC Environmental Management
KNPD 8700.1 (Rev.: A-1)	Safety and Mission Assurance Policy Directive
KNPD 8719.9	Examination and Licensing of KSC Operators of Special, Heavy Equipment, Facility Cranes or Hoists
KNPD 9501.1 (Rev.: A)	Contractor Financial Management Reporting System

KNPD 9501.2 (Rev.: A-1)	KSC Earned Value Management
KNPR 1040.3 (Rev.: BASIC)	Continuity of Operations Planning (COOP)
KNPR 1600.1	KSC Security Procedural Requirements
KNPR 1820.3 (Rev.: BASIC-1)	KSC Hearing Loss Prevention Program
KNPR 1820.4 (Rev.: A)	KSC Respiratory Protection Program
KNPR 1840.19 (Rev.: A)	KSC Industrial Hygiene Program
KNPR 1860.1 (Rev.: BASIC-1)	KSC Ionizing Radiation Protection Program
KNPR 1860.2 (Rev.: BASIC-1)	KSC Nonionizing Radiation Protection Program
KNPR 1870.1 (Rev.: BASIC-1)	KSC Sanitation Program
KNPR 2540.1 (Rev.: BASIC)	KSC Telecommunications Services
KNPR 2570.1 (Rev.: BASIC)	KSC Radio Frequency Spectrum Management
KNPR 4000.1 (Rev.: BASIC)	Supply and Equipment System Manual
KNPR 6000.1 (Rev.: BASIC)	Transportation Support System
KNPR 8040.1 (Rev.: BASIC)	KSC Configuration Management Procedural Requirements
KNPR 8040.4 (Rev.: A-2)	International Space Stations/Payload Processing Configuration Management Procedural Requirements
KNPR 8040.5 (Rev.: BASIC)	Shuttle Processing Level III Configuration Control Board Procedural Requirements
KNPR 8500.1 (Rev.: A)	KSC Environmental Requirements
KNPR 8715.3 (Rev.: C-1)	KSC Safety Practices Procedural Requirements
KNPR 8715.4	KSC Lockout/Tagout Program Procedural Requirements
KNPR 8715.5	KSC Personal Protective Equipment (PPE) Program Procedural Requirements
KNPR 8720.1 (Rev.: BASIC-1)	KSC Reliability, Maintainability, and Quality Assurance Procedural Requirements
KNPR 8730.2 (Rev.: BASIC)	Quality Assurance Procedural Requirements
KNPR 8830.1 (Rev.: A-1)	Facilities and Real Property Management Procedural Requirements

KDP-KSC-P-1280	Government Printing Process
KDP-KSC-P-1311	Major, High Impact and Minor Moves
KDP-KSC-P-1334	KSC Network Scan Process
KDP-KSC-P-1376	Information Technology (IT) directorate New Work Flow
KDP-KSC-P-1451	NASA Safety Reporting System
KDP-KSC-P-1473	KSC Mishap Reporting and Investigating
KDP-KSC-P-1474	Mishap Investigation Board
KDP-KSC-P-1537	Document Release Authorization (DRA) Process
KDP-KSC-P-1538	NASA KSC Specifications and Standards Development Process
KDP-KSC-P-1833	KSC Web Site Development and Maintenance
KDP-KSC-P-1836	Removing Data and Licensed Software from Information Technology (IT) Storage Devices
KDP-KSC-P-1878	Control and Use of Internal and External Documents
KDP-KSC-P-1881	NASA Business Records Management
KDP-KSC-P-1899	Obtaining Graphics Services
KDP-KSC-P-2111	Reporting Close Calls
KDP-KSC-P-2117	Deviating from KSC Maximum Work Time (MWT) Requirements
KDP-KSC-P-2123	Reporting of Unsafe and/or Unhealthful Conditions or Acts
KDP-KSC-P-2139	Advance notification of Workforce Reductions
KDP-KSC-P-2613	KSC Export Process
KDP-KSC-P-3213	KSC Web Site Registration and Approval
KDP-KSC-P-3313	ODIN Waiver Process
KDP-KSC-P-3320	Telecommunications Headset Acquisition Process
KDP-KSC-P-3323	Non-ODIN Printers Vulnerability Process
KDP-KSC-P-3717	Foreign National Visitor Badging and Access

INFORMATION TECHNOLOGY SECURITY DIRECTIVES

National Institute of Standards and Technology (NIST) Special Publications (SP)

Document #	Title
SP–800-18	Guide for Developing Security Plans
SP–800-26	Security Self-Assessment Guide for IT Systems
SP–800-30	Risk Management Guide
SP–800-34	Contingency Planning Guide for IT System
SP–800-37	Guide for the Security Certification & Accreditation of Federal Information Systems
SP–800-40	Patch and Vulnerability Management
SP–800-53	Recommended Security Controls for Federal Information Systems
SP-800-60, Vol. I & II	Guide for Mapping Types of Information to Security Categories
SP–800-64	Security Considerations in the Information system Development Life Cycle
SP–800-70	Security Configuration Checklists Program
SP–800-83	Malware Incident Prevention and Handling
SP–800-85A	PIV Middleware and PIV Card Application Conformance Test
SP–800-86	Computer and Network Data Analysis: Applying Forensic Techniques to Incident Response
SP–800-87	Codes for the ID of Federal and Federally-Assisted Orgs
SP–800-97	Establishing Wireless Robust Security Networks A Guide to IEEE 802.11i
SP–800-94	Guide to Intrusion Detection and Prevention Systems (IDPS)
SP–800-78	Cryptographic Algorithms and Key Sizes for Personal Identity Verification
SP–800-72	Guidelines on PDA forensics
SP–800-67	Recommendation for the Triple Data Encryption Algorithm (TDEA) Block Cipher

Federal Information Processing Standards (FIPS)

Document #	Title
FIPS PUB 140-2	Security Requirements for Cryptographic Modules
FIPS PUB 197	Advanced Encryption Standard (AES)
FIPS PUB 199	Standards for Security Categorization of Federal IT Systems
FIPS PUB 200	Minimum Security Requirements for Federal Information and Information Systems
FIPS PUB 201	Personal Identity Verification (PIV) of Federal Employees and Contractors

NASA IT Requirements (NITRS)

Document #	**Title**
NITR 2810-1	Wireless Requirements
NITR 2810-2	Risk Management and Security Plans
NITR 2810-3	Internet Publishing Content Guidelines
NITR 2810-4	Information Technology (IT) system Security Certification and Accreditation and Authorizing Systems for Operation
NITR 2810-5	NASA Information Technology (IT) Security Patch Management System

NASA IT Security Standard Operating Procedures (SOPs)

Document #	**Title**
ITS-SOP-0002	NASA's Target Vulnerability Selection Procedures
ITS-SOP-0003	NASA's IT Security Emergency After-Hours Test Procedures
ITS-SOP-0004	NASA's Information Technology Requirement (NITR) Procedures
ITS-SOP-0005-B	Procedure for Completing a NASA Information Technology (IT) Security Program or System Assessment
ITS-SOP-0006-C	Procedure for Extending an IT System Authorization to Operate
ITS-SOP-0007	NASA Master and Subordinate System Security Plan Numbering Schema
ITS-SOP-0008	Procedures for Initiating and Managing Targeted Monitoring of Electronic Data
ITS-SOP-0009	Procedures for Updating and Managing NASA's Plan of Actions and Milestones
ITS-SOP-0012	NASA Patch Selection & Reporting Procedures
ITS-SOP-0014	Procedures for Approving Changes to NASA's Information Technology Baseline
ITS-SOP-0015	Procedures for Agency IT Security Incident Classification and Reporting
ITS-SOP-0016-B	Subordinate IT Security Plan Template, Requirements, Guidance and Examples
ITS-SOP-0017	IT Security Penetration Test Plan and Rules of Engagement
ITS-SOP-0018	Contractor IT Security Program Plan Procedures
ITS-SOP-0019-B	Procedure for FIPS-199 Information Categorization for NASA IT Systems
ITS-SOP-0020	Wireless Local Area Network Implementation
ITS-SOP-0021	Network Security Vulnerability Scanning
ITS-SOP-0022	Determining Cost Impact of Information Technology Security Incidents
ITS-SOP-0030B	IT System Certification and Accreditation Process for FIPS 199 Moderate and High Systems

ITS-SOP-0031B	IT System Certification and Accreditation Process for FIPS 199 Low Systems
ITS-SOP-0032	Master IT Security Plan Template, requirements, Guidance and Examples
ITS-SOP-0033	External System Identification & IT Security Requirements
ITS-SOP-0043	Procedures for Selecting & Tailoring NIST SP 800-53 Common Security Controls
SOP No. CIOB-01	Assignment of IT Actions

Office of Management and Budget Memorandums

Document #	**Title**
OMB M-06-15	Safeguarding Personally Identifiable Information
OMB M-06-16	Protection of Sensitive Agency Information
OMB M-07-16	Safeguarding Against and Responding to the Breach of Personally Identifiable Information

AIR FORCE PUBLICATIONS

Document #	**Title**
AFI 21-101	Aircraft and Equipment Maintenance Management
AFI 32-9002	Use of Real Property Facilities
AFI 33-103	Communications and Information – Requirements Development and Processing
AFI 33-117	Multimedia (MM) Management
AFI 91-204	Safety Investigations and Reports
AFSPCMAN 91-710 V6	Ground and Launch Personnel, Equipment, Systems, and Materials Operations Safety Requirements

45th SPACE WING PUBLICATIONS

Document #	**Title**
45SW 13-206	Eastern Range Scheduling
45SW 33-104	Multimedia (MM) Management
45SWI40-201	45the Space Wing Instruction 40-201 Radiation Protection Program

RANGE OPERATING INSTRUCTIONS

Document #	**Title**
ROI 01-01	Range Operating Instructions
ROI 01-01-01	Site Verification of ROI Mailing
ROI 01-02	Reacceptance Procedures for Range Instrumentation
ROI 01-03	Station Designators
ROI 01-04	ER Range Conference Nets

ROI 01-05	Operational Configuration Control Philosophy
ROI 01-06	Range Time Standardization
ROI 01-07	Minor Range Support
ROI 01-08	Downgrading of Scheduling or Launch Information After DOD or NASA Release
ROI 01-10	Coordination with Range Users During Operations
ROI 01-12	Visits to Range Instrumentation Sites
ROI 01-13	Instrumentation Coverage Plans
ROI 01-14	Requesting Emergency Maintenance Assistance for Communications, Electronic, Meteorological Equipment
ROI 01-15	Processed Data Delivery Schedules
ROI 01-16	RTSC Instrumentation Launch Planning Process
ROI 01-19	Orbital Network Duties and Responsibilities During Unmanned Space Flights
ROI 01-20	Range Scheduling Operation Notification Responsibility
ROI 01-21	System Access
ROI 01-23	Scheduling Downtime for Maintenance
ROI 01-24	Range Turnaround Time
ROI 01-25	Relaying Countdown and Operations Information
ROI 01-29	Range Control Officer (RCO) Responsibilities
ROI 01-30	Expedite Operations Requirements Processing
ROI 01-32	Range Instrumentation Systems Controllers
ROI 01-33	Inflight Advisories of Vehicle Flight Performance
ROI 01-36	Network Operating Procedures During Manned Space Flights
ROI 01-39	Scheduling of Prelaunch Instrumentation Checkout Operations and Calibration Operations
ROI 01-40	Control and Operation of Instrumentation Nets
ROI 01-44	Use of Unaccepted Equipment, Systems, or Configurations
ROI 01-45	Range Reconfiguration Time for Navy Missions
ROI 02-02	Range Countdown
ROI 02-04	Operations Control Instructions
ROI 03-01-01	Operation Logs
ROI 03-01-04	Reporting Range Instrumentation Status During an Operation
ROI 03-01-05	Launch Performance Analysis
ROI 03-02-10	Quick Look Operation Report
ROI 03-03-01	Pre-Operational Instrumentation Checks
ROI 03-03-04	Eastern Range Equipment Status Reporting System
ROI 03-04	Notification of Weather Warnings and Weather Advisories
ROI 03-05	Reporting Operation Termination/Extension Status
ROI 09-01	Handling of Film Products for DOD Launch Operations Requiring Special Handling
ROI 09-02	Handling of Film Products for DOD Launch Anomalies During Classified Operations

ROI 12-01-14	Optical Tracking Central Computer (OTCC) Checkout Operating and Reporting Procedures
ROI 12-04-01	Manual Audit Trails for Instrumentation Computers
ROI 14-08-01	Closed-Circuit Television Unit Operating Procedures
ROI 14-08-02	Range Safety Video and Vertical Wire Skyscreen Site Designations

OTHER POLICIES AND PROCEDURES

Document #	**Title**
	Americans with Disabilities Act of 1990, as amended
	Federal Acquisition Regulations (FAR)
	NASA FAR Supplement
	ISO 14000 Standards
	The Gregg Reference Manual
	Roget's Thesaurus
	Merriam Webster's Collegiate Dictionary
	U.S. Government Printing Office Style Manual (2000 Edition)
	NASA Chief Information Officer (CIO) Executive Notices
	IT Security Implementation Guide
	Library of Congress Classification Schedules
29 CFR Part 1910	Occupational Safety and Health Standards
29 CFR Part 1925	Safety and Health Standards for Federal Service Contracts
29 CFR Part 1926	Safety and Health Regulations for Construction
29 CFR Part 1960	Basic Program Elements for Federal Employees OSHA
29 U.S.C. § 794(d)	Section 508 of the Rehabilitation Act of 1973, as amended
7 CFR Part 1755.890	RUS Specification for Filled Telephone Cables with Expanded Insulation
7 CFR Part 1755.900	RUS Specification for Filled Fiber Optic Cables
79K28125	Fiber Optic Cable Specification for KSC
AACR2	Anglo-American Cataloguing Rules
AFSPCMAN 91-710	Range Safety Manual (Volumes 1-7)
ANSI/ISO/ASQ Q9001-2000	Quality Management Systems Requirements
CSP 03-01-002 [TED 8.4]	Voluntary Protection Programs (VPP): Policies and Procedures Manual & Directive
ANSI/J-STD-607-A-2002	Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications
ANSI/TIA/EIA-568-B.1-2001	Commercial Building Telecommunications Cabling Standard – Part 1: General Requirements
ANSI/TIA/EIA-568-B.1-1-2001	Commercial Building Telecommunications Cabling Standard – Part 1: General Requirements – Addendum 1 – Minimum 4-Pair UTP and 4-Pair ScTP Patch Cable Bend Radius

ANSI/TIA/EIA-568-B.2-2001	Commercial Building Telecommunications Cabling Standard – Part 2: Balanced Twisted Pair Cabling Components
ANSI/TIA/EIA-568-B.2-1-2002	Commercial Building Telecommunications Cabling Standard – Part 2: Balanced Twisted Pair Components – Addendum 1 – Transmission Performance Specifications for 4-Pair 100 Ohm Category 6 Cabling
ANSI/TIA/EIA-606-A-2002	Administration Standard for Commercial Telecommunications Infrastructure
Executive Order (EO) 10290	Prescribing Regulations Establishing Minimum Standards for the Classification Transmission and Handling of Official Information Which Requires Safeguarding in the Interests of Security
EO 10995	Assigning Telecommunications Management Functions
EO 12046	Relating to the Transfer of Telecommunications Functions
EO 12139	Exercise of Certain Authority Respecting Electronic Surveillance
EO 12148	Federal Emergency Management
EO 12356	National Security Information
EO 12472	Assignment Of National Security and Emergency Preparedness Telecommunication Functions
EO 13231	Critical Infrastructure Protection in the Information Age
EO 13407	Public Alert and Warning System
EO 13423	Strengthening Federal Environmental, Energy, and Transportation Management
GP-435 Vol. 1 & 2	Engineering Drawing Practices
HSPD-12	Homeland Security Presidential Directive 12
ISO 9001	Quality Management Systems - Requirements
JDP-KSC-P-3014 (Rev.: C)	Generic Emergency Procedures Document (EDP)
JHB 2000 (Rev.: D)	Consolidated Comprehensive Emergency Management Plan
KCA 1308	Joint Operating Procedure (JOP) Between 45th Space Wing (45 SW) and the John F. Kennedy Space Center (NASA-KSC) for Safety
KCA-1323	Joint Operating Procedure (JOP) Between 45th Space Wing (45 SW) and NASA-KSC for Electromagnetic Laboratory (EML) Services
KPL-PLN-50007	KSC Facility Contamination Control Requirement Plan
KSC-DE-512-SM	Facility, System, and Equipment General Design Requirements
KSC-DF-107	Technical Document Style Guide
KSC-PLN-1912	KSC Environmental Management Plan
KSC-PLN-3302 (Rev.: D)	Information Technology (IT) Security Awareness and Training Plan

KSC-STD-E-0002	Hazardproofing of Electrically Energized Equipment, Standard For
KSC-STD-E-0021	Telecommunications Premises Distribution Systems, Design of, Standard for (KSC)
NASA Communication Material Review System Website	Communication Material Review Team (CMRT) Policy Guidelines
NASA Communication Material Review System Website	NASA Logo/Insignia Guidelines
NASA-SP-2005-7602 (Rev. 1)	NASA Publications Guide for Authors
NASA-SP-7084	Grammar, Punctuation, and Capitalization; A Handbook for Technical Writers and Editors
NF-1676	NASA Scientific and Technical Information (STI) Document Availability Authorization (DAA)
NFPA 70	National Electrical Code
NSTS 07700, Volume V (Change No. 167)	Information Management Requirements
NSTS 08117 (Change No. 84)	Requirements and Procedures for Certification of Flight Readiness
NSTS 22206 (Change No. 39)	Requirements for Preparation and Approval of Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL)
NSTS 22254 (Change No. 17)	Methodology for Conduct of Space Shuttle Program Hazard Analyses
NSTS 5300.4 (1D-2) (Change No. 9)	Safety, Reliability, Maintainability and Quality Provisions for the Space Shuttle Program
SF-298	Report Documentation Page
TIA-569-B-2004	Commercial Building Standard for Telecommunications Pathways and Spaces
TIA-758-A	Customer-Owned Outside Plant Telecommunications Infrastructure Standard (2004)
TIA-942	Telecommunications Infrastructure Standard for Data Centers`

The following KSC Shelf-Master SPECSINTACT specifications should be used when performing work at KSC:

Document #	**Title**
16700	Communications Termination Blocks and Patch Panels
16701	Communication/Equipment Room Fittings
16702	Communications Optical Fiber Backbone Cabling
16703	Communications Copper Backbone Cabling
16704	Communications Horizontal Cabling
16705	Clock systems

16725	Audio-Video Communications Horizontal Cabling
16801	Paging Systems
16802	Intermediate/Radio Frequency Communications Horizontal Cabling

Appendix 5

Expectations, Performance Standards, and Metrics

For

Information Management and Communications Support (IMCS)

Expectations, Performance Standards, and Metrics

Expectations, performance standards, and metrics provided in this appendix will be incorporated into the final Government performance surveillance and award fee evaluation plans. The Government has the unilateral right to revise this document as necessary, including revisions to capture and incorporate methodologies, approaches, and levels of expected performance proposed by the successful offeror and accepted by the Government. The Government may make revisions anytime prior to the next award fee period commencing.

Performance standards data will be collected by the contractor, reported to and evaluated by the Government for trends and operational analysis, as well as Award Fee purposes

For the purpose of this document the following definitions shall be used:

Expectation – The Government's and their customers' expected response and outcome by the contractor to have work completed, to have problems resolved and to have systems available under this contract.

Performance standards - A representation of the actual performance levels that the contractor achieves and to what degree these achievements meet or exceed the Governments expectations.

Metrics – The resulting pictorial view of the actual work performance by contractor to meet the expectations and performance standards.

Service Delivery

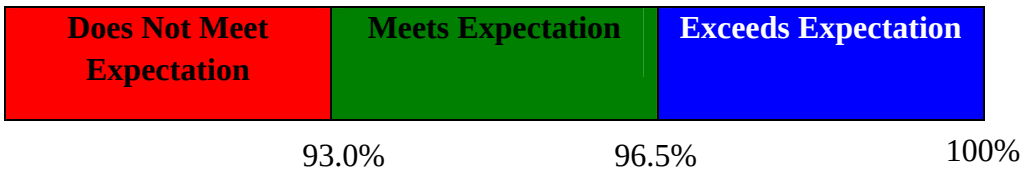
Service delivery is the performance of work orders by the contractor to meet customer-submitted requirements and delivery timeframes.

Expectation – Service Delivery
Successfully complete all customer service requests by the Scheduled Completion Dates (SCD) that are in adherence with the timeframes established in Table 5-1 - Service Delivery Standards.

Performance Standard - Service Delivery [(1)]
Completed by Scheduled Completion Date 93.0% - 96.5% Completed by SCD – Meets Expectation > 96.5% Completed by SCD - Exceeds Expectation < 93.0% Completed by SCD - Does Not Meet Expectation **Open 20 Days Past SCD** No more than 2.5% open for more than 20 Working days past the SCD **Open 40 Days Past SCD** No more than 1% open for more than 40 Working days past the SCD

(1) In all cases, level of service shall not impact safety, mission success or major program/project milestones.

Metric - Service Delivery:



Service Delivery Standards

Service Delivery Standards Expectation Levels are delineated below for services to be performed by the contractor. The expectation levels represent the time from receipt of customer request until work completion**.**

Table 5-1 Service Delivery Standards

Service Delivery Standards (** All metrics are in working days unless noted specifically in Hours or Minutes or Seconds)					
PWS	**Service Area**	**Service**		**Expectation for Services (Infrastructure Available) <= ****	**Expectation for Services (Infrastructure Not Available) <= ****
3.0	All Services	Answer Help Desk Call		< 15 Seconds	
3.1.1	Computer	Provide server space for new application		5	20
3.1.1	Computer	Perform software upgrade		5	20
3.1.1	Computer	Add account with specified permissions		4 Hours	
3.1.2	Computer	Move New Applications to Production		3	20
3.1.2	Computer	Move New Development to Production		2	
3.1.2	Computer	Priority Data Changes		1	
3.1.2	Computer	Data Changes		3	
3.1.2	Computer	Priority Minor Software Changes		CCB	
3.1.2	Computer	Priority Medium Software Changes		CCB	
3.1.2	Computer	Priority Major Software Changes		CCB	
3.1.2	Computer	Minor Software Changes		CCB	
3.1.2	Computer	Medium Software Changes		CCB	
3.1.2	Computer	Major Software Changes		CCB	
3.2.1	Cable Plant	Install Copper pair		2	15
3.3.1	Transmission	Install Transmission Drop/Circuit		5	15
3.4.1	Networks	Install Network Drop Less than 20			10
3.4.1	Networks	Install Network Drop More than 20			15

CCB denotes work must be completed by the CCB negotiated due date**.**

Table 5-1 Service Delivery Standards (cont.)

Service Delivery Standards (** All metrics are in working days unless noted specifically in Hours or Minutes)					
PWS	**Service Area**	**Service**		**Expectation for Services (Infrastructure Available) <= ****	**Expectation for Services (Infrastructure Not Available) <= ****
3.4.1	Networks	Provide and activate IP address		1	
3.4.1	Networks	Install Wireless Access Points			20*
3.4.1	Networks	Install Temporary Wireless Access Points		2	
3.4.2	Networks	Activation of Approved Perimeter Access Control Change Request Standard Request		5	
3.4.2	Networks	Activation of Approved Perimeter Access Control Change Request Priority Request NTE 10% of total requests		2	
3.4.2	Networks	Activation of Approved Perimeter Access Control Change Request Priority Expedite Request NTE 2% of total requests		<4 Hours	
3.4.3	Networks	Install or MAC Telephone including Voicemail - Less than 20		2	10
3.4.3	Networks	Install or MAC Telephone including Voicemail - More than 20		5	30
3.4.3	Networks	Telephone MAC -no field visit required		1	
3.4.4	Networks	Issue Secure Remote Access Device		3	
3.5.1	Imaging	Install Video Monitor		5	20
3.5.1	Imaging	Install Perimeter Security Camera			20
3.5.2	Imaging	Install BCDS Drop		5	20
3.5.4	Imaging	Digital Photo Print <25 prints		1	
3.5.4	Imaging	Digital Photo Print >25 prints		3	
3.6	Graphics	Perform Photo Editing		2	
3.6	Graphics	Convert Graphic for Web Use		1	
3.6	Graphics	Produce Graphics Products		5	
3.8	Timing	Install countdown timing display		10	20

* Not including approval time for Master Planning

Table 5-1 Service Delivery Standards (cont.)

Service Delivery Standards (** All metrics are in working days unless noted specifically in Hours or Minutes)					
PWS	**Service Area**	**Service**		**Expectation for Services (Infrastructure Available) <= ****	**Expectation for Services (Infrastructure Not Available) <= ****
3.9.1	Voice	Install Voice/PAWS Speaker		10	20
3.9.3	Voice	Replace Radio in Vehicle		2	
3.9.3	Voice	Remove Radio from Vehicle		1	
3.9.3	Voice	Install Radio at Fixed Location		10	20
3.9.3	Voice	Program Radio		1	
3.9.4	Voice	Install Voice/OIS-D End Instrument		10	20
3.9.4	Voice	Provide OIS Dub		1	
3.9.4	Voice	Provide OTV dub to DVD		2	
3.9.4 3.12	Voice & Print/ Repro	Provide DVD/CD dub		2	
3.11	Publications	Provide Tech Written Document		5	
3.11	Publications	Respond to Public Inquiry- General		5	
3.12	Printing/Repro	Reproduction of Documents: <10,000 pages		2	
3.12	Printing/Repro	Reproduction of Documents: >10,000 pages (non-GPO)		5	
3.13	Engineering Data Center	Retrieve document, convert to electronic format and provide to customer		3	
3.16	Forms	Generate New Form		5	
3.17	IT Security	Initial Report of Potential IT Security Incident		<1 Hours	
3.17	IT Security	Isolate IT Security Incident		<2 Hours	
3.17	IT Security	Provide Accurate Report of IT Security Incident		1	

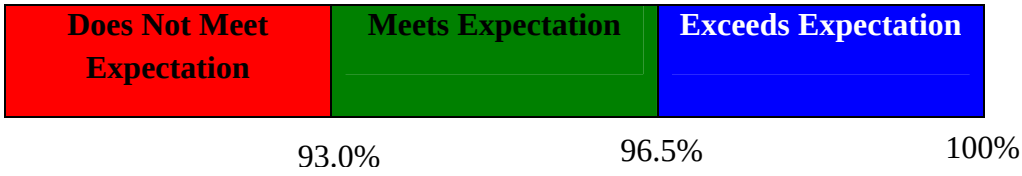
Problem Resolution

Problem resolution is the measured response of the contractor's performance to provide corrective action to system, sub-system and/or component malfunction or failure.

Expectation - Problem Resolution
Successfully resolve all service problems and return to service prior to the original receipt time of the service problem on the next work day.

Performance Standard - Problem Resolution
Completed by Expected Problem Resolution Time (EPRT) 93.0 - 96.5% Completed within the EPRT – Meets Expectation > 96.5% Completed within the EPRT - Exceeds Expectation < 93.0% Completed within the EPRT - Does Not Meet Expectation **Open 20 Working Days Past EPRT** No more that 2% open for more than 20 working days past EPRT.

Metric - Problem Resolution:



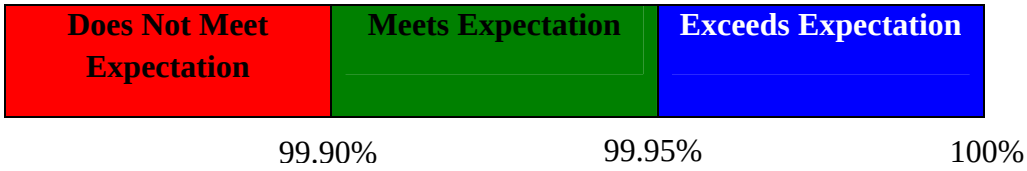
System Availability

System availability is the percent of time the system is available for use by the customer**.** System availability shall be reported to two or three decimal places where possible.

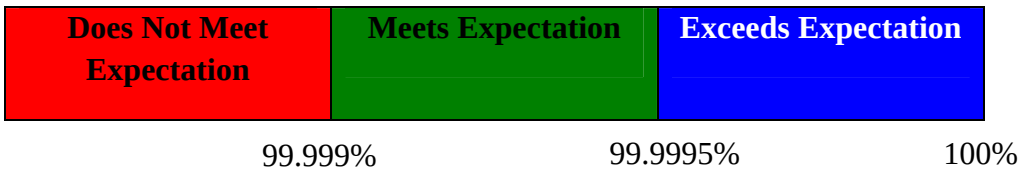
Expectation -System Availability
The systems are to be functional, accessible and useable 24 hours per day 7 days per week and 365 days per year.

Performance Standard - System Availability
Group 1 Systems: Data Center, Cable Plant, Transmissions, Networks and Network Security Perimeter, Imaging, Voice Communications, Engineering Data Center, Library (Online), Forms
99.90 – 99.95% Availability – Meets Expectation > 99.95% Availability - Exceeds Expectation < 99.90% Availability - Does Not Meet Expectation
Group 2 Systems: Telephones and Timing
99.999 – 99.9995% Availability – Meets Expectation > 99.9995% Availability - Exceeds Expectation < 99.999% Availability - Does Not Meet Expectation

Metric - System Availability – Group 1



Metric - System Availability - Group 2



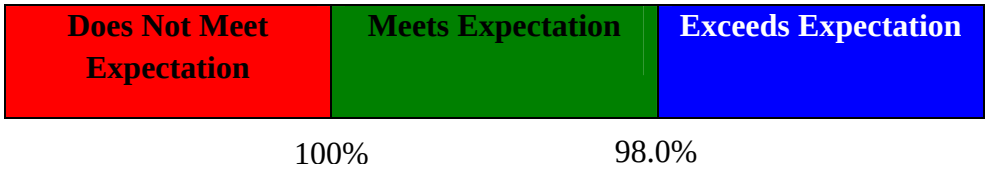
Cost Performance

This metric tracks the actual contract costs of CLIN 001 for the period and is reported to the Government for use in the Cost Control Evaluation.

Expectation – Cost Performance
Actual costs within the contractor's control are less than or equal to the Negotiated Estimated Cost (NEC) of CLIN 001 for the period.

Performance Standard – Cost Performance
Actual Cost Is: 98.0% - 100% of NEC – Meets Expectation < 98.0% of NEC - Exceeds Expectation > 100% of NEC - Does Not Meet Expectation

Metric – Cost Performance



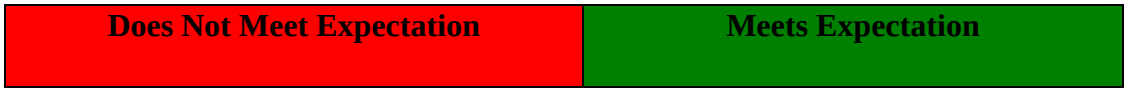
Safety and Quality Metrics

These metrics track Safety and Quality performance.

Expectation – Safety and Quality
Maintain a non-fatal injury Total Case Incident Rate (TCIR) below the U.S. Department of Labor (DOL) Bureau of Statistics (BLS) established limits for NAICS Code 517100.
Maintain an injury/illness Days Away From Work, Restricted Work Activity, and Job Transfer Rate (DART) below DOL BLS established limits for NAICS Code 517100.
Complete work correctly with no rework required.

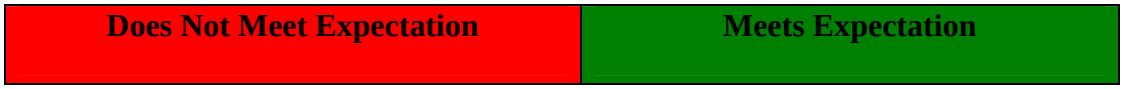
Performance Standard – Safety and Quality
TCIR < 2.10
DART < 1.30
First Time Quality 95.0% - 98.0% work completed without rework – Meets Expectation > 98.0% work completed without rework – Exceeds Expectation < 95.0% work completed without rework – Does Not Meet Expectation

Metric – TCIR



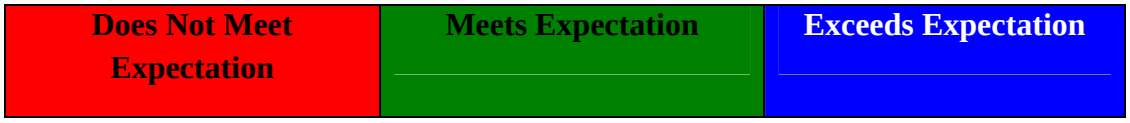
2.10

Metric – DART



1.30

Metric – First Time Quality



95.0% 98.0% 100%

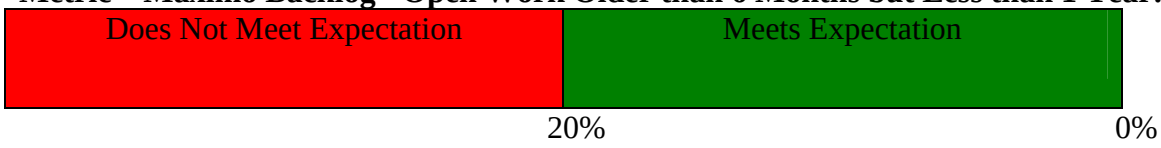
Backlog of Open Maximo Work Items

This metric tracks the backlog of open Maximo work items.

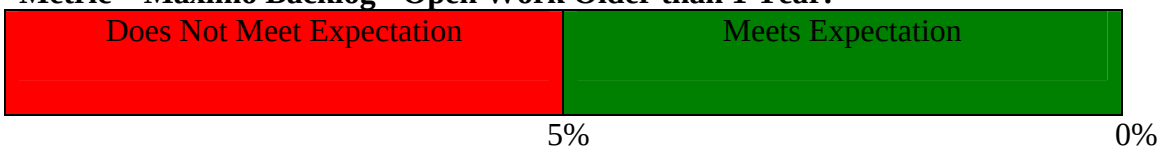
Expectation- Backlog of Open Maximo Work Items
Open Work Older than 6 Months but Less than 1 Year: Maintain all open Maximo work items reported between 6 months and one calendar year ago at a minimum level.
Open Work Older than 1 Year: Maintain all open Maximo work items reported over one calendar year ago at a minimum level.

Performance Standard - Backlog of Open Maximo Work Items
Open Work Older than 6 Months but Less than 1 Year: <= 20% Open – Meets Expectation > 20% Open – Does Not Meet Expectation
Open Work Older than 1 Year: <= 5% Open – Meets Expectation > 5% Open – Does Not Meet Expectation

Metric – Maximo Backlog - Open Work Older than 6 Months but Less than 1 Year:



Metric – Maximo Backlog - Open Work Older than 1 Year:



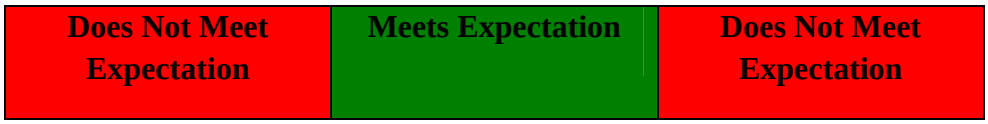
Task Order Estimating

This metric tracks the accuracy of CLIN 002 Task Order proposal cost estimation versus actual cost performance.

Expectation – Task Order Estimating
The contractor will provide accurate cost estimates in task order proposals.

Performance Standard – Task Order Estimating
Estimated Costs versus Actual Cost variances are: 20% Underrun to 5% Overrun – Meets Expectation > 20% Underrun or > 5% Overrun - Does Not Meet Expectation

Metric – Task Order Estimating



20% Underrun 5% Overrun

Appendix 6

Workload Indicators

For

Information Management and Communications Services (IMCS)

WORKLOAD INDICATORS

PWS Element		Indicators	Annual Workload Quantities by FY								
			FY 09	**FY 10**	**FY 11**	**FY 12**	**FY 13**	**FY 14**	**FY 15**	**FY 16**	**FY 17**
1.4.8	System Engineering and Integration	Systems in use	50	50	50	50	50	50	45	45	45
		Document Generation / Document Reviews	150	200	250	250	250	200	200	150	150
3.1.1	Data Center	Number of hosts supported	310	315	320	325	330	335	340	345	350
		Number of data center locations	5	5	4	4	3	3	3	3	3
		Number of web sites/applications	275	285	295	300	300	300	300	300	300
3.1.2	S/W Eng	Priority data changes	75	75	75	75	75	75	75	75	75
		Data changes	375	375	375	375	375	375	375	375	375
		Priority minor changes	375	375	375	375	375	375	375	375	375
		Priority medium changes	225	225	225	225	225	225	225	225	225
		Priority major changes	75	75	75	75	75	75	75	75	75
		Minor change	1350	1350	1350	1350	1350	1350	1350	1350	1350
		Medium change	600	600	600	600	600	600	600	600	600
		Major change	150	150	150	150	150	150	150	150	150
3.2	Cable Plant Services	Trouble Tickets	400	400	280	280	300	320	340	340	340
		Support Requests	175	180	120	120	130	140	150	150	150
3.3	Transmission Services	Trouble Tickets	250	250	180	180	190	200	210	210	210
		Support Requests	100	100	70	70	75	80	85	85	85
3.4.1	Network Services	Trouble Tickets	1,300	1,300	900	900	975	1,000	1,100	1,100	1,100
		Support Requests	1,300	1,300	900	900	975	1,000	1,100	1,100	1,100
3.4.2	Network Security Perimeter	Access Request	150	150	125	125	150	150	150	150	150
		Support Requests	125	125	125	125	125	125	125	125	125
3.4.3	Telephone Services	Trouble Tickets	4,000	4,000	2,800	2,800	3,000	3,200	3,400	3,400	3,400
		Support Requests (TDM)	3,900	3800	3500	2900	2800	2500	2200	2000	1800
		Support Requests (VoIP)	100	130	170	200	270	400	530	670	800
		TDM Instruments (each)	18,000	17,500	16,000	13,500	12,750	11,500	10,250	9,250	8,250
		VoIP Instruments (each)	750	1,000	1,250	1,500	2,000	3,000	4,000	5,000	6,000
3.4.4	Secure Remote Access	Account Request	2,000	400	500	2,500	500	500	3,500	500	500
		Support Requests	600	350	350	650	350	350	700	350	350
3.5	Imaging Services	Trouble Tickets	150	150	105	105	110	120	130	130	130
		Support Requests	1,300	1,300	910	910	975	1,050	1,100	1,100	1,100
3.6	Graphic Services	Basic products	900	900	850	850	900	900	850	850	850
		Complex products requiring lengthy planning & frequent customer interface	700	700	650	650	700	700	650	650	650

WORKLOAD INDICATORS

PWS Element		Indicators	Annual Workload Quantities by FY								
			FY 09	**FY 10**	**FY 11**	**FY 12**	**FY 13**	**FY 14**	**FY 15**	**FY 16**	**FY 17**
3.7	Audio Visual & Production Support Services	Videoconferences supported (events)	1,500	1,650	1,650	1,500	1,500	1,350	1,350	1,200	1,200
		Assist with AV presentations (events)	700	770	770	700	700	630	630	560	560
		Provide sound reinforcement (events)	270	270	190	190	200	220	230	230	230
		AV equipment loans	60	60	60	60	60	50	50	50	50
3.8	Timing Services	Trouble Tickets	50	50	35	35	40	40	40	40	40
		Support Requests	50	50	35	35	40	40	40	40	40
3.9	Voice Comm Services	Trouble Tickets	750	750	525	525	565	600	640	640	640
		Support Requests	580	580	410	410	435	470	500	500	500
3.10	Electromagnetic Measurement & Analysis Svcs	EMI Tests	n/a	45	45	45	45	40	40	35	35
		Beacon Readouts	n/a	10	10	10	10	14	18	20	20
		Launch Support	n/a	10	10	10	10	12	14	15	15
3.11	Publications Services	Research, write, edit, & post web videos & podcasts	150	180	165	150	150	135	135	120	120
		Research, write, edit, & post web feature-length articles	150	180	165	150	150	135	135	120	120
		Coordinate, write scripts, & post live web productions	50	60	55	50	50	45	45	40	40
		Perform minor updates to web pages	360	435	400	360	360	325	325	290	290
		Create new or modify existing web pages	270	325	300	270	270	245	245	220	220
		Release and post press releases	100	115	110	100	100	90	90	80	80
		Release and post status reports	50	60	55	50	50	45	45	40	40
		Publish KSC internal newsletters	80	95	85	80	80	70	70	65	65
		Writing assignments	350	420	385	350	350	315	315	280	280
		Captions created for photos	2,200	2,640	2,420	2,200	2,200	1,980	1,980	1,760	1,760
3.12	Printing, Reproduction, and Microimaging Services	Printing / duplicating (8.5x11 page equiv)	40,000,000	50,000,000	45,000,000	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000
		Color copies (8.5x11 page equiv)	1,500,000	1,800,000	1,650,000	1,500,000	1,500,000	1,350,000	1,350,000	1,200,000	1,200,000
		Drawing reproductions (sq. ft.)	1,212,000	1,454,000	1,333,000	1,212,000	1,212,000	1,091,000	1,091,000	970,000	970,000
		Encode aperture cards	50,000	60,000	55,000	50,000	50,000	45,000	45,000	40,000	40,000
		Aperture cards scanned to raster files	120,000	144,000	132,000	120,000	120,000	108,000	108,000	96,000	96,000
		Documents scanned to CDROM	3,500,000	4,000,000	3,750,000	3,500,000	3,250,000	3,000,000	3,000,000	2,700,000	2,700,000
		Microfiche scanned to CDROM	65,000	78,000	71,500	65,000	65,000	58,500	58,500	52,000	52,000
		Prints created from aperture & microfiche	30,000	30,000	30,000	30,000	20,000	20,000	20,000	20,000	20,000
		Microforms inventory	1,700,000	2,000,000	1,800,000	1,700,000	1,600,000	1,450,000	1,450,000	1,300,000	1,300,000
		Images indexed via hyperlinks	1,700,000	2,040,000	1,870,000	1,700,000	1,700,000	1,530,000	1,530,000	1,360,000	1,360,000
		Images converted for MS Word format	20,000	24,000	22,000	20,000	20,000	18,000	18,000	16,000	16,000

WORKLOAD INDICATORS

PWS Element		Indicators	Annual Workload Quantities by FY								
			FY 09	**FY 10**	**FY 11**	**FY 12**	**FY 13**	**FY 14**	**FY 15**	**FY 16**	**FY 17**
3.13	Engineering Data Center	Engineering document sheets processed	27,000	29,000	29,000	27,000	25,000	21,500	21,500	20,000	20,000
		Document Release Authorizations	2,000	2,400	2,200	2,000	2,000	1,800	1,800	1,600	1,600
3.14	Library Services	Acquistions	39,000	39,000	39,000	39,000	39,000	35,000	35,000	30,000	30,000
		Items circulated	87,000	90,000	90,000	87,000	87,000	78,000	78,000	70,000	70,000
		Updates to library online catalog	45,000	50,000	47,500	45,000	45,000	40,000	40,000	36,000	36,000
		Reference requests	160,000	175,000	160,000	150,000	150,000	140,000	140,000	125,000	125,000
3.16	Forms Services	Forms created or revised	800	960	880	800	800	720	720	640	640
		Requests for stock forms	2,000	2,400	2,200	2,000	2,000	1,800	1,800	1,600	1,600
3.17	IT Security Services	Incident investigations	70	75	80	100	100	100	125	125	125
		IT Security Documentation Packages	50	50	50	50	50	50	50	50	50
3.18	Center Managed Services	Fan Mail kits & special items distributed	33,000	35,000	31,000	32,000	33,000	33,000	30,000	30,000	30,000
	Unless otherwise noted, quantities indicate the number of times the service was performed.										

Appendix 7
Applications List

For

Information Management and Communications Support (IMCS)

This appendix describes the applications that are currently supported by the contractor as stated in PWS 3.1. This list shall be maintained and will serve as a work load indicator for Systems and Applications supported under this contract.

Systems and Applications are assigned Approval types and Return To Service (RTS) times.

There are three different types of Approvals as defined below:

1. **Formal Approval:** Systems or Applications used by the Government and for which the Government dictates, approves, or disapproves changes. These Systems and Applications are managed under a joint Change Control Board (CCB) where Government and contractor participate in addressing Change Requests (CRs) and other issues.

2. **Informal Approval:** Systems or Applications containing data owned by the Government for which the contractor may make changes to the system without Government approval as long as the basic functionality and level of service is not affected.

3. **No Approval:** Systems or Applications used by the contractor to fulfill contractual needs or systems or applications where the Government is the data owner but the contractor may make changes without Government approval.

Return To Service (RTS) Category is defined as Standard or Critical. Items listed as Standard shall be returned to service in accordance with Problem Resolution expectations defined in Appendix 5, Expectations, Performance Standards, and Metrics.

Items listed as critical shall be returned to service within four clock hours. Problems reported outside nominal support hours require call-in support.

Status can be Development, Active, or Archive; some applications under Development might be On-Hold. Applications listed as Archive do not require new development but are to be maintained so the data is accessible to the Government.

Primary User lists the main users of the application including the organization, if known.

Computer denotes where the applications are currently hosted, except for Mainframe applications, most others will be transferred to the main Data Center environment during the period of performance of this contract as directed by the Government.

Language captures the main development software used to write the code for the application.

DBMS contains the database used to capture the data associated with the application, if applicable.

Type identifies applications as being a Web Page, a Custom application, an Interface, a Commercial Off The Shelf (COTS), or a Government Off The Shelf (GOTS) product.

1. **Web Page**: identifies web sites that do not include an application or database backend and display information only.

2. **Custom**: identifies applications and databases developed, maintained, and/or sustained by the contractor.

3. **Interface**: identifies interface software developed, maintained, and/or sustained by the contractor used to receive and extract data in support of KSC users; however the IMCS contractor does not have O&M responsibility for the source application.

4. **Commercial Off The Shelf (COTS)**: identifies commercially available software for which the contractor has the responsibility for installation, configuration, and administration.

5. **Government Off The Shelf (GOTS)**: identifies Government developed software for which the contractor has the responsibility for installation, configuration, and administration.

A listing of current applications follows on the next page:

Current Applications List

App Name: **Senior Secretarial Council Website** **AppID:** **AA01**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** none **Type:** Web Page **RTS Cat.:** Standard
App Desc: Website for NASA, displaying a variety of information used by NASA Senior Secretarial Pool and other interested parties.

App Name: **NASA Personnel/Payroll System (NPPS)** **AppID:** **AC02**
Status: Active **Primary User:** NASA Comptroller **Approval:** Informal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS PNATC **Type:** Custom **RTS Cat.:** Standard
App Desc: This application has been placed in an archive state such that legacy data can be accessed. No development work required.
A standard agency-wide system designed for personnel information management and payroll calculation and distribution. This system conforms to all government regulations regarding federal government employees. It was developed as a result of a specific REFORM 88 initiative to improve efficiency of Personnel and Payroll functions throughout the federal government.

App Name: **NASA Interactive Planning System (NIPS)** **AppID:** **AC03**
Status: Archive **Primary User:** NASA Comptroller **Approval:** Informal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS PNATB **Type:** Custom **RTS Cat.:** Standard
App Desc: This application has been placed in an archive state such that legacy data can be accessed. No development work required.
Used by NASA to formulate, analyze, evaluate, and monitor project and program plans. There are two subsystems: NIPS-PMR is used to track monthly obligations, costs, and manpower for one fiscal year; plan values coming from POP(s) and actuals from STARS. NIPS-KSC/POP is used to plan resources, dollars and manpower by fiscal year, months and quarters.

App Name: **Space Transportation Accounting Resources System (STARS)** **AppID:** **AC06**
Status: Archive **Primary User:** NASA Comptroller **Approval:** Informal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** PNATB **Type:** Custom **RTS Cat.:** Standard
App Desc: This application has been placed in an archive state such that legacy data can be accessed. No development work required.
Used by NASA for financial management at KSC. All financial transactions are captured. Provides support for General Ledger, Accounts Payable and Receivable, Billings and Collections, Travel, and Funds Control.

App Name: **KSC Labor Distribution (aka GH29)** **AppID:** **AC07**
Status: Archive **Primary User:** NASA Comptroller **Approval:** Informal **Computer:** IBM Mainframe
Language: NATURAL/COBOL **DBMS Type:** PNATA **Type:** Custom **RTS Cat.:** Standard
App Desc: This application has been placed in an archive state such that legacy data can be accessed. No development work required.
Application replaced in October 05 with "ALDS" which is an Agency solution. Used to balance labor costs to payroll, budget control, cost estimating, cost control, and budget preparation. This system is also used for estimating manpower requirements, manpower control, overtime analysis and control, and equipment analysis. Bi-weekly edits include number of hours worked, work order number, cost center, service code, appointment code, personnel compensation, personnel benefits, type of pay, and status code.

App Name: **STARS Interactive Reporting Subsystem (SIRS)** **AppID:** **AC08**
Status: Archive **Primary User:** NASA Comptroller **Approval:** Informal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** PNATB **Type:** Custom **RTS Cat.:** Standard
App Desc: This application has been placed in an archive state such that legacy data can be accessed. No development work required.
Used by NASA to generate ad hoc reports from the STARS financial database. Provides support to RMO offices for financial planning.

App Name: **KSC Reading Room Website** **AppID:** **AE01**
Status: Active **Primary User:** KSC **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Web Page **RTS Cat.:** Standard
App Desc: Website communicating information from the Center Director and associated data to the KSC population at large.

App Name: **Spaceport Weather Alerts System** **AppID:** **AF04**
Status: Active **Primary User:** NASA PH **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: This application provides the ability to store and disseminate weather alert information. Using AF04, alerts can be transmitted to all consoles (on which AF04 is installed), providing real time weather alert notification to users via a scrolling banner.

App Name: **Annual Training and Development Survey (ATDS)** **AppID:** **BA02**
Status: Active **Primary User:** NASA BA-C **Approval:** Formal **Computer:** ODIN Server
Language: Cold Fusion 5 **DBMS Type:** SQL Server 7 **Type:** Custom **RTS Cat.:** Standard
App Desc: The primary function of the ATDS application is to collect data regarding desired training from each KSC NASA employee. Secondary functionality is related to utilization of reports which summarize data entered. An example would be a report which indicates how many people center wide are requesting to attend courses at a college, the total dollar value of these requests, and a breakdown by directorate of all such requests. Once collected, the data can be used in a variety of ways including training budget estimates or other determined usage.

App Name: **KSC Human Resources Website** **AppID:** **BA04**
Status: Active **Primary User:** NASA BA **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** Access **Type:** Web Page **RTS Cat.:** Standard
App Desc: Website for the KSC Human Resources Directorate containing HR related information for the NASA employee.

App Name: **Bureau of National Affairs Environmental Library** **AppID:** **BNA**
Status: Active **Primary User:** NASA **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: Contains text of OSHA, EPA, and DOT regulations, acts, Federal Register, state regulations, and other documents. This CD-based database includes information on federal and state environmental laws, regulations, and legal cases.

App Name: **Computer Aided Dispatch 4D** **AppID:** **CAD**
Status: Active **Primary User:** NPSC **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** COTS **RTS Cat.:** Standard
App Desc: CAD (Computer Aided Dispatch) is the application used by the JCCC/AJCCC to respond to 911 calls, dispatch fire / emergency / security personnel, and archive related data/information for future reporting/analysis. The product currently utilized is RESPONSE, built by Public Safety Systems, Inc. (PSSI).

App Name: **Circuit Assignment Management System (CAMS)** **AppID:** **CAMS**
Status: Active **Primary User:** IMCS **Approval:** Formal **Computer:** IMCS Server
Language: Visual Basic **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard
App Desc: Cable records are managed using the Circuit Assignment Management System (CAMS). It automatically selects available circuits and specifies the cross-connects necessary to provide a complete a path between endpoints. In addition, CAMS provides information about which users will be affected when planning circuit outages.

App Name: **Coarse Wave Division Multiplex (CWDM) Tool** **AppID:** **CWDM**
Status: Active **Primary User:** IMCS **Approval:** Formal **Computer:** IMCS Server
Language: C **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: CWDM tool provides detail tracking and visual representation of the fiber plant utilization.

App Name: **Acoustic Launch and Vibration Data Plot** **AppID:** **DE Plots**
Status: Active **Primary User:** NASA PH **Approval:** None **Computer:** PC
Language: **DBMS Type:** **Type:** COTS **RTS Cat.:** Standard
App Desc: "Acoustic Launch & Vibration Data Plot." This application utilizes MatLab as a math model for analysis of acoustic

and vibration loads on the Orbiter from engine start through MECO. Primary user is Dr. Bruce Vu (NASA).

App Name: **FreeFlow** **AppID:** **FreeFlow**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** COTS **RTS Cat.:** Standard
App Desc: DigiPath has been replaced by FreeFlow. FreeFlow is a COTS application from Xerox that is used to scan and prepare documents for printing to the Xerox Docutech printers and the Xerox Creo color printer.

App Name: **Business World Website** **AppID:** **EA01**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** ODIN Server
Language: HTML **DBMS Type:** N/A **Type:** Web Page **RTS Cat.:** Standard
App Desc: Website for NASA to provide Business and Administrative information to the NASA KSC employee and other interested parties at KSC.

App Name: **Benchmarking Website** **AppID:** **EA02**
Status: Active **Primary User:** NASA KSC **Approval:** Formal **Computer:** IMCS Server
Language: HTML/Flash **DBMS Type:** N/A **Type:** Web Page **RTS Cat.:** Standard
App Desc: Website for the Kennedy Benchmarking Clearinghouse Charter group to provide benchmarking and other related information.

App Name: **Independent Technical Authority and Systems Management Office Website** **AppID:** **EA03**
Status: Development **Primary User:** NASA EA **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** N/A **Type:** Web Page **RTS Cat.:** Standard
App Desc: Business Systems Division performance-based management systems to ensure the effective alignment of Center wide work processes/products with the customer.

App Name: **Systems Management Office** **AppID:** **EA04**
Status: Active **Primary User:** NASA EA **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** N/A **Type:** Custom **RTS Cat.:** Standard
App Desc: The Systems Management Office, acting as an agent for the KSC Center Director, KSC's CFO and the NASA Chief Engineer (Code D), assures that development efforts and mission operations are being planned and conducted on a sound engineering and project management basis with appropriate controls and management of technical risks.

App Name: **NASA Exchange Council Web Site** **AppID:** **EX03**
Status: Active **Primary User:** KSC **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Web Page **RTS Cat.:** Standard
App Desc: Website for the NASA Exchange Council to provide information on Exchange Council services to include the Exchange Council Stores, KARS I and II parks, Service Station and Child Development Center.

App Name: **NASA Exchange Council KARS Application** **AppID:** **EX04**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: ColdFusion 5 **DBMS Type:** SQL Server 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: Application for the NASA Exchange Council KARS parks website. Allowing employees to request reservations for KARS parks facilities and services. Administrative portion of the application provides KARS parks personnel with the ability to manage the Reservation requests.

App Name: **NASA Exchange Council Store Application** **AppID:** **EX05**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: Coldfusion 5 **DBMS Type:** SQL Server 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: Application for the NASA Exchange Council Store website. The application allows Store personnel to post product and service information to the Website.

App Name: **Federal Logistics (FEDLOG)** **AppID:** **FEDLOG**
Status: Active **Primary User:** ISC **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** COTS **RTS Cat.:** Standard
App Desc: FED LOG is the logistics information system published by the Defense Logistics Information Service (DLIS).

Cataloging information on 7 million-plus stock numbers and 12 million-plus part numbers, FED LOG is available in CD-ROM or DVD format. Updated monthly, FED LOG is ever changing to meet the needs of military and civilian personnel worldwide.

App Name: **User Verification System** **AppID:** **FF03**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: ASP **DBMS Type:** SQL 7.0 **Type:** Custom **RTS Cat.:** Standard
App Desc: Application used by System Administrators to verify identification of users during an IT system password reset.

App Name: **KSC Electronic Forms Tracking System** **AppID:** **FF10**
Status: Active **Primary User:** IMCS **Approval:** Formal **Computer:** IMCS Server
Language: Visual Basic **DBMS Type:** Access **Type:** Custom **RTS Cat.:** Standard
App Desc: The Forms Automated Tracking and Reporting System is a custom designed PC application to track the inventory of forms, usage, and issuances at the Kennedy Space Center (KSC) Forms Control Center. FF10 also provides a replicated version used for a master index search capability on the KSCFORMS System web site for the NASA Community.
The application was designed to allow entry of information pertaining to a specific form and its orders, receipts and issues. This information can then be easily viewed and tabulated for online and hard copy reports. This application supports NASA (agency-wide), the Contractor and any others who require access to a KSC form.

App Name: **KSC Engineering Documentation System (KEDS)** **AppID:** **FF11**
Status: Active **Primary User:** NASA **Approval:** Informal **Computer:** IMCS Server
Language: Visual Basic, ASP **DBMS Type:** SQL 7.0 **Type:** Custom **RTS Cat.:** Standard
App Desc: The KSC Engineering Documentation System is a web-based application that provides the KSC engineering community with easy access to electronic images of flight and ground support engineering drawings and associated documents. The system allows for paperless distribution of engineering drawings, reducing user trips to document centers and minimizing on-site support at document centers, while allowing data access 24 hours a day, seven days a week. Over 200,000 engineering drawings are currently available online. KEDS drawings can be accessed by all on-site U.S. persons at KSC.
As drawings and documents may be sensitive in nature and/or classified as Administratively Controlled Information (ACI), KEDS complies with ACI directives and guidelines, and the requirements set forth in the International Traffic in Arms Regulations (ITAR) and Export Administration Regulations (EAR). Access to KEDS is limited to U.S. persons (via an access control list) and user authentication is required.

App Name: **Engineering Documentation File Mgmt. (EDFM)** **AppID:** **FF14**
Status: Active **Primary User:** NASA **Approval:** Informal **Computer:** IMCS Server
Language: Visual Basic, ASP **DBMS Type:** SQL 7.0 **Type:** Custom **RTS Cat.:** Standard
App Desc: The EDFM system is the vehicle for electronic release and management of drawings and related documentation under configuration control. This application currently runs on an NT server and Windows NT/98 workstations, using Microsoft SQL Server database to maintain configuration control. Over 14,000 engineering drawings are maintained on a server supporting NASA and the Contractor customers with another 15,000+ drawings residing on a server supporting CAPPS customers.

App Name: **Fluids Inventory Management System (FIMS)** **AppID:** **FK01**
Status: Active **Primary User:** NASA **Approval:** Informal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS **Type:** Custom **RTS Cat.:** Standard
App Desc: Used for recording and reporting fluids equipment (tankers, cylinders, and drums) related to vendor deliveries of commodities for each trip, date and quantity delivered.

App Name: **Acquisition Management Subsystem (AMS)** **AppID:** **GD03**
Status: Active **Primary User:** NASA **Approval:** Informal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS **Type:** Custom **RTS Cat.:** Standard
App Desc: Tracks purchase orders, materiel requisitions, and contracts issued by the KSC NASA procurement office. Grants and intergovernmental purchases are referred to as procurements unless specified otherwise. The basic relationship for contract reporting is between the contract number and the materiel/purchase request number. The system processes contracts, materiel/purchase requests, purchase orders, blanket purchase agreements, orders under contract, grants and contract modifications (new work, change orders, supplemental agreements, and administrative changes).

App Name: **IFMP User Management System** **AppID:** **GG02**
Status: Active **Primary User:** Brian Bookhart, IT- **Approval:** Formal **Computer:** ODIN Server
Language: Visual Basic 6.0 **DBMS Type:** SQL 7.0 **Type:** Custom **RTS Cat.:** Standard
App Desc: The Integrated Enterprise Management Program (IEMP) User Management System (UMS), known as IEMP-UMS, is an application designed to provide the system administrators and data owners of the IFMP modules or applications a more efficient means to manage the access, module assignments, and roles of NASA Users. The IEMP-UMS application provides an online means for viewing, analyzing, and modifying different aspects of the Users' accounts, and provides reports electronically. IEMP was formerly known as IFMP.

App Name: **IFMP SAP Core Financials** **AppID:** **GG04**
Status: Active **Primary User:** NASA GG **Approval:** Formal **Computer:** IEMP Server
Language: ABAP **DBMS Type:** Oracle **Type:** GOTS **RTS Cat.:** Standard
App Desc: Agency Core Financial Management system. The Contractor is responsible for providing System Administrative, and Interface support for the Core Financial module of SAP.

App Name: **Core Financial Business Warehouse** **AppID:** **GG05**
Status: Active **Primary User:** NASA GG **Approval:** Formal **Computer:** IEMP Server
Language: ABAP **DBMS Type:** Oracle **Type:** GOTS **RTS Cat.:** Standard
App Desc: Business Warehouse for Core Financial provides a means for reporting from Core Financial data. The Contractor is responsible for providing System Administrative support.

App Name: **IFMP Travel Manager** **AppID:** **GG06**
Status: Active **Primary User:** NASA GG **Approval:** Formal **Computer:** IEMP Server
Language: COTS **DBMS Type:** Oracle **Type:** GOTS **RTS Cat.:** Standard
App Desc: Travel Manager provides an electronic means for creating, approving and distributing travel documents. The Contractor is responsible for providing System Administrative support for Travel Manager. The Contractor is not responsible for creating and deleting new accounts for Travel Manager.

App Name: **Federal Personnel and Payroll System** **AppID:** **GG07**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS **Type:** GOTS **RTS Cat.:** Standard
App Desc: FPPS is the Federal Personnel Payroll System that NASA selected to implement as the NASA Agency Person and Payroll System also, the Contractor is responsible for providing some system administrative support for FPPS. The Contractor does not have the responsibility for creating new accounts and deleting existing accounts within FPPS.

App Name: **KSC Travel Office Application** **AppID:** **GG08**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: The application will generate paperless travel notices to NASA travelers. The process will automatically send e-mail notices to employees who have outstanding vouchers, will randomly select vouchers for travel audit and e-mail the request to provide voucher receipts to the travel office. Will also provide a database for which reports and metric can be obtained on travel processes.

App Name: **Process Control System** **AppID:** **GG09**
Status: Active **Primary User:** NASA GG **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: The scope of the PCS application is to develop an on-line application that GG management can use to monitor the health of the organization by analyzing and manipulating data to provide useful management metrics and reports on the organization's key processes: Travel, 533, PR and Labor.

App Name: **Goal Performance Evaluation System (GPES)** **AppID:** **HM03**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** ODIN Server
Language: ASP **DBMS Type:** SQL 7.0 **Type:** Custom **RTS Cat.:** Standard
App Desc: The Goal Performance Evaluation System (GPES) focuses on individual performance and the management of employee actions. GPES was developed in response to the NASA Strategic Management Handbook which identifies the "Center Implementation Plan as the communication tool to enable the Center's customers to see that their requirements are being addressed and to ensure that employees understand their contribution to the highest level

strategies and objectives." GPES was developed to successfully accomplish these objectives and maximize the involvement of every employee in the future direction of the Agency. All KSC NASA personnel use this system. GPES is comprised of the following modules:
Performance Planning, where supervisors define the Mission Objectives and supporting Strategies for each of their employees, from within or outside the Directorate's Business Objectives and Agreements (BOAs). Individual employees' Job Specifics and Action Plans can also be identified.
Performance Evaluation, for mid-term and annual Performance Appraisal processes, allows the appraisals to be completed and assessed on-line. An employee's individual rating for each objective can be tracked and summarized. The status of each Performance Appraisal is also tracked.
Safety and Health First (Voluntary Protection Program, VPP), tracks safety inspections, meetings, Job Hazard Analysis (JHA), miscellaneous activities, and open hazard issues. Reports are available to allow for supervisory monitoring of their safety activities.
Public Outreach, where employees enter activities pertaining to their contributions and assistance with outside organizations and affiliations. Data collected includes presentations, interviews, and speeches; education activities; external exhibits; launch and landing support activities; KSC tours/escorts (non-launch and -landing); new customer outreach; volunteer support for KSC special events; community service; and other public outreach activities.

App Name: **H-SERIES** **AppID:** **H-SERIES**
Status: Active **Primary User:** NASA **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** COTS **RTS Cat.:** Standard
App Desc: The H-Series CD-ROM product contains the following Cataloging Handbooks: H2, Federal Supply Classification(FSC); H3, DoD Ammunition Codes; H4/H8, Commercial and Government Entity (CAGE) Codes; H5, Corporate Complex Data; and H6, Federal Item Name Directory (FIND). The H-Series is published in its entirety monthly on CD-ROM. Each product supersedes previous editions, and installation is required each month.

App Name: **KSC Records Management System** **AppID:** **IM03**
Status: Active **Primary User:** NASA **Approval:** Informal **Computer:** IMCS Server
Language: Visual Basic 3.0 **DBMS Type:** NT **Type:** Custom **RTS Cat.:** Standard
App Desc: The KSC Records Retirement Database System supports dual input by NASA/KSC RSA Manager and RSA Warehouse contractor personnel in a windows application. It tracks the retired records (documents) as they are stored in the warehouse and moved off-site to the Federal Warehouse.

App Name: **Contractor Mail Labels** **AppID:** **IM07**
Status: Active **Primary User:** Mail **Approval:** None **Computer:** IMCS Server
Language: Clipper **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: This system is the data collection point for ATS mailing labels data for all of KSC. This application resides on the NT server as a Clipper 5.2e network application and is Year 2000 compliant.

App Name: **Automatic Distribution Service System (ADSS)** **AppID:** **IM08**
Status: Active **Primary User:** Mail **Approval:** Informal **Computer:** PC
Language: Clipper 5.2 **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: The Automated Distribution Services System collects and stores the necessary data for automated mailing labels. Used to support KSC personnel.

App Name: **Retired NASA Mailing Labels System** **AppID:** **IM10**
Status: Active **Primary User:** Mail **Approval:** Informal **Computer:** PC
Language: Clipper 5.2 **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: The Retired NASA Mailing Labels System collects and stores all the necessary data for producing mail labels for all retired NASA personnel.

App Name: **Miscellaneous Mailing Labels** **AppID:** **IM11**
Status: Active **Primary User:** Mail **Approval:** Informal **Computer:** PC
Language: Clipper 5.2 **DBMS Type:** S/A **Type:** Custom **RTS Cat.:** Standard
App Desc: The Miscellaneous Mailing Labels System collects and stores the necessary data for producing miscellaneous mailing labels. Used to support KSC and CCAFS personnel.

App Name: **One Label System** **AppID:** **IM12**
Status: Active **Primary User:** Mail **Approval:** Informal **Computer:** PC

Language: Clipper 5.2 **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: The One Label Mail system is used to create and store one mail label as desired. Used to support KSC and CCAFS personnel.

App Name: **Invite for Bids Mailing Labels** **AppID:** **IM14**
Status: Active **Primary User:** Mail **Approval:** Informal **Computer:** PC
Language: Clipper 5.2 **DBMS Type:** S/A **Type:** Custom **RTS Cat.:** Standard
App Desc: The system provides a means to collect and store data for the Invitation for Bids mail labels. Used to support NASA procurement.

App Name: **Fleet Management Tracking System (FMTS)** **AppID:** **IM35**
Status: Active **Primary User:** NASA/IMCS **Approval:** Informal **Computer:** IMCS Server
Language: Visual Basic 3.0 **DBMS Type:** N/A **Type:** Custom **RTS Cat.:** Standard
App Desc: This system is a Windows based application which is used to record the data from the Fleet Management Control area. It is a rewrite of an existing Dbase user written application.

App Name: **Heavy Equipment Log** **AppID:** **IM76**
Status: Active **Primary User:** ISC **Approval:** Informal **Computer:** IMCS Server
Language: Visual Basic 3.0 **DBMS Type:** Access **Type:** Custom **RTS Cat.:** Standard
App Desc: Heavy Equipment System is an application designed for logging and tracking of procurement information for heavy equipment parts and supplies. The user enters basic information relating to the equipment/parts: date ordered, date received, date issued, cost, part number, requester, purchase request number and BPA number. Used by the Contractor to maintain equipment in support of NASA and AF projects.

App Name: **Janitorial Facility Listing System** **AppID:** **IM77**
Status: Active **Primary User:** Custodial **Approval:** None **Computer:** IMCS Server
Language: VB6 **DBMS Type:** Access 97 **Type:** Custom **RTS Cat.:** Standard
App Desc: This system will provide a data collection point for the USAI Janitorial Services management and the NASA directorate. It will reside on the NT server as a Visual Basic 3.0 networked application using Access 2.0 database.

App Name: **KSC Locator Organization Labels** **AppID:** **IM78**
Status: Active **Primary User:** Mail **Approval:** Informal **Computer:** PC
Language: Visual Basic 3.0 **DBMS Type:** S/A **Type:** Custom **RTS Cat.:** Standard
App Desc: This system is used to print organization labels.

App Name: **Contractor Property System** **AppID:** **IM80**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: Clipper **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: Archived property information used only for property inventories provided by previous contractors.

App Name: **EDW - Self Service Management Tool (SSMT)** **AppID:** **IT01**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: C#.NET **DBMS Type:** SQL 7.0 **Type:** Custom **RTS Cat.:** Standard
App Desc: Phase 1 of the SSMT Project has been developed in an effort to consolidate management of non-sensitive personnel information, improve the quality of data, and to empower employees that log in to the KSC domain with the ability to correct their own information. Phase 1 also includes an enhanced search capability to find KSC employees by first name, last name, mail code, supervisor, and department.

This initial release allows employees to update their own business-related data with approval by the KSC Locator staff. Please allow three to five days to propagate other systems with your updated data. In future releases, the employee's supervisor, the KSC Locator, and/or the Designated Facility Utilization Manager is included in the approval process and other systems are updated more frequently.

App Name: **KSC Internet System (KIS) Applications** **AppID:** **IT02**
Status: Active **Primary User:** NASA, Public **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion, ASP **DBMS Type:** SQL Server, Access **Type:** Custom **RTS Cat.:** Standard

App Desc: KSC INTERNET SYSTEM APPLICATIONS
• Customer Contact Center is designed to enhance interactions with customers, enabling government employees and staff to find and provide information to questions from internal and external customers as well as allow customers to engage in self-service. Having the capability to take common requests for information, bringing that information out to the web and making that information searchable to the public is beneficial. In addition, provide the ability to process requests from customers through this application to track and status requests as well as the ability to provide brief and up to the minute status of activities.
• Countdown Clock simulates the actual launch Countdown Clock. The application is activated at T-43 hours and counts down through all of the appropriate built-in holds, until approximately three days prior to landing. This Virtual Countdown Clock is viewed via the External KSC Home Page.
• KSC Search Engine provides search capability throughout the KSC Internet site. Verity has been incorporated as an indexing software, which powers the actual search activity and allowing advanced searching to be performed. The application provides extremely fast return of search results, highlighting of keywords in the document summary of the search results page, has the ability to search within a result set, and provides numerous advanced search options.

App Name: **NASA Correspondence Templates** **AppID:** **IT03**
Status: Active **Primary User:** NASA **Approval:** Informal **Computer:** IMCS Server
Language: VBA **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: This application was developed to facilitate the formatting and creation of the most commonly used types of National Aeronautics and Space Administration (NASA) correspondence and travel forms. As part of this application, an Access database file is created. This file allows the user to store and recall information for populating common fields used in the creation of correspondence and travel forms. The application only displays the property pages necessary to generate the selected type of correspondence.

App Name: **Combined Federal Campaign Application** **AppID:** **IT04**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** ODIN Server
Language: Cold Fusion 5 **DBMS Type:** SQL Server 7 **Type:** Custom **RTS Cat.:** Standard
App Desc: Annual event. Application captures NASA KSC employees Combined Federal Campaign donations. The application retrieves X.500 identification to include SSN and transmits this information via SSL Certificate.

App Name: **Environmental and Energy Awareness Week (EEAW)** **AppID:** **IT05**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: FORTRAN **DBMS Type:** **Type:** Web Page **RTS Cat.:** Standard
App Desc: Application used for the Annual Environmental and Energy Awareness Week. http://eeaw.ksc.nasa.gov

App Name: **Education Calendar Application** **AppID:** **IT06**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** SQL Server 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: Application used on the Education Website.

App Name: **KSC Internal Home Page** **AppID:** **IT07**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: Directorate and links to internal sites and applications used by internal KSC users.

App Name: **KSC NASA Holiday Dinner Application** **AppID:** **IT08**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** ODIN Server
Language: HTML **DBMS Type:** None **Type:** Custom **RTS Cat.:** Standard
App Desc: Allows employees to print dinner ticket.

App Name: **Equipment Tracking System Application** **AppID:** **IT09**
Status: Active **Primary User:** NASA IT **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** SQL Server 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: Equipment Tracking Application for use by the NASA IT Directorate.

App Name: **KSC Picnic Web Site** **AppID:** **IT10**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** ODIN Server

Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: Web site for NASA, providing information for the planning of the KSC Picnic.

App Name: **KSC Picnic Application** **AppID:** **IT11**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** ODIN Server
Language: ColdFusion 5 **DBMS Type:** SQL Server 7 **Type:** Custom **RTS Cat.:** Standard
App Desc: Consists of various forms for NASA people to sign up for Picnic events and to gather volunteer information. Includes reports.

App Name: **Web Portal Content Management System** **AppID:** **IT13**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: The Portal Content Management System is designed as a Web-based application to control and automate the following tasks for the KSC Web Portal:
1. Editing, building and publishing the main internal home page of the portal (HTML)
2. Editing and publishing all of the various feeds for the portal (RDF/XML)

App Name: **KSC - HSPD-12 Informational Website** **AppID:** **IT14**
Status: Active **Primary User**: KSC **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Web Page **RTS Cat.:** Standard
App Desc: The KSC HSPD-12 website shall provide KSC personnel an informational area to which users will be drawn based on the extent and usefulness of the content to the overall HSPD-12 Program effort as well as specifically to Change Management components of the overall HSPD-12 effort.

App Name: **Employee Data Warehouse Administration Application** **AppID:** **IT15**
Status: Active **Primary User:** IMCS **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: EDW Administration Application is a tool that will allow EDW Administrators to monitor various aspects of the Employee Data Warehouse.

App Name: **PIV II Scheduling Application** **AppID:** **IT18**
Status: Active **Primary User:** KSC **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: The application will allow KSC population to schedule enrollment and issuance for the PIV II Smart Card.

App Name: **UUPIC Lookup Tool** **AppID:** **IT19**
Status: Active **Primary User:** KSC **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: Application associates the NASA UUPIC from other supplied fields (name, email, etc.) and provides the UUPIC data to other systems supporting HSPD-12 project.

App Name: **Patchlink System** **AppID:** **IT20**
Status: Active **Primary User:** NASA IT **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** COTS **RTS Cat.:** Standard
App Desc: PatchLink scans computer networks for vulnerabilities (i.e., viruses) and is used to deliver software patches to secure and protect IT assets. Equipment supporting the Patchlink system include 7 HP Servers, 5 Dell 2850 Servers, 2 Rack Unit PCs, an HP disk storage system, and an LTO tape backup system.

App Name: **Fire PGMS KSC Fire Rescue** **AppID:** **JB01**
Status: Active **Primary User:** NPSC **Approval:** Informal **Computer:** IMCS Server
Language: COTS **DBMS Type:** NT **Type:** Custom **RTS Cat.:** Standard
App Desc: Fire Programs (JB01) serves as the primary database management system for all KSC/CCAFS fire rescue responses (NFIRS). This program also has the capability to track inventory, training, and personnel. The system operates 7-days/week, 24-hours/day.

App Name: **SPECSINTACT Tech Support Tracking System** **AppID:** **JB05**

Status: Active **Primary User:** NASA, A/F, Navy **Approval:** None **Computer:** IMCS Server
Language: VB6 **DBMS Type:** Access 97 **Type:** Custom **RTS Cat.:** Standard
App Desc: JB05 SpecsIntact Tech Support Tracking System is the SI-CCCB approved tool used by the SpecsIntact Support Team for providing services to customers worldwide. It provides an internal interface with the SpecsIntact System and it is utilized to support a variety of functions. It is the control center for collecting, storing and processing information for the following:
Metrics Processing for distribution to Engineering.
Report Processing for distribution to the NAVFAC, the Contractor IT Managers, and SpecsIntact Tech Support History.
Help Support Processing for tracking and maintaining historical information relating to customer assistance. Automated Caller Tracking Function is embedded in this system for tracking customer information, category of help request and duration of support
Change Request Processing for generating, tracking and maintaining historical information relating to change requests submitted by customers around the world. This process compiles and prepares the change requests for SI-CCCB review and a determination is made (approve, defer, reject). It is also used to maintain recommendations, status, impacts, and applied solution. In addition, this information is also used for posting the status of the change requests on the SpecsIntact Web-site.

Problems – Bugs Processing for documenting and tracking system errors, problems and anomalies. Description, recreation and simulation of steps and applied solutions are recorded for current needs and future references.
Requirements Processing for recording customer needs and demands. The requirements are compiled and presented to the SI-CCCB for action determination.
Feedback Database: This database is used to record any comments or suggestions from beta testers.
SpecsIntact User Database: Enables SpecsIntact to keep track of users, companies, problems, systems and application versions most currently used. Through this database SpecsIntact can also average the level of phone support per month and the amount of time required to respond to each call.
Knowledge Base Processing is the result of the collection of historical information from various sources that are structured, stored and categorized accordingly. The Knowledge Base is used for solving difficult and obscure problems, enhancing system upgrades and improving customer assistance, etc.

App Name: **Personnel Access Security System (PASS)** **AppID:** **JB06**
Status: Active **Primary User:** KSC **Approval:** Formal **Computer:** IMCS Server
Language: PL/SQL **DBMS Type:** Oracle 9i **Type:** Custom **RTS Cat.:** Critical
App Desc: PASS serves as the primary database management system for all KSC security credentials and contains security information and credential issuance history for every individual working at or visiting KSC. Area authorizations/de-authorizations for controlled areas are entered in PASS and distributed to two access control systems, ACIDS II and LOACS, via the ATHS. These users enter data, query the database, and/or authorize/create area access credentials. The system operates seven days per week, 24 hours per day.

App Name: **Lockout / Tagout Application** **AppID:** **JB109**
Status: Active **Primary User:** KSC **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: The Lockout / Tagout application is used to track the distribution and use of tags by the Safety and Health Compliance team. LOTO tracks the life cycle of a tag from the time the tag is received from the Form Control office until it has been destroyed.

App Name: **Geographical Information System (GIS) Applications** **AppID:** **JB11**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: ESRI (COTS) Cold **DBMS Type:** Oracle 9i, ArcSDE **Type:** COTS **RTS Cat.:** Standard
App Desc: A Geographic Information System (GIS) is an integrated system of computer hardware, and software, linking topographic, demographic, utility, facility, image and other resource data that is geographically referenced. The design of the geographical information system is based on the concept of a geodatabase that provides the community access to mapping data for the Kennedy Space Center (KSC), Cape Canaveral Air Force Station (CCAFS), and the Florida (FL) Annexes. GIS integrates existing data into the geodatabase through a process of validation and conversion while new geographic data is being collected through field surveys. The organizations currently responsible for system attributes retain responsibility for updating and maintaining those attributes in the GIS database. GIS users access data from the geodatabase via PC-based, web-enabled applications through the intranet/internet, or by using direct network access to perform queries utilizing client software.
GIS WEB APPLICATIONS:
• Spaceport Map Viewer allows easy access to view maps through a thin client interface.

• Web Maps is a thin client interface that allows the user to create customized maps using drawing tools and text capabilities. The application has a data query builder, along with select features.
• Comprehensive Master Planning (CMP) is a geographic information analysis application. CMP allows users to review the locations of features such as buildings, roads, utilities, and land features.
• Real Property Information System (RPIS) is an application designed for the Real Property Analyst with dynamic GIS capabilities. RPIS allows real property analysis and assessments to be performed. Users can interactively query facility information, and directly link to the Facility Information Center for editing of facility attribute information.
• Geodetic Control is a thin client interface that provides a means to locate, review and evaluate published geodetic control monumentation information for the land surveying projects.
GIS STAND ALONE APPLICATIONS
• GIS Road Closure Application provides mapping with ESRI ArcView, customized to meet the needs of the user. The GIS Road Closure Application displays aerial photographs with geographic features that collectively describe the traffic control of the Kennedy Space Center (KSC) and Cape Canaveral Air Force Station (CCAFS) region. The GIS Road Closure Application maps and aerial photographs help the User to visualize and communicate where the appropriate resources and equipment need to be located in order to close roads on a large/small scale, to provide security and safety where needed.
• GIS Locator Application provides mapping with ESRI ArcView, customized to meet the needs of the user. The GIS Locator Application is a stand-alone application that displays specific maps for users wanting to go from "here" to "there". The application allows user to search for a building, employee or phone number, and display the information graphically. The application also incorporates aerial photo locations.
05/23/06 new description:
'A Geographic Information System (GIS) is an integrated system of computer hardware, and software, linking topographic, demographic, utility, facility, image and other resource data that is geographically referenced. The design of the geographical information system is based on the concept of a geodatabase that provides the community access to mapping data for the Kennedy Space Center (KSC), Cape Canaveral Air Force Station (CCAFS), and the Florida (FL) Annexes. GIS integrates existing data into the geodatabase through a process of validation and conversion while new geographic data is being collected through field surveys. GIS users access data from the geodatabase via PC-based, web-enabled applications through the intranet/internet, or by using direct network access to perform queries utilizing client software ie ArcGIS.

App Name: **Contractor Web Authentication** **AppID:** **JB113**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: This system is used to authenticate user credentials against the Active Directory. It then creates a ColdFusion and ASP.Net user session on the webserver for applications to use.

App Name: **Map911 Application** **AppID:** **JB117**
Status: Active **Primary User:** NPSC **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: Map911 is a standalone application of the Joint Communication Control Center (JCC) for 911 emergency calls in Cape Canaveral Spaceport. This application is designed to display location of a selected building and its associated planimetric data. The associated planimetric data includes the following:
1) Roads
2) Buildings
3) Fire Hydrants
4) Natural Gas Lines
5) Emergency Response Grid

App Name: **Flight Information Display System (FIDS)** **AppID:** **JB118**
Status: Active **Primary User:** NASA **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** COTS **RTS Cat.:** Standard
App Desc: FIDS is a Shuttle Landing Facility display of Schedules, Dates and Times of Operations, Fuelings, Maintenance, Take Offs, Landings of all aircraft at the SLF. There is a Windows 3.1 computer in the SLF that is connected to video displays in Fire Station 2 and LCC 1p10. The video displays and communications are maintained by the Facilities Management Alarm Shops.

Video transmission of schedule of SLF departures and arrivals and aircraft routed to a protected software interface and secured by network drop, domain userid and password and COTS userid and password authentication. Maximum 15 connections.

App Name: **Secured Application Manager 2 (SAM2)** **AppID:** **JB139**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: SAM2 is a consolidated System for Application Security that defines relationships between Users, Roles and Restrictions. SAM2 will allow different applications to have a common authorization solution, ensuring consistency and allowing multiple application security maintenance. The system has the ability to assign Users to Roles with or without restriction or it can create and define Roles with specific operations, defined by the application, and then assign the Users to the Role previously created.

App Name: **Fire Alarm Data Collection System** **AppID:** **JB140**
Status: Active **Primary User:** NPSC **Approval:** Formal **Computer:** IMCS Server
Language: Visual C++ **DBMS Type:** SQL 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: The Fire Alarm Data Collection System (FADCS) is an internal Contractor auxiliary system to view and analyze data from three fire alarm systems together: Simplex data, Digitized data, and Siemens data from fire alarm activity on KSC and CCAFS. The three fire alarm systems collect their own data, and the data from each system is transferred on request to the Fire Alarm SQL Server database for consolidation. The FADCS allows the user to view and analyze the consolidated data from all alarm systems.

App Name: **Dynamic Web Site Maintenance** **AppID:** **JB142**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: Cold Fusion **DBMS Type:** MS Access **Type:** Custom **RTS Cat.:** Standard
App Desc: Dynamic website provides a web-based environment whereby designated personnel within an organization can maintain the information that appears on their organization's web page. Approved personnel can enter, edit, or delete pertinent information (such as announcements and events), post important documents, and provide links to relevant web sites/applications.

App Name: **KSC IT Architecture Repository (KITAR)** **AppID:** **JB143**
Status: Active **Primary User:** NASA IT **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: A web application that graphically depicts KSC IT applications and interfaces. Provide an interactive capability to display (a) characteristics of each application, and (b) characteristics of each interface.

App Name: **GIS - Spill Prevention and Control Sub-Application** **AppID:** **JB144**
Status: Active **Primary User:** MESC **Approval:** Formal **Computer:** IMCS Server
Language: ESRI (COTS), **DBMS Type:** Oracle 9i, ArcSDE **Type:** Custom **RTS Cat.:** Standard
App Desc: The objective of the Spill Prevention Sub-Application is to establish NASA compliance with the requirements of 40 CFR Part 112, Oil Pollution Prevention and Response, administered by the Environmental Protection Agency (EPA). The plan addresses prevention of the discharge of oil into or upon waters of the U.S. and applies to petroleum as well as animal and vegetable oils in all forms including gasoline, diesel fuel, hydraulic fluid, grease, sludge, synthetic oil, cooking oil, etc.

App Name: **Security Investigation Tracking System** **AppID:** **JB145**
Status: Active **Primary User:** NPSC **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: This system will track the status of security investigations and provide reporting capabilities.

App Name: **Net Database** **AppID:** **JB147**
Status: Active **Primary User:** NASA **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: MS Access application developed and maintained by KSC Facilities System Maintenance Engineering that tracks and trends inspection activity and findings/discrepancies with regard to the VAB roof debris nets. Accessed by NASA TA for review.

App Name: **PM Job Plan Review** **AppID:** **JB148**
Status: Development **Primary User:** NASA TA **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard

App Desc: MS Access application developed and maintained by KSC Facilities System Maintenance Engineering that performs an automated review of estimated labor hours to actual manhours charges to WONs in support of PM Job Plans. Creates a candidate list for SME review and recommends changes based on pre-set criteria.

App Name: **PM Analysis** **AppID:** **JB149**
Status: Development **Primary User:** NASA TA **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: Large, long-term MS Access application that compiles data from multiple sources to perform analysis for internal and external customers on a wide range of KSC facilities questions including CCR preparation, budgetary, manpower, and operational considerations.

App Name: **Web Emergency Operations Center (Web EOC)** **AppID:** **JB15**
Status: Active **Primary User:** NASA TA **Approval:** Informal **Computer:** IMCS Server
Language: Tango V5.0 **DBMS Type:** SQL Server 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: The Web EOC is a web-based emergency management communications system used to provide real-time information sharing and help to facilitate decision-making in emergency situations. This is a customized COTS application designed to meet the unique requirements of KSC. Web EOC uses a standard Web browser such as Internet Explorer or Netscape. Supports KSC and CCAFS organizations.

App Name: **KSC Protective System Purchase Requisitions** **AppID:** **JB150**
Status: Development **Primary User:** NASA TA **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: This SysID is listed in JB29 at the request of Mr. James King via a prior data call. It represents an MS Access Database that is used by the Facilities Management directorate. Its development has not followed IM processes and procedures and it is not "ready for production"in accordance with IM and IMCS standards. It will remain in "development" until it is adequately developed and documented to allow its transition to production.

App Name: **Protective Systems Employee Database** **AppID:** **JB151**
Status: Development **Primary User:** NASA TA **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: Protective Systems Employee Database; this SysID is listed in JB29 at the request of Mr. James King via a prior data call. It represents an MS Access database that is used by the Facilities Management directorate. Its development has not followed IM processes and procedures and it is not “ready for production” in accordance with IM and IMCS standards. It will remain “in development” until it is adequately developed and documented to allow its transition to production.

App Name: **ESS SON Database** **AppID:** **JB152**
Status: Development **Primary User:** NASA TA **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: An MS Access database used internally by the Power and Protective Systems organization. This SysID is listed in JB29 at the request of Mr. James King via a prior data call. It represents an MS Access database that is used by the Facilities Management directorate. Its development has not followed IM processes and procedures and it is not “ready for production” in accordance with IM and IMCS standards. It will remain “in development” until it is adequately developed and documented to allow its transition to production.

App Name: **Protective Systems Informational Database** **AppID:** **JB153**
Status: Development **Primary User:** NASA TA **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: An MS Access database used internally by the Power and Protective Systems organization. This SysID is listed in JB29 at the request of Mr. James King via a prior data call. It represents an MS Access database that is used by the Facilities Management directorate. Its development has not followed IM processes and procedures and it is not “ready for production” in accordance with IM and IMCS standards. It will remain “in development” until it is adequately developed and documented to allow its transition to production.

App Name: **Protective Systems Parts Quick Look** **AppID:** **JB155**
Status: Development **Primary User:** NASA TA **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: Protective Systems Parts Quick Look; this SysID is listed in JB29 at the request of Mr. James King via a prior data

call. It represents an MS Access database that is used by the Facilities Management directorate. Its development has not followed IM processes and procedures and it is not "ready for production" in accordance with IM and IMCS standards. It will remain "in development" until it is adequately developed and documented to allow its transition to production.

App Name: **Emergency 911/Caller ID ANI/ALI (E911)** **AppID:** **JB16**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: 4th Dimension **DBMS Type:** N/A **Type:** Custom **RTS Cat.:** Standard
App Desc: The E911 Emergency 911 Caller ID ANI/ALI is a GUI telephony PC interface to emergency management phone communications systems. Special administrative phone lines and 911 phone lines link to 9 dispatcher positions from a central hub phone switch. The system is used to provide real-time caller ID and caller location information.

App Name: **Programming Library 52 (PLIB52)** **AppID:** **JB17**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: Clipper 52 **DBMS Type:** Dbase IV **Type:** Custom **RTS Cat.:** Standard
App Desc: JB17 is a library of common Clipper 5.2 routines used by many applications.

App Name: **Programmers Clipper Library (PLIB87)** **AppID:** **JB18**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: clipper Summer '87 **DBMS Type:** N/A **Type:** Custom **RTS Cat.:** Standard
App Desc: JB18 is a library of common Clipper Summer 87 routines used by many applications

App Name: **Joint Mission Operations Support Tool (JMOST)** **AppID:** **JB19**
Status: Active **Primary User:** ISC **Approval:** None **Computer:** IMCS Server
Language: Cold Fusion **DBMS Type:** SQL 7.0 **Type:** Custom **RTS Cat.:** Standard
App Desc: The JMOST is composed of 2 parts; the back-end is a web-based application that allows the Mission Support Office to maintain mission data and ultimately support the Supporting Organization's (SO) reporting of launch readiness requirements. This is a secure application accessible only to the Mission Support Office and team.
The front-end of the JMOST provides access to documents that the Mission Support Office is required to make available. The documents are created and delivered via the web. These documents, generated from stored mission planning data, are accessible to the KSC and CCAFS user community.
The Joint Mission Operations Support Tool (JMOST) automates the production of launch readiness reporting, launch forecasts, and launch history documents currently being posted on the Contractor Web Site: Launch Support Activity, and created with Microsoft Office products by the Mission Support Office. The automation of the documents is accomplished through the collection of mission data that is input and maintained by the application administrator.

App Name: **Hand Held Scanner Systems** **AppID:** **JB21**
Status: Active **Primary User:** NASA **Approval:** None **Computer:** IMCS Server
Language: VB6 **DBMS Type:** Access97 **Type:** Custom **RTS Cat.:** Standard
App Desc: JB21 is used to collect information for direct input to RD40. JB21 is used to maintain a copy of all software for configuration control and database for file structure.

App Name: **Analytical Information Management System (AIMS)** **AppID:** **JB22**
Status: Active **Primary User:** MESC **Approval:** None **Computer:** IMCS Server
Language: VB **DBMS Type:** SQL 7.0 **Type:** Custom **RTS Cat.:** Standard
App Desc: AIMS Phase I is an Analytical Information Management tool designed to convert and house surface and ground water sample data from laboratory text files. The application provides a means to input and edit data, resolve record exceptions received from the laboratories, generate required Landfill Monitoring reports for KSC and CCAFS surface and groundwater wells, and is equipped with an ad hoc reporting tool.

App Name: **Tool Crib Tracking (TCT)** **AppID:** **JB24**
Status: Development **Primary User:** ISC **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** COTS **RTS Cat.:** Standard
App Desc: This is a COTS Product called ETOOLS that is used for Tool Crib Tracking.

App Name: **Graphics Numbering System** **AppID:** **JB25**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: ASP/VB Script **DBMS Type:** None **Type:** Custom **RTS Cat.:** Standard
App Desc: Graphical Numerical System is used to format numbering patterns for placards, launch badges, car passes, and publications. This system supplies a formatted output file in the form of a text file.

App Name: **Technical Training Management System** **AppID:** **JB27**
Status: Active **Primary User:** KISS **Approval:** Informal **Computer:** IMCS Server
Language: ASP **DBMS Type:** SQL 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: The Technical Training Management System is an electronic web-based system that allows the Contractor technical training personnel to enter and track technical courses, instructors, scheduled classes, and classroom facilities. The system also allows the Contractor training coordinators to schedule personnel for classes and enables instructors to produce class rosters. The Contractor personnel completing classes are tracked and manually entered in the PM50 KSC Training Certification Records System (TCRS). The TTMS also tracks and regularly reports no-show personnel to the training coordinators and the director of the Contractor Information Management. Additional reports allow technical training personnel and training coordinators to manage their activities and reporting requirements in a timely manner.

App Name: **Site Planning Application** **AppID:** **JB28**
Status: Active **Primary User:** ISC **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** Access **Type:** Custom **RTS Cat.:** Standard
App Desc: The Site Planning Application is a Microsoft Access database used to manage the Spaceport's site plan data. This data is tracked by KSC's Master Planning Office. Users interact with the Site Planning database via a Microsoft Access interface. This application was designed to be server-based. As such, each client PC will only be installed with a shortcut icon to the database, which will itself reside on a local application server, EAS-1 (Engineering Application Server).

App Name: **Contractor IT Systems Database** **AppID:** **JB29**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** PC
Language: **DBMS Type:** Access **Type:** Custom **RTS Cat.:** Standard
App Desc: This database is used to collect information on configuration items managed by the Information Management Directorate on the contractor. The 007 will be generated from this database on a bi-annual basis.

App Name: **Test Issue Database** **AppID:** **JB30**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** PC
Language: Access **DBMS Type:** Access **Type:** Custom **RTS Cat.:** Standard
App Desc: Test Issue Database. This MS Access-based database is used by Product Assurance to track software test issues. JB30 is a simple, static database used to store issues discovered during software testing. It is considered a tool to be used during the software test process. On the other hand, JB69 is an online application that software test managers can use to train and test the expertise of their personnel. It is considered a professional development tool.

App Name: **Facility Information Center** **AppID:** **JB31**
Status: Active **Primary User:** ISC **Approval:** None **Computer:** IMCS Server
Language: ColdFusion **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard
App Desc: The FIC provides a common platform of real property data including facility identification, capacity, function, use, depreciated book values, current replacement values, facility status, condition, historical significance, lists active facility managers and their alternates, and among other data, shows construction characteristics, such as materials used for the construction of foundation and roofs. FIC allows several queries in the form of Facility Managers Directory (FMD), Facility Maps, and Facilities Search.

App Name: **Quality and Mission Assurance Corrective and Preventive Action Request** **AppID:** **JB33**
Status: Active **Primary User:** ISC **Approval:** None **Computer:** IMCS Server
Language: ColdFusion **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard
App Desc: This application is used for submitting Corrective Action Requests and Preventive Action Requests. It may also be used for maintenance of existing records, tracking the history of revisions, and full inquiry capabilities with reporting options.

App Name: **Excavation Permit Request** **AppID:** **JB34**
Status: Active **Primary User:** ISC **Approval:** None **Computer:** IMCS Server
Language: ColdFusion **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard
App Desc: This application is the preferred method for requesting a dig permit and locating service.

App Name: **Information Management Change Request (IMCR)** **AppID:** **JB35**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: ColdFusion **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard
App Desc: Used for submittal and management of Change Requests. Change Requests are used to request enhancements or modifications to existing applications and systems, or to request new applications.

App Name: **Anomaly and Close Call Reporting** **AppID:** **JB36**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: ColdFusion **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard
App Desc: Used for reporting anomalies and close calls by any Contractor employee.

App Name: **The BIG Access Database (BAD)** **AppID:** **JB49**
Status: Active **Primary User:** ISC **Approval:** Informal **Computer:** IMCS Server
Language: Access **DBMS Type:** Access **Type:** Custom **RTS Cat.:** Standard
App Desc: Supports Waste Management data management and reporting.

App Name: **Health & Environmental Resource System (HERS)** **AppID:** **JB50**
Status: Active **Primary User:** MESC **Approval:** Informal **Computer:** IMCS Server
Language: SQL, Access **DBMS Type:** Access **Type:** Custom **RTS Cat.:** Standard
App Desc: Supports Environmental Health and Services data management and reporting.

App Name: **Material Safety Data Sheets (MSDS)** **AppID:** **JB52**
Status: Active **Primary User:** KSC **Approval:** None **Computer:** IMCS Server
Language: Perl **DBMS Type:** DBM **Type:** Custom **RTS Cat.:** Standard
App Desc: An online system for searching and displaying Material Safety Data Sheets.

App Name: **Contractor Energy Management Office Meter Reading** **AppID:** **JB56**
Status: Active **Primary User:** NASA TA **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: Each month the Low Voltage Electrical Shop techs read the electrical meters here on KSC and on the Cape side. The Contractor EMO transcribes this information into a spreadsheet that calculates the electrical consumption for this read cycle. Once the monthly electrical consumption is calculated, it is then entered into another spreadsheet known as the Energy Utilization and Consumption Report (EUCR). The EUCR is a monthly contract document requirement for the Contractor used for Finance, Accounting, Forecasting, Energy Metrics, etc....
At the present time the meter readers have implemented usage of the handheld devices. The handheld devices display the reading from the previous month and other helpful information for the meter readers to view in the field. The meter readers are issued the handheld devices on a monthly schedule and input readings during there meter run. The handhelds are returned to the EMO Office where the data is downloaded. As a result of this improved process the consumption data is automatically calculated via the handheld software/database.
The entire process has not yet been fully implemented due to the ongoing education and setup of equipment with the meter readers and the handheld devices.
This monthly data stream will ultimately be used by the Automated Utility Data Reporting Information System (AUDRIS) program that is being funded by NASA at this time. The goal of AUDRIS is to replace the existing EUCR and bring the entire utility reporting system into a web-based system.
The database which interfaces with the handheld and the EMO's main database currently resides on two machines in their office.

App Name: **NASA Web Application Checklist** **AppID:** **JB58**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** Access **Type:** Custom **RTS Cat.:** Standard
App Desc: This application is used internally by the Web Development team. It is deployed on the teams development server and is not 'in productions', is not accessible by anyone externally, and is only accessible

internally to a select group of people who have been granted permissions to perform developmental work on the KSC-WEBDEV02 server.
This application is used internally by the Testing Team in support of 508 compliance review and test. It is deployed on the on a development server and is not 'in production', is not accessible by anyone externally, and is only accessible internally to a select group of people who have been granted permissions to perform developmental work on the KSC-WEBDEV02 server.

App Name: **Project Management Status Report (PMSR)** **AppID:** **JB60**
Status: Active **Primary User:** ISC **Approval:** None **Computer:** IMCS Server
Language: ASP .Net **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard
App Desc: This application will produce a single report containing specific fields requested by the customer. It was designed to provide a high-level, one page summary of certain projects of interest that are not currently available as part of Maximo's standard set of reports.
1. The following work types will be included in the report: 3C, 3I, CCR (Contract Change Request), B5, and 4.0.
2. External customers shall not have visibility into the 3I work. An additional login field
inside the application will offer regular Maximo users the ability to see such data.
3. The number of actual WONs (projects) available for query by this application will be solely dependent on the ability and availability of contractor Work Control to enter such data. Work Control will be directed by the external customer as to which projects must be tracked by this report tool.
4. On a weekly basis, the DSS will feed the relevant cost data into a staging table within Maximo. IMCS employees will populate the remainder of the data via Maximo.

App Name: **OMEU Report** **AppID:** **JB67**
Status: Active **Primary User:** NASA **Approval:** None **Computer:** IMCS Server
Language: ColdFusion **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard
App Desc: Provides the first single-source consolidation of in-contract and not-in-contact responsibilities for the Contractor and provides the potential to have one consolidated, one authoritative, customer-friendly lookup source. The submitted matrix will be used to validate, obtain contract concurrence, and baseline OMEU responsibilities so that future changes can be tracked and controlled to ensure the list is accurate and that appropriate contract action is taken when applicable.

App Name: **On Line Test Administration (OLTA)** **AppID:** **JB69**
Status: Active **Primary User:** KISS **Approval:** None **Computer:** IMCS Server
Language: ColdFusion **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard
App Desc: Provides on-line testing following an employee's completion of an on-line training course. Test results are saved within the test manager's defined area. Test Managers can create and modify tests as well as view test results. The Online Test Administration application allows personnel to create and administer web-accessible testing and study materials pertaining to any area of interest. Test managers can create and modify tests as well as view test results. The features that can be associated with an online test include:
- Study guides with links to related materials
- Random selection of test questions from a test database
- Minimum passing scores and times
- Employee coaching via positive reinforcement or corrective information during tests

App Name: **Secured Application Manager (SAM)** **AppID:** **JB72**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: ColdFusion **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard
App Desc: Allows Data Owners and site administrators to control which web site users (registered members) have access to specific applications.

App Name: **Missing Property List (MPL)** **AppID:** **JB74**
Status: Active **Primary User:** KSC **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: Used for searching or to query missing property.

App Name: **TCRS Query** **AppID:** **JB76**
Status: Active **Primary User:** KISS **Approval:** None **Computer:** IMCS Server
Language: ColdFusion **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard

App Desc: A web-accessible application and associated database to support and promote mandatory and optional training course completion by personnel.

App Name: **GIS - Data Maintenance Sub-Application** **AppID:** **JB82**
Status: Active **Primary User:** KSC **Approval:** Formal **Computer:** IMCS Server
Language: ESRI (COTS) Cold **DBMS Type:** Oracle 9i, ArcSDE **Type:** Custom **RTS Cat.:** Standard
App Desc: This is a web based application which allows users to report any issues they have with the GIS System. It further allows the GIS staff to manage these issues.

App Name: **GIS - Contractor Environmental Management Sub-Application** **AppID:** **JB83**
Status: Active **Primary User:** MESC **Approval:** Formal **Computer:** IMCS Server
Language: ESRI (COTS) Cold **DBMS Type:** Oracle 9i, ArcSDE **Type:** Custom **RTS Cat.:** Standard
App Desc: This GIS Application allows Contractor to display the Contractor specific environmental information (i.e. storage tanks) under the Contractor control.

App Name: **GIS - Security Incident Tracking Sub-Application** **AppID:** **JB84**
Status: Active **Primary User:** NPSC **Approval:** Formal **Computer:** IMCS Server
Language: ESRI (COTS) Cold **DBMS Type:** Oracle 9i, ArcSDE **Type:** Custom **RTS Cat.:** Standard
App Desc: The GIS application is used to collect, store, modify, analyze and display geographic location and associated attribute data for each security incident.

App Name: **Contractor Event Logging System** **AppID:** **JB85**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: The Contractor Network Event Logging System gathers the logs from the Contractor Servers and Special Workstations running Windows and UNIX OS's. Reports (for Contractor IT Security) are generated from the data.

App Name: **Skid Strip Flight Activity Application** **AppID:** **JB98**
Status: Active **Primary User:** CCAFS Air Traffic **Approval:** None **Computer:** IMCS Service
Language: Clipper **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: The Skid Strip Flight Activity Application (SSFAA) serves two major functions for the CCAFS airfield services, a Prior Permission Request (PPR) log of flight activity tracking for each KSC arrival, and a Daily log of significant SLF events that is printed to satisfy FAA requirements. Reports provide data for numerous purposes, including traffic count data for JSC billing (JSC owns the fuel that is pumped), propellants, LOX servicing, scheduled support, scheduled maintenance, airspace intrusions, and metrics.

App Name: **Mission & Customer Support System (MCSS)** **AppID:** **JB99**
Status: Active **Primary User:** ISC **Approval:** None **Computer:** PC
Language: C **DBMS Type:** SQL **Type:** Custom **RTS Cat.:** Standard
App Desc: MCSS is a .Net Client Server Application. Using a Windows Application and Web Services. Applications supports the Duty Office.

App Name: **CCSMO CCR Database** **AppID:** **JP01**
Status: Archive **Primary User:** NASA **Approval:** Informal **Computer:** PC
Language: Visual Basic 6.0 **DBMS Type:** Access 2k **Type:** Custom **RTS Cat.:** Standard
App Desc: The Cape Canaveral Spaceport Management Office (CCSMO) Contract Change Request (CCR) database provides a desktop interface and database to record and track CCR activities in the Contracts Office of CCSMO. The database includes monetary and vendor data. The primary users of the system are Contracts, Finance, Engineering, and administrative personnel in CCSMO. All users are located in the Hangar I Annex, CCAFS.

App Name: **CCSMO Website** **AppID:** **JP02**
Status: Active **Primary User:** NASA KSC **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: Directorate website internal only

App Name: **OTV Pressurization Database** **AppID:** **KI01**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS Access **Type:** Custom **RTS Cat.:** Standard
App Desc: Used to provide NASA with confidence and analysis data regarding safety of OTV pressurized items in hazardous areas.

App Name: **Photographic Acquisition Disposition Document (PADD)** **AppID:** **KI03**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** FileMaker Pro **Type:** Custom **RTS Cat.:** Standard
App Desc: Camera setups for launch and landing

App Name: **Institutional Computerized Archival System (ICAS)** **AppID:** **KI05**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS SQL **Type:** Custom **RTS Cat.:** Standard
App Desc: KSC institutional archive of photos, videos, and documents.

App Name: **Portfolio** **AppID:** **KI06**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** Portfolio Server 8 **Type:** Custom **RTS Cat.:** Standard
App Desc: Catalog imaging work flow.

App Name: **Phones DB** **AppID:** **KI08**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS Access **Type:** Custom **RTS Cat.:** Standard
App Desc: Equipment and Services DB for Admin Phones.

App Name: **Admin Tel User Interface** **AppID:** **KI12**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS Access **Type:** Custom **RTS Cat.:** Standard
App Desc: Provide user interface to Phones DB.

App Name: **Danger Tag Data Base** **AppID:** **KI14**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS Access **Type:** Custom **RTS Cat.:** Standard
App Desc: To track danger tag information.

App Name: **Fall Protection Equipment Data Base** **AppID:** **KI15**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS Access **Type:** Custom **RTS Cat.:** Standard
App Desc: To track fall protection equipment inspections.

App Name: **Chemical Inventory** **AppID:** **KI16**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS Excel **Type:** Custom **RTS Cat.:** Standard
App Desc: To track chemicals used by the contractor.

App Name: **Stamp Control** **AppID:** **KI17**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS Excel **Type:** Custom **RTS Cat.:** Standard
App Desc: To track tech and quality stamps issues.

App Name: **NSLA1** **AppID:** **KI18**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** Postgres **Type:** Custom **RTS Cat.:** Standard

App Desc: Performs service level monitoring of KSC networks operated and maintained by KNET.

App Name: **NSLA2** **AppID:** **KI19**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** Postgres **Type:** Custom **RTS Cat.:** Standard
App Desc: Performs service level monitoring of KSC networks operated and maintained by KNET.

App Name: **SecureID** **AppID:** **KI20**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** RSA ACE **Type:** Custom **RTS Cat.:** Standard
App Desc: Contains the token records file for authentication to the VPN.

App Name: **XWalk** **AppID:** **KI23**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS Access **Type:** Custom **RTS Cat.:** Standard
App Desc: Used to manipulate data for 800-53 controls and ICN security plan data.

App Name: **SysLog** **AppID:** **KI24**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS SQL **Type:** Custom **RTS Cat.:** Standard
App Desc: Collects ICN Log Data.

App Name: **CIDW** **AppID:** **KI25**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS SQL **Type:** Custom **RTS Cat.:** Standard
App Desc: Disseminate Circuit Information.

App Name: **IP Database** **AppID:** **KI26**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS Access **Type:** Custom **RTS Cat.:** Standard
App Desc: Manage IP Addresses.

App Name: **OBM Database** **AppID:** **KI27**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS Access **Type:** Custom **RTS Cat.:** Standard
App Desc: Facilitate Out of Band connection to KNET Eq. via Remote Terminal Servers.

App Name: **CC03** **AppID:** **KI28**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS SQL **Type:** Custom **RTS Cat.:** Standard
App Desc: Wideband Fiber Optics Circuit Maintenance.

App Name: **DM02** **AppID:** **KI29**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS SQL **Type:** Custom **RTS Cat.:** Standard
App Desc: Data Modem Circuits Maintenance.

App Name: **KMET Drop Circuit Maintenance and Reports** **AppID:** **KI30**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** MS Excel **Type:** Custom **RTS Cat.:** Standard
App Desc: Circuit Maintenance and Reports.

App Name: **Stormwater Systems Subapplication** **AppID:** **KI31**
Status: Active **Primary User:** MESC **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** Oracle 9i, ArcSDE **Type:** Custom **RTS Cat.:** Standard

App Desc: Displays permitted stormwater systems at KSC.

App Name: **Maximo** **AppID:** **MAX**
Status: Active **Primary User:** IMCS, ISC **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** Oracle **Type:** COTS **RTS Cat.:** Standard
App Desc: Maximo is used for initiating, scheduling and managing work orders for the IMCS and ISC contractors and other contractors performing work for KSC. Maximo is also used for managing warehouse inventory, receiving, and procurement activities. It also provides parts management functionality to develop and maintain accurate and consistent maintenance, repair and operations (MRO) parts description. Maximo also creates and monitors Purchase Requests and Purchase Orders and tracks dollar amounts and delivery dates.

App Name: **Configuration Management Data System (CMDS)** **AppID:** **MD00**
Status: Active **Primary User:** KSC **Approval:** Formal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS **Type:** Custom **RTS Cat.:** Standard
App Desc: Supports contractors and NASA in Engineering Document Release, Engineering Change Processing, and equipment/system Configuration Identification Documents (CID). Those recorded on the system are indexed to specific equipment and systems that are identified in the document itself. All document revisions are maintained as well as Engineering Orders (modifications) and Engineering Instructions to support the Engineering Orders. There are three major subsystems. Document Release Subsystem: All new or revised engineering documentation is authorized and released officially by a signed Document Release Authorization (DRA). Some typical documents indexed and identified are electrical schematics, cable assemblies, deviation waivers, operation and maintenance manuals, etc. Some of the elements recorded when a new document or revision is released are the authorizing engineer, authorizing organization, document location, total sheets, sheet size, and equipment item. Configuration Identification Subsystem: Three files of equipment system relationships are maintained. Baseline System Codes identify systems such as Launch Operations Area (LOA), Vehicle Assembly Area (VAA), and Hypergolic Maintenance Area (HMA), but this level of identification does not specify equipment items. Subordinate to the baselines are Work Unit Codes (WUC) and Program Model Numbers (PMN) which identify equipment types and specific equipment items. All of these files are indexed to documents. Change Processing Subsystem: Contractors track Engineering Support Requests (ESR) for design engineering activities and Configuration Control Board actions. Engineering assessments, CCB directives, and Support Requests are also indexed to the other subsystems.

App Name: **Asbestos Management Information System** **AppID:** **MD21**
Status: Active **Primary User:** KSC **Approval:** Informal **Computer:** IMCS Server
Language: VB/Access **DBMS Type:** SQL 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: The Asbestos Management Information System (AMIS) is a PC Visual Basic application used to track inspections and samples for the Environmental Health Department, as they proceed through the facility asbestos inspection process. This system maintains records for facilities, inspectors, and laboratory results. This application generates Active Server Pages (ASP) to allow all KSC personnel to view Facility Asbestos Inspection results. Photographs have been integrated into the system as well as Internet availability.

App Name: **Microstation J** **AppID:** **MSSE/J**
Status: Active **Primary User:** ISC **Approval:** None **Computer:** PC
Language: **DBMS Type:** **Type:** COTS **RTS Cat.:** Standard
App Desc: The Bentley MicroStation application supports NASA and IMCS Engineers and Computer Aided Drafters with a design tool for generating engineering sketches, models, and final design documents. Additional Bentley applications support floor plan space utilization and a robust survey application. The application software is installed locally on workstations and licenses are obtained from a network server.

App Name: **EXPO Exhibitor Registration Application** **AppID:** **OP06**
Status: Active **Primary User:** NASA OP **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** SQL Server 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: Exhibitor Registration for this Annual Trade show sponsored by NASA/KSC Small Business Council, 45th Space Wing and Canaveral Port Authority.

App Name: **Public Affairs Metrics Tracking** **AppID:** **PA01**
Status: Active **Primary User:** NASA XA **Approval:** Informal **Computer:** IMCS Server
Language: Visual Basic 6 **DBMS Type:** Access 97 **Type:** Custom **RTS Cat.:** Standard
App Desc: This Public Affairs Metric Tracking System is the collection point for the Public Affairs Branch data to track and

report information on metrics.

App Name: **Public Affairs Car Pass Tracking** **AppID:** **PA04**
Status: Active **Primary User:** NASA XA **Approval:** Informal **Computer:** IMCS Server
Language: Visual Basic 6.0 **DBMS Type:** Access 97 **Type:** Custom **RTS Cat.:** Standard
App Desc: This Public Affairs Car Pass Tracking System, PA04 is a collection point for the Public Affairs Branch to track and report information on car passes requested and granted at Kennedy Space Center.

App Name: **Programming Utility System** **AppID:** **PH10**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IBM Mainframe
Language: **DBMS Type:** TNATA **Type:** Custom **RTS Cat.:** Standard
App Desc: The Programmer's Utility System was designed to give the programmers a single access point from which to execute NATURAL utility programs. It consists of a series of general purpose utility programs and a set of menus which allow the programming staff to access them without having to remember what each utility is called or what it does.

App Name: **DAAWG Website** **AppID:** **PH11**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: Website for the Disability Awareness and Action Working Group to provide related information to KSC Personnel.

App Name: **Database Administration** **AppID:** **PM04**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IBM Mainframe
Language: **DBMS Type:** PNATA **Type:** Custom **RTS Cat.:** Standard
App Desc: PM04 is a mainframe Utility System utilized by a Database Administrator (DBA). It contains libraries for NATURAL / CICS DBA Maintenance, DBA Library to issue Database Check points, NATURAL Program Recovery Application and Backup source for PRD.CNT.SYSLIB.

App Name: **KSC Training & Certification Record System** **AppID:** **PM50**
Status: Active **Primary User:** KSC **Approval:** Formal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS **Type:** Custom **RTS Cat.:** Standard
App Desc: The PM50 system is an Online data base system to provide the user with immediate update and retrieval capabilities. This is necessary for maintaining current training and certification status information on personnel who directly support shuttle operations. Inputs are made through file transfers and online screens which allow the users to add, modify, delete, and query records. Batch reports are generated by the user on request. Query programs are available to give the user visibility to database files.

App Name: **KSC Personnel Unique System** **AppID:** **PM93**
Status: Archive **Primary User:** NASA **Approval:** Informal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** PNATA **Type:** Custom **RTS Cat.:** Standard
App Desc: This application has been placed in an archive state such that legacy data can be accessed. No development work required
Functions and features for personnel that are unique to KSC and not part of AC02 (NPPS).

App Name: **SPS Common Modules** **AppID:** **RD00**
Status: Active **Primary User:** NASA **Approval:** Informal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** PNATA **Type:** Custom **RTS Cat.:** Standard
App Desc: This application transfers PASS data to RD00 weekly. It deletes and recreates files for transfer to other systems. Provides common modular computer program support to all Safety and Protective Services systems, and employee information and data store forPM50. It contains standard log-on control and menu handling, a central table update that allows user independence, audit trail features to ensure file integrity and assist in problem solving.

App Name: **Key Core Code Tracking System** **AppID:** **RD01**
Status: Active **Primary User:** KSC **Approval:** Informal **Computer:** PC
Language: Clipper **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: The Key Code Core Tracking System is used by Security Services to track the Locksmith key code core combinations for all locks at KSC and NASA controlled buildings. The PC stand-alone system allows the locksmith

to retrieve data on existing combinations and generate new cores by using the pinning chart processing. Use is restricted to the Locksmith, but benefits all KSC organizations.

App Name: **NASA Personnel Security Information** **AppID:** **RD02**
Status: Active **Primary User:** NPSC **Approval:** Informal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS **Type:** Custom **RTS Cat.:** Standard
App Desc: Contains records of security information on KSC-NASA employees and selected data elements from the personnel files. Record keeping security investigative information is updated to the master file monthly.

App Name: **Security Services Case Tracking** **AppID:** **RD06**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** PC
Language: Clipper **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: The Security Services Case Tracking System is used to track case investigations and related information for the Security Contractor. It contains processes to add, modify and delete records as well as reporting capabilities and stand-alone file maintenance utilities. Application is used by the security Contractor for reporting to NASA.

App Name: **Personnel Investigation Monitoring System (PIMS)** **AppID:** **RD08**
Status: Active **Primary User:** NPSC **Approval:** Informal **Computer:** IMCS Server
Language: Clipper **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: The RD08 Personnel Investigation System is an application which automate the personnel monitoring functions of the Contractor Security Organization. The system tracks employee data and any open or closed cases. The system allows the user to track monitored cases on a scheduled basis, as well a non-monitored cases. The system also tracks gun club history for each employee. This application resides on a closed network environment with the Contractor Security work area.

App Name: **Security/Fire Outage Tracking System** **AppID:** **RD29**
Status: Active **Primary User:** NPSC **Approval:** Informal **Computer:** IMCS Server
Language: Visual Basic 6.0 **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: The Security/Fire Outage Tracking System is a PC application designed to track the fire and security system activity, to include trouble tickets, PMI's, OMI's, outages, etc., thus providing PSCC Console operators with real time information and awareness. Provides real-time fire and security system status by location to the operator for relay to responding Fire and Security Emergency personnel. Primary users are located at the JCCC.

App Name: **Fire Inspection Tracking System w/Barcode** **AppID:** **RD40**
Status: Active **Primary User:** NPSC **Approval:** Informal **Computer:** IMCS Server
Language: Visual Basic 5.0 **DBMS Type:** N/A **Type:** Custom **RTS Cat.:** Standard
App Desc: The Fire Inspector Extinguisher Tracking has been written to support automated Fire Inspection reporting to NASA. It has the capability of producing MS Word "Inspection Reports" that are sent as Email Attachments to the inspection site Manager. Inspections are tracked via an extensive reporting system. The system has local compressed database Backup capabilities in case of Network problems. Used to benefit all KSC and CCAFS organizations.

App Name: **WUC/SPA/Model Number Cross Reference System** **AppID:** **RG38**
Status: Active **Primary User:** ISC **Approval:** None **Computer:** IMCS Server
Language: Visual Studio .NET **DBMS Type:** SQL 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: Provides the user with the capability to update the work unit code table and produce reports. The table is used to cross reference work unit code, spare parts analysis number, and model number so that using continuing requirements of other central supply items.

App Name: **NASA Equipment Management System Property Custodian Module** **AppID:** **RG67**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS **Type:** Interface **RTS Cat.:** Standard
App Desc: A standard agency-wide system designed as an extension of RG68 NEMS to provide an interface to approve equipment status by 'Electronic signature' of the Property Custodian and/or the NEMS Manager. The Property Custodian's function is to initiate online transactions against equipment assigned to them; the NEMS Managers' function is to approve the Property Custodians' transactions allowing the transactions to be processed against the Equipment file. The use of NEMSPCM significantly reduces the amount of paperwork required through the automated 1602 processing. Property Custodians and NEMS Control are able to process online transactions which

primarily deal with equipment ownership.
A standard agency-wide system designed as an extension of RG68 NEMS to provide an interface to approve equipment status by 'Electronic Signature' of the Property Custodian and/or the NEMS Manager. The Property Custodian's function is to initiate online transactions against equipment assigned to them; the NEMS Managers' function is to approve the Property Custodians' transactions allowing the transactions to be processed against the Equipment file. The use of NEMSPCM significantly reduces the amount of paperwork required through the automated 1602 processing. Property Custodians and NEMS Control are able to process online transactions which primarily deal with equipment ownership.

App Name: **NASA Equipment Management System (NEMS)** **AppID:** **RG68**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS **Type:** Custom **RTS Cat.:** Standard
App Desc: A standard agency system designed to track information and activity pertaining to NASA capital and sensitive equipment. NEMS transactions track the movement of equipment in and out of an installation, equipment disposal, equipment maintenance, and equipment inventory. Transactions are entered, edited, and applied Online. Batch reports assist in both monitoring these activities and maintaining an accurate and up-to-date database. All items are managed by Equipment Control Number (ECN).The Online system is menu driven with formatted screens; the user enters the information that determines which screen appears next, or enters data necessary to update an equipment or table record. Capabilities are: Online updating of the local database, overnight updating of the central database, Online query and report generation, Online NASA-wide screening of the central database, standardization of data elements throughout the agency, automation of the inventory process, and computer generated standard forms. The system has separate partitions for each user. The IMCS contractor provides limited System Administration duties.

App Name: **NASA Equipment Inventory System** **AppID:** **RG69**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IBM Mainframe
Language: Natural **DBMS Type:** ADABAS **Type:** Custom **RTS Cat.:** Standard
App Desc: A standard agency system designed to capture physical inventory data and process this data against the capital equipment file. The inventory is done with a bar code reader, exploded to a PC, and then uploaded to the mainframe. Online transactions are provided for reconciling the physical inventory with the equipment file. The system provides for multiple locations and users.

App Name: **LSOC Logistics Open Requirements Management Tracking System (LORMS)** **AppID:** **RG71**
Status: Active **Primary User:** SPOC **Approval:** Informal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS **Type:** Custom **RTS Cat.:** Standard
App Desc: Used to process, control, manage, and report the status of all Orbiter-related open items. Included are mod kits, component end items, LRUs, spares, and flight GSE. A menu selection is provided for update or report generation. All records and data elements pertaining to receipt, deletion, and modification are included in the system. There is about 10,000 records in the system.

App Name: **NPDMS-NASA Property Disposal Management System Aim Standard** **AppID:** **RG90**
Status: Active **Primary User:** NASA Logistics **Approval:** Formal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS **Type:** Custom **RTS Cat.:** Standard
App Desc: NASA Property Disposal System (NPDMS). The NPDMS is an online, menu-driven system providing the system user with the capability to enter transactions affecting the status and disposition of excessed property items, request ad hoc reports, modify system user access capability, and select and determine batch report tape and frequencies. It also provides automatic determination of excess item status based upon screening dates and generates the appropriate reports.

App Name: **Area Access Application** **AppID:** **SA01**
Status: Active **Primary User:** KISS **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** SQL Server **Type:** Custom **RTS Cat.:** Standard
App Desc: Provide access and tracking of video's and web training required for special work area access

App Name: **NASA Institutional Safety & Quality Web Site** **AppID:** **SA02**
Status: Active **Primary User:** NASA SA **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Web Page **RTS Cat.:** Standard
App Desc: This site is linked from the KSC Internal Home Page and provides information about the NASA SA Directorate and

NASA Institutional Safety & Quality program.

App Name: **Safety Concern Reporting System** **AppID:** **SA03**
Status: Active **Primary User:** NASA KSC **Approval:** Formal **Computer:** IMCS Server
Language: Coldfusion 5 **DBMS Type:** SQL 7.0 **Type:** Custom **RTS Cat.:** Standard
App Desc: The Safety Concern Reporting System allows NASA personnel at KSC to report safety concerns through this online Web based application. Reports are routed to appropriate personnel for action.

App Name: **Shuttle Landing Facility Log System** **AppID:** **SI01**
Status: Active **Primary User:** ISC **Approval:** None **Computer:** IMCS Server
Language: Clipper **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: The Shuttle Landing Facility Log System serves two major functions for Airfield Services, a Prior Permission Request (PPR) log of flight activity tracking for each KSC arrival, and a Daily log of significant SLF events that is printed to satisfy FAA requirements. Reports provide data for numerous purposes, including traffic count data for JSC billing (JSC owns the fuel that is pumped), propellants, LOX servicing, scheduled support, scheduled maintenance, airspace intrusions, and contractor metrics

App Name: **PAMIS Printing & Micrographics** **AppID:** **SI07**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: Clipper **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: Supports printing, micro-imaging and microform repository.

App Name: **Propellant Handler's Ensemble Tracking System (PHE)** **AppID:** **SI18**
Status: Active **Primary User:** ISC **Approval:** Informal **Computer:** IMCS Server
Language: Clipper **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: The PHE Discrepancy Tracking System is used to provide the Life Support Organization with a locally controlled system to track discrepancies, corrective actions and related data. Its purpose is to provide information used to supplement the existing PRACA system and provide the additional managerial information needed to redefine the corrective action process. Used by Wyle Labs for generating reports for NASA and other contractors. (i.e. anyone who uses SCAPE).

App Name: **SAT Processing System** **AppID:** **SI35**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS **Type:** Custom **RTS Cat.:** Standard
App Desc: The SAT Processing System was designed to improve the process of moving programs from one place to another more efficiently. It provides an online means of recording requests and activities performed for each mainframe application. Notification of SATS waiting approval or implementation can be made directly to the approver or implementer. It allows any NATURAL program to be moved from TEST to PROD or Vice-Versa, and between any NATURAL domains.

App Name: **Data Entry System** **AppID:** **SI36**
Status: Archive **Primary User:** NASA **Approval:** Informal **Computer:** IBM Mainframe
Language: NATURAL **DBMS Type:** ADABAS **Type:** Custom **RTS Cat.:** Standard
App Desc: This application has been placed in an archive state such that legacy data can be accessed. No development work required.

Data Entry facility replacing keymaster key-to-disk product. Basic data entry facility for NASA Payroll, Time and Attendance.

App Name: **Propellants/Life Support Scheduling System** **AppID:** **SI37**
Status: Active **Primary User:** ISC **Approval:** Informal **Computer:** IMCS Server
Language: Clipper **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: The LIFE SUPPORT SCHEDULING System (S137) is a PC Network based job roster used by the Contractor for day-to-day operations including SCAPE. This system displays a list of jobs for each functional area on a large monitor already installed in the work areas. The system allows update of the job rosters from a central location with a highlight notification and receipt of notification response. This work is in support of NASA, AF, and contractors including USA, Boeing, Lockheed Martin, Wiltech, InDyne, United Paradyne, NAVY, SVT.

App Name: **Security UserID Tracking System (SUITS)** **AppID:** **SI44**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: Clipper 5.2 **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: Security Userid Tracking System is used to track USERID'S of all KSC personnel having access to any computer supported on this contract be it mainframe access or personal computers. This system will maintain records for the Contractor Computer Security Administrator office.

App Name: **Outbound Freight Traffic** **AppID:** **SI49**
Status: Active **Primary User:** ISC **Approval:** Informal **Computer:** IMCS Server
Language: Clipper **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: The Outbound Freight Register Function provides the facilities control on all outbound International and Domestic shipments. It also allows the facilities to process requests for shipments, initiate and print DD Form 1149, Commercial and Government Bills of Lading or other supporting documentation necessary for processing all outbound International and Domestic shipments.

App Name: **Contractor PC Network Application Access System** **AppID:** **SI60**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: Clipper **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: The Contractor Network Applications Access System is the means to control data custodian's access to each networked application for the Network Security section. Each data custodian and alternate is listed by SystemID and Userld.S160 must reside on each server that the corresponding application resides. Supports any KSC or CCAFS user who requires access to Contractor applications.

App Name: **Property Management EVS/ERR Tracking System** **AppID:** **SI65**
Status: Active **Primary User:** ISC **Approval:** None **Computer:** IMCS Server
Language: Clipper **DBMS Type:** dBASE **Type:** Custom **RTS Cat.:** Standard
App Desc: The Property Management EVS/ERR Tracking system combines two functions, the availability inquiry of the Equipment Verification System (EVS), and logging and form generation for Equipment Receipt Reporting (ERR). On initial receipt of a purchase request, EVS is queried by as to system-wide availability of the item. The item and response are entered into the system. Upon receipt of the item, additional information is entered and necessary forms can be printed for forwarding to NASA. Reports can be run against varying criteria within the database.

App Name: **Solimar Printshop** **AppID:** **SOLIMAR**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** COTS **RTS Cat.:** Standard
App Desc: This is a COTS application used to spool and convert print jobs from the IBM mainframe for the Xerox Docutech printers located in the Print Shop.

App Name: **KSC Action Item Tracking System (KAITS)** **AppID:** **TA01**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: ColdFusion **DBMS Type:** SQL 7.0 **Type:** Custom **RTS Cat.:** Standard
App Desc: KAITS is a Web-Based application used to initiate, process and monitor action items assigned to NASA Organizations and/or employees. KAITS can be used by all NASA KSC organizations for the tracking of action assignments and the dissemination of action in KAITS provides a single repository of information for all actions and reference material.

App Name: **Records Management Training System (RMTS)** **AppID:** **TA04**
Status: Active **Primary User:** KSC **Approval:** Informal **Computer:** ODIN Server
Language: ColdFusion, **DBMS Type:** Access **Type:** Custom **RTS Cat.:** Standard
App Desc: Developed for the KSC Training Office to serve the training needs of the KSC Records Officer. RMTS is a web-based training system available to all KSC users.

App Name: **TechDoc 2** **AppID:** **TA05**
Status: Active **Primary User:** IMCS **Approval:** Formal **Computer:** IMCS Server
Language: Java **DBMS Type:** SQL 2000 **Type:** GOTS **RTS Cat.:** Critical
App Desc: TechDoc 2.0 is a document management system developed by NASA to control the publication, release, and maintenance of documents. TechDoc is available via a web interface to all KSC employees and other authorized

users off center. Some documents are also available to the general public.
TechDoc 2.0 is used by each of the major contractors at KSC to store and manage their documents. This system is comprised of two search managers (TDSearch and TDGlobal) and three database servers (TDKSC, TDJBOSC, and TDELV).
TechDoc is being offered as a Center-wide institutional service for document management, document configuration management, document publishing, electronic records management, and TDSearch search infrastructure integration.
NASA retains maintenance of the code and the Contractor is responsible for System/Server administration.

App Name: **KSC Employee Data Warehouse (EDW)** **AppID:** **TA06**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** ODIN Server
Language: ASP **DBMS Type:** SQL 7.0 **Type:** Custom **RTS Cat.:** Critical
App Desc: The Employee Data Warehouse was developed to provide a warehouse of employee-related data from numerous authoritative sources, both KSC sources and Agency-wide enterprise business systems. The data collected includes NASA corporate personnel information and X500 information on KSC civil service and contractor employees, for everyone badged at KSC. Data is collected from many sources, including the Personnel Access Security System (PASS), the Federal Personnel/Payroll System (FPPS), the PM50 Training, Certification, and Records System (TCRS), the EDW Self Service Management Tool (SSMT), and e-mail. The data collected from the authoritative sources can then be distributed to other applications requiring access to employee-related data. The applications requiring employee-related data no longer have to interface to each authoritative source of the data, thereby relieving numerous applications of interfacing with a multitude of source applications to retrieve required data. The Warehouse also provides the benefit of one application change when a data source changes, rather than having to change each application utilizing the data. The requests for data by individuals and applications are approved by each data's custodian for distribution to the requesting entity. The EDW data can also be viewed by approved users online.

App Name: **Access Control and Intrusion Detection System II (ACIDS II)** **AppID:** **TA08**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: COTS **DBMS Type:** N/A **Type:** COTS **RTS Cat.:** Standard
App Desc: ACIDS II provides Access Control and Intrusion Detection capabilities at various KSC controlled areas. The system receives intrusion alarms and cardreader access information from 34 intelligent Remote Terminal Units. Alarms and database information are displayed on operator X terminals. Remote database access and visitor authorization capability are provided by Pentium workstations.

App Name: **Specifications-Kept-Intact (SpecsIntact)** **AppID:** **TA11**
Status: Active **Primary User:** IMCS **Approval:** Formal **Computer:** IMCS Server
Language: Visual Basic 6.0, **DBMS Type:** N/A **Type:** COTS **RTS Cat.:** Standard
App Desc: An automated system for preparing facility construction specifications used worldwide by NASA, Navy, and Army. The software is continually enhanced in response to user suggestions and guidance from the Interagency Configuration Control and Coordinating Board, which oversees any changes to the system. Operation and Maintenance includes program upgrades, enhancements and problem corrections. The Contractor distributes the software to the National Institute of Building Sciences (NIBS) and posts software releases for download from the SI Web site. The Contractor also provides telephone support services to users worldwide - Monday through Friday 7:30 am to 4:30 pm, maintains and updates the SpecsIntact web pages, and updates and maintains user documentation. The Contractor is required to coordinate and present at bi-annually Interagency Configuration Control and Coordinating Board Meetings, document and post minutes on the web site.

App Name: **KSC Electronic Forms FileNet Electronic Forms Manager** **AppID:** **TA14**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: COTS, HTML, **DBMS Type:** Access **Type:** Custom **RTS Cat.:** Standard
App Desc: The FileNet Forms Manager is a 300 concurrent use license that operates as a thick client application. The Contractor and ODIN are responsible for application deployment to user desktops. There are potentially 5,000 - 6,000 users. The application runs on the user desktop, or a second method of electronic forms retrieval is via ColdFusion web pages from the contractor Home page URL kscforms.
Updated description per Nancy Gamble, 08/29/05. The Kennedy Electronic Forms Systems (KEFS) is a suite of tools for filling out, saving, and submitting electronic forms, all using the desktop computer. KEFS uses a commercial software application called Informed Filler to provide KSC users with electronic form capabilities. The FileNet Forms Manager is a 300 concurrent use license that operates as a thick client application. The Contractor and ODIN are responsible for application deployment to user desktops. There are potentially 5,000 - 6,000 users. The

application runs on the user desktop, or a second method of electronic forms retrieval is via ColdFusion web pages from the contractor Home Page URL kscforms.

App Name: **Communication Device Tracking System (CDTS)** **AppID:** **TA16**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** PC
Language: Visual Basic 6 **DBMS Type:** SQL 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: The Communication Device Tracking System tracks assignments of blackberries, cell phones, and pagers for NASA and the Contractor, and tracks billing for the Contractor blackberries, cell phones, and pagers. The system extracts relevant employee data from the Employee Data Warehouse (EDW) and tracks new device assignments, device transfers, and device turn-ins. For each Contractor device assignment, the appropriated cost from the vendor's billing file is assigned. This data is reported monthly for the Contractor contract and for each directorate within the Contractor.

App Name: **Safety Variance Request Process System (SVRPS)** **AppID:** **TA17**
Status: Active **Primary User:** KSC **Approval:** Informal **Computer:** ODIN Server
Language: Cold Fusion **DBMS Type:** SQL 7.0 **Type:** Custom **RTS Cat.:** Standard
App Desc: The Safety Variance Request Processing System (SVRPS) is a web-based system for the initiation and processing of requests for variances from NASA and KSC safety procedures. The SVRPS allows the entry of variance request information. The request is electronically routed through email for review and approval to the appropriate safety officials. The requestor is notified of action through email. All KSC NASA and contractor employees have access to the system. SVRPS interfaces with the X500 database to verify users. The SVRPS automatically expires requests on expiration dates and notifies originator and approvers of expiration.

App Name: **Surplus Property Sales Program** **AppID:** **TA18**
Status: Active **Primary User:** ISC **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** SQL Server 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: Website providing Surplus property sales information to the General Public.

App Name: **CBACS/OnGuard Security Management System** **AppID:** **TA19**
Status: Active **Primary User:** NPSC **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** SQL 7.0 **Type:** COTS **RTS Cat.:** Critical
App Desc: The CBACS/OnGuard Security Management System is KSC's regional instance of the NASA Agency's Enterprise Common Badging and Access Control System. This system supports local (KSC) management of identity verification, provisioning of required identity credentials, control of personnel access into and out of controlled areas, and electronic monitoring of intrusion detection throughout the Spaceport. The primary operator consoles are located in the Joint Communications Control Center (JCCC); secondary monitoring consoles are located in the Alternate JCCC (AJCCC). This system was initially installed by the Electronic Security System – Access Control (ESS-AC) CCR over the May 2005 through February 2007 time frame.

App Name: **Facility Space Utilization Application (FSUA)** **AppID:** **TA20**
Status: Active **Primary User:** NASA TA **Approval:** Formal **Computer:** IMCS Server
Language: Coldfusion, PLSQL, **DBMS Type:** Oracle 9i, ArcSDE **Type:** Custom **RTS Cat.:** Standard
App Desc: The Facility Space Utilization Application (FSUA) was built to support the management of space (i.e., assignment of rooms). The primary users of this system are the Facility Space Utilization Group and individuals who manage space for contractors. These individuals are referred to as Directorate Facility Utilization Managers (DFUMs) and Space Utilization Managers (SUMs). These terms are respectively used by NASA and Air Force.
The application is primarily web-based and allows users to access, read and modify data for space that are their responsibility. The application reads and displays employee data which is stored on the Self-service Management Tool (SSMT). Access and privileges to roles are controlled via user names and passwords. A separate application modules enables client-based, Geographic Information System (GIS) software to import floor and room drawings into the database. The application and data are housed on the Cape Canaveral Spaceport GIS.

App Name: **NASA Recycle & Affirmative Procurement Web Site** **AppID:** **TA21**
Status: Active **Primary User:** NASA TA **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: Website providing Recycle & Affirmative Procurement related information to KSC.

App Name: **GIS - Cable Engineering Sub-Application** **AppID:** **TA22**
Status: Active **Primary User:** IMCS **Approval:** Formal **Computer:** IMCS Server
Language: ESRI (COTS) Cold **DBMS Type:** Oracle 9i, ArcSDE **Type:** COTS **RTS Cat.:** Standard
App Desc: This GIS application allows cable engineering to retrieve cable drawings associated with buildings and man holes.

App Name: **GIS - Spaceport Map Viewer** **AppID:** **TA23**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: ESRI (COTS) Cold **DBMS Type:** Oracle 9i, ArcSDE **Type:** COTS **RTS Cat.:** Standard
App Desc: This is the KSC main web-base, GIS program.

App Name: **GIS - Electrical Ductbank Sub-Application** **AppID:** **TA24**
Status: Active **Primary User:** ICS **Approval:** Formal **Computer:** IMCS Server
Language: ESRI (COTS) Cold **DBMS Type:** Oracle 9i, ArcSDE **Type:** COTS **RTS Cat.:** Standard
App Desc: This GIS application allows electrical engineering to trace the flow path of electricity on the spaceport.

App Name: **GIS - Geodetic Control Sub-Application** **AppID:** **TA25**
Status: Active **Primary User:** ISC **Approval:** Formal **Computer:** IMCS Server
Language: ESRI (COTS) Cold **DBMS Type:** Oracle 9i, ArcSDE **Type:** COTS **RTS Cat.:** Standard
App Desc: This GIS application displays land survey information.

App Name: **GIS - NASA Environmental Management Sub-Application** **AppID:** **TA26**
Status: Active **Primary User:** MESC **Approval:** Formal **Computer:** IMCS Server
Language: ESRI (COTS) Cold **DBMS Type:** Oracle 9i, ArcSDE **Type:** COTS **RTS Cat.:** Standard
App Desc: This GIS application displays NASA Environmental Data.

App Name: **GIS - Facility Floor Plans Sub-Application** **AppID:** **TA27**
Status: Active **Primary User:** ISC **Approval:** Formal **Computer:** IMCS Server
Language: ESRI (COTS) Cold **DBMS Type:** Oracle 9i, ArcSDE **Type:** COTS **RTS Cat.:** Standard
App Desc: This GIS application allows users to retrieve floors associated with specific facilities.

App Name: **GIS - Excavation Permit Sub-Application** **AppID:** **TA28**
Status: Active **Primary User:** ISC **Approval:** Formal **Computer:** IMCS Server
Language: ESRI (COTS) Cold **DBMS Type:** Oracle 9i, ArcSDE **Type:** COTS **RTS Cat.:** Standard
App Desc: This GIS application allows users to create excavation permit maps.

App Name: **GIS - Planning Sub-Application** **AppID:** **TA29**
Status: Active **Primary User:** ISC **Approval:** Formal **Computer:** IMCS Server
Language: ESRI (COTS) Cold **DBMS Type:** Oracle 9i, ArcSDE **Type:** COTS **RTS Cat.:** Standard
App Desc: This GIS application allows users to obtain current replacement value, square footage and people counts for buildings.

App Name: **KSC Administrative Services Website** **AppID:** **TA30**
Status: Active **Primary User:** NASA KSC **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: Directorate Website - internal only

App Name: **Environmental and Energy Awareness Website** **AppID:** **TA31**
Status: Active **Primary User:** NASA KSC **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: Annual Website providing EEAW information regarding the week's activities. Schedules of events, speakers, seminars etc.

App Name: **Propellants Website** **AppID:** **TA32**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: Website offering information on the KSC Propellants and Life Support Branch.

App Name: **Kennedy Mobile Equipment Database (KMED)** **AppID:** **TA33**
Status: Development **Primary User:** ISC **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: This application will provide the functionality to track and maintain propellant mobile equipment for NASA TA / Design Engineering.

App Name: **NASA Protective Services and Safeguards Office Website** **AppID:** **TA34**
Status: Development **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: Website offering information on the NASA Protective Services & Safeguards Office.

App Name: **Environmental Program Branch Application** **AppID:** **TA35**
Status: Active **Primary User:** NASA TA-C3 **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** None **Type:** Custom **RTS Cat.:** Standard
App Desc: The Environmental Program Branch (EPB) Website offers information about and in support of KSC's Environmental Programs. This Calendar application supports EPB activities.

App Name: **Environmental Program Branch Website** **AppID:** **TA36**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: Site contains the environmental policy development, engineering and research for Environmental Program Branch.

App Name: **Major Move Website** **AppID:** **TA38**
Status: Active **Primary User:** NASA TA **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Web Page **RTS Cat.:** Standard
App Desc: KSC Internal Web Site providing a central location for all major move information.

App Name: **Food Services Survey Application** **AppID:** **TA39**
Status: Active **Primary User:** KSC **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion **DBMS Type:** SQL **Type:** Custom **RTS Cat.:** Standard
App Desc: An online survey available to the KSC community to gather information about the KSC Food Services.

App Name: **Health Education & Wellness Program** **AppID:** **TA42**
Status: Active **Primary User:** KSC **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Web Page **RTS Cat.:** Standard
App Desc: This is a public website containing links to other health organizations. The site was designed to provide employees and their families with health-related information and promote healthier lifestyles.

App Name: **Consolidated Address Label System** **AppID:** **TA45**
Status: Development **Primary User:** Mail **Approval:** Informal **Computer:** PC
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: Application is used to maintain and print various mailing labels for groups and mail codes. The application also provides report options for displaying mailing services information.

App Name: **Viisage Document Authentication** **AppID:** **TA46**
Status: Active **Primary User:** NPSC **Approval:** Formal **Computer:** PC
Language: COTS **DBMS Type:** N/A **Type:** Custom **RTS Cat.:** Standard
App Desc: Document Authentication - Electronic Document Readers for Passports, Visas, and Drivers' Licenses. Provides an automated system for capturing, analyzing, and processing travel and identity documents. Automatically authenticate identification documents such as passports, visas, INS immigration cards, driver licenses, and military ID cards. It reads document data and captures full-page document images.

App Name: **Complay Electronic Marquee Software** **AppID:** **TA47**
Status: Active **Primary User:** NPSC **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** COTS **RTS Cat.:** Standard

App Desc: Uploads and downloads messages to the Gate Electronic Marquees (GEM2, GEM3, and GEM4) positioned outside of Gate #2, 3 & 4 that displays welcome and important information to employees and visitors approaching KSC. Multiple messages are displayed for various time durations in rotation. Messages are sent over a secure telephone modem from the software to the signs.

App Name: **Gate2 Electronic Marquee (GEM2)** **AppID:** **TA48**
Status: Active **Primary User:** NPSC **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** COTS **RTS Cat.:** Standard
App Desc: Electronic Marquee positioned outside of Gate #2 that displays welcome and important information to employees and visitors approaching KSC. Multiple messages are displayed for various time durations in rotation. Messages are sent over a secure telephone modem using Complay Software.

App Name: **Gate4 Electronic Marquee (GEM4)** **AppID:** **TA50**
Status: Active **Primary User:** NPSC **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** COTS **RTS Cat.:** Standard
App Desc: Electronic Marquee positioned outside of Gate #4 that displays welcome and important information to employees and visitors approaching KSC. Multiple messages are displayed for various time durations in rotation. Messages are sent over a secure telephone modem using Complay Software.

App Name: **Area Credential Management System (ACMS)** **AppID:** **TA52**
Status: Development **Primary User:** NPSC **Approval:** Formal **Computer:** TBD
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Critical
App Desc: Area Credential Management System (ACMS) will be a web based system hosted at MSFC. It will be developed using the Sun JAVA Workflow. This application will manage the request, approval, and issuance of Kennedy Space Center Temporary and Permanent Area Access Credentials.

App Name: **Keys Credential Management System (KCMS)** **AppID:** **TA53**
Status: Development **Primary User:** NPSC **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: Keys Credential Management System (KCMS) will be a web based system hosted at MSFC. It will be developed using the Sun JAVA Workflow. This application will manage the request, approval, and issuance of Kennedy Space Center Keys.

App Name: **Computer Aided Dispatch - Response (CAD Response)** **AppID:** **TA54**
Status: Active **Primary User:** NPSC **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Critical
App Desc: Computer Aided Dispatch is integrated with 911 Call Taker events and maintains records of Fire, EMS, and Security Police Dispatch activities including paging notification to Management. The system interfaces with GIS, 911 phone switch caller number ID location information, and audio recording equipment and RMS security records management.

App Name: **Printshop Online Processing System** **AppID:** **TA55**
Status: Active **Primary User:** IMCS **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: The Printshop Online Processing system allows all KSC employees to request print services from the KSC Print Shop. In addition to requesting services, administration functions allow the KSC Printshop staff to review, manage and report on the print jobs.

App Name: **NASA PM Audit Database** **AppID:** **TA56**
Status: Development **Primary User:** NASA TA **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: This SysID is listed in JB29 at the request of Mr. James King via a prior data call. It represents an MS Access database that is used by the Facilities Management directorate. Its development has not followed IM processes and procedures and it is not “ready for production” in accordance with IM and IMCS standards. It will remain “in development” until it is adequately developed and documented to allow its transition to production.

App Name: **Florida Labor Management Application** **AppID:** **UB01**
Status: Active **Primary User:** NASA KSC **Approval:** Formal **Computer:** IMCS Server

Language: Cold Fusion 5 **DBMS Type:** SQL Server 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: Application used for annual work shop registration.

App Name: **Master Plan/Acquisition Forecast Application** **AppID:** **UB02**
Status: Active **Primary User:** NASA OP **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** SQL Server 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: Master Buy and Acquisition Forecasting is required for each NASA Center for ALL anticipated contract opportunities in excess of $100,000. KSC Directorate inputs are captured annually in the Master Plan/Acquisition Forecast Application.

App Name: **Change Leaders Network Website** **AppID:** **UB03**
Status: Active **Primary User:** NASA KSC **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: Website for internal KSC organization call CLN, provides information about the group for members and potential members.

App Name: **NASA Shipping Labels** **AppID:** **US09**
Status: Active **Primary User:** ISC **Approval:** None **Computer:** PC
Language: Clipper **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: US09 is a shipping label program used by Packing and Crating personnel. IT creates labels for shipping NASA property. It's on a stand alone PC in the warehouse.

App Name: **Research Catalog On-Line (RECOL)** **AppID:** **US29**
Status: Active **Primary User:** **Approval:** None **Computer:** IMCS Server
Language: Clipper **DBMS Type:** Bdbase **Type:** Custom **RTS Cat.:** Standard
App Desc: This application is used by the BOC to research part numbers and descriptions. The users have access to a database containing historical data on usage and sources of purchased materials.

App Name: **Quality Data Center (QDC) Viewer** **AppID:** **US36**
Status: Active **Primary User:** SPOC **Approval:** None **Computer:** PC
Language: C **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: US36 (USA) Quality Data Center (QDC) Viewer system allows viewing of reference documents for all shuttle missions that are complete. The Contractor Engineering Documentation Center (EDC) scans the Payload Support Plans (PSPs) provided to them by SFOC, including the contractor and NASA quality inspection stamps for each step in the process of preparing for a shuttle mission, and puts their .tif images onto CD as an indexed file. The viewer searches the CDs of indexed files and displays the images that have been stored for the selected mission or PSP. The system allows the user to select from several viewing and printing options for the documents.

App Name: **User Registration** **AppID:** **USREG**
Status: Active **Primary User:** IMCS **Approval:** None **Computer:** IMCS Server
Language: ColdFusion **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard
App Desc: Used to register as a member of the Contractor web site and to maintain account information.

App Name: **Vibroacoustic Analysis Programs (VAP)** **AppID:** **VAP**
Status: Active **Primary User:** NASA **Approval:** None **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: A collection of programs developed by NASA Engineering for power- and cross-density vibration and acoustical spectral analysis.

App Name: **WebTADS** **AppID:** **WTADS**
Status: Active **Primary User:** NASA **Approval:** None **Computer:** IEMP Server
Language: **DBMS Type:** **Type:** GOTS **RTS Cat.:** Standard
App Desc: National Aeronautics and Space Administration (NASA) Web-based Time, Attendance, and Distribution System (WebTADS).
It provides for a simplified user interface through Web browser features to enable civil service employees and timekeepers to enter time and attendance information, and provides for approval and submittal of the time and

attendance data for payroll and labor processing.
The Contractor only maintains the interface between WebTADS and the Labor Distribution System (AC07/GG29) and performs limited System Admin duties.

App Name: **Opportunity for Improvement (OFI)** **AppID:** **XA01**
Status: Active **Primary User:** NASA XA **Approval:** Informal **Computer:** ODIN Server
Language: ColdFusion **DBMS Type:** SQL 7.0 **Type:** Custom **RTS Cat.:** Standard
App Desc: The Opportunity for Improvement (OFI) system is designed to obtain comments and suggestions from the public and internal customers regarding any subject related to Kennedy Space Center. It has a web interface linked to the KSC homepage "Customer Connecting." Upon submission of a comment/suggestion, the OFI manager is notified, a directorate is assigned the action to evaluate the suggestion, suspense dates are established, and the OFI is processed through the HQ to the ManagementAdvisory Board or Executive Council, as appropriate, until it is either implemented or determined not feasible. As the OFI is routed through the system, an audit trail is established and automatic e-mail is activated upon specific events.

App Name: **Press Site Media Accreditation Application** **AppID:** **XA02**
Status: Active **Primary User:** NASA XA **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion5 **DBMS Type:** SQL Server 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: This application provides the World Wide Media a Web based method for requesting a badge for entry to KSC. The administrator portion of the application allows NASA personnel to manage and disposition the requests.

http://media.ksc.nasa.gov Applications using a login ID and Password. Transmits data using SSL Certificate. Application is hosted in the Kennedy Internet Facility.

App Name: **Speakers Bureau Website Application** **AppID:** **XA03**
Status: Active **Primary User:** NASA XA **Approval:** Formal **Computer:** ODIN Server
Language: Cold Fusion 4 **DBMS Type:** SQL Server 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: Application providing a method for requesting Speakers to support a specific event or activity. This site is also open to the General Public.

App Name: **KSC Public Web Pages** **AppID:** **XA04**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: Webpages linked from the KSC External Home Page.

App Name: **Press Site Media Metrics Application** **AppID:** **XA05**
Status: Active **Primary User:** NASA **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** SQL Server 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: This application captures and reports metric information for specifically identified Press Site activities.

App Name: **NASA Multi Media Gallery Application** **AppID:** **XA06**
Status: Active **Primary User:** Public **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** SQL Server **Type:** Custom **RTS Cat.:** Standard
App Desc: The Multi Gallery is used by the General Public to access archive Photos and video of NASA activities and other related activities, events, personnel and places.

App Name: **Mission Quiz** **AppID:** **XA07**
Status: Active **Primary User:** Public **Approval:** Formal **Computer:** IMCS Server
Language: Coldfusion 5/Flash **DBMS Type:** SQL Server **Type:** Custom **RTS Cat.:** Standard
App Desc: An application used as required prior to launch (SST and ELV) allowing the General Public access to a Mission specific quiz. There is also an administrative portion to manage the questions and answers as needed for each quiz.

App Name: **Site Survey Application** **AppID:** **XA08**
Status: Active **Primary User:** NASA XA **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** SQL Server **Type:** Custom **RTS Cat.:** Standard
App Desc: The application captures site survey information when provided by the General Public. The Administrative portion

of the application provided NASA personnel the ability to manage and report the survey data.

App Name: **Countdown Clock Application** **AppID:** **XA09**
Status: Active **Primary User:** Public **Approval:** Formal **Computer:** IMCS Server
Language: ColdFusion5/Flash **DBMS Type:** SQL Sever **Type:** Custom **RTS Cat.:** Standard
App Desc: A countdown ticker found on the KSC Home Page during SST launch.

App Name: **KSC Search Engine Application** **AppID:** **XA10**
Status: Active **Primary User:** Public **Approval:** Formal **Computer:** IMCS Server
Language: Coldfusion 5 **DBMS Type:** None **Type:** Custom **RTS Cat.:** Standard
App Desc: An application accessed from the KSC Internal Home Page to search KSC information.

App Name: **Conversion Utility Application** **AppID:** **XA11**
Status: Active **Primary User:** Public **Approval:** Formal **Computer:** ODIN Server
Language: Coldfusion 5 **DBMS Type:** None **Type:** Custom **RTS Cat.:** Standard
App Desc: Conversion utility uses JavaScript to display a pop-up window containing the converted value. Any HRML page can embed the proper link for conversion of Distance, Area, Volume, Liquid, Dry, Speed, Time, and Temperature. A total of 56 different conversion are possible.

App Name: **VIP Official Tour Request Application** **AppID:** **XA12**
Status: Development **Primary User:** NASA XA **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** SQL Server **Type:** Custom **RTS Cat.:** Standard
App Desc: Provide automation support for XA VIP Tour process.

App Name: **KSC History Program Hall of Honor Application** **AppID:** **XA13**
Status: Active **Primary User:** NASA XA **Approval:** Formal **Computer:** IMCS Server
Language: Cold Fusion 5 **DBMS Type:** SQL Server 2000 **Type:** Custom **RTS Cat.:** Standard
App Desc: Application use by XA to receive historical information from retired aerospace employees and general public sources.

App Name: **KSC History Program Hall of Honor Website** **AppID:** **XA14**
Status: Active **Primary User:** Public **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: External website that introduces the Hall of Honor application.

App Name: **External Relations Website** **AppID:** **XA15**
Status: Active **Primary User:** NASA KSC **Approval:** Formal **Computer:** IMCS Server
Language: HTML **DBMS Type:** None **Type:** Web Page **RTS Cat.:** Standard
App Desc: Directorate website - internal only

App Name: **Question Board Application** **AppID:** **XA16**
Status: Active **Primary User:** Public **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: The Question Board Application is used prior to a Mission (Shuttle and ELV), where the public is invited to submit questions for review and after approval/moderation, posting to the "Question Board". The questions are answered by Mission Subject Matter Experts and posted. The Mission Question Board is available for a set amount of time then archived.

App Name: **Shuttle Data Processing System (DPS)** **AppID:** **YA02**
Status: Active **Primary User:** NASA NE **Approval:** Informal **Computer:** IMCS Server
Language: ASP, Fortran, C, **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard
App Desc: The Data Processing System consists of Loral Open Systems 90 equipment, one Penny and Giles 14-track recorder, a DEC 5000 ULTRIX Telemetry Front End (TFE) Workstation with Ingres database, two Loral Model IV 14-track tape recorders, one Loral 8470 Digital Discriminator, two Time Code Generator units, three sets of subcarrier discriminators, three oscillographs, one 429 Multiplexor encoder, one digital frequency discriminator, one analog to digital converter, two Wavetek signal filters and associated rack assemblies. The launch history data is stored in a

144 cartridge Alphatronix Inspire II magneto-optical jukebox.

App Name: **Engineering Analysis VMS Computer System (EAS)** **AppID:** **YA03**
Status: Active **Primary User:** NASA KT **Approval:** Informal **Computer:** IMCS Server
Language: Fortran, C, DCL **DBMS Type:** ISAM **Type:** Custom **RTS Cat.:** Standard
App Desc: The Engineering Analysis Computer System (EAS) serves as the primary system for NASA and other contractor engineers and end-users to support data analysis of the Space Shuttle and its Ground Support Equipment (GSE). Once the launch telemetry data is acquired and processed, NASA Engineers utilize these systems to perform various types of analysis of the data. The NASA Labs and Testbeds engineers perform structural stress analysis and modal analysis for projects such as the MLP model, Shuttle Lifting Sling, and VETA (Verification Test Article), using commercial software tools. Engineers analyze launch data for vibration, acoustics, strain, pressure, and acceleration; and perform troubleshooting of LOX pump operations, and also leak detection analysis.

App Name: **Computer Aided Design/Computer Aided Engineering (CAD/CAE)** **AppID:** **YA04**
Status: Active **Primary User:** NASA, IMCS **Approval:** Informal **Computer:** IMCS Server
Language: N/A **DBMS Type:** N/A **Type:** COTS **RTS Cat.:** Standard
App Desc: The CAD/CAE Systems and Support group provides Computer-related services to the Contractor and NASA Engineering communities, including Windows 2003 Active Directory Domain and Workstation administration; Network Services; Data Management and Server services; Windows Printing and Plotting services; Licensing services for MicroStation and Pro Engineer; Installation and Support services for MicroStation and Pro Engineer, Trouble Call services, support for standard Office applications, and Data Backup and Restore services. This level of support is provided to a Primary audience of approximately 175 End-Users, with casual support to an additional 150 MicroStation Users outside of our Primary audience. The CAD/CAE support group is the Primary Licensing and Support group for both MicroStation and Pro Engineer at KSC.

App Name: **Airborne Field Mill (ABFM)** **AppID:** **YA05**
Status: Active **Primary User:** NASA KT **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: The Airborne Field Mill Project was conducted near Kennedy Space Center during June 2000, February 2001 and May/June 2001. It is a cooperative project between the NASA Kennedy Space Center, National Center for Atmospheric Research, NASA Marshall Space Flight Center, University of North Dakota, University of Arizona, NOAA National Hurricane Lab., and in Feb. 2001, the NOAA Environmental Technology Lab.
This web site contains plots and images of radar, airborne electric field, microphysics and lightning data recorded during the flights of the UND Citation and additionally, ongoing analysis of the different cases.

App Name: **Tropical Rainfall Measurement Mission (TRMM)** **AppID:** **YA06**
Status: Active **Primary User:** NASA KT **Approval:** Informal **Computer:** IMCS Server
Language: ASP **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: Spaceport Weather Data Archive

App Name: **Meteorological Interactive Data Display System (MIDDS)** **AppID:** **YA07**
Status: Active **Primary User:** NASA KT **Approval:** Informal **Computer:** IMCS Server
Language: **DBMS Type:** **Type:** Custom **RTS Cat.:** Standard
App Desc: The data is a collection of wind and Doppler radar files containing various weather measurements collected from 45th WS 24/7.

App Name: **Design Data Management System (DDMS)** **AppID:** **YA08**
Status: Active **Primary User:** NASA, IMCS **Approval:** Formal **Computer:** IMCS Server
Language: **DBMS Type:** Oracle **Type:** Custom **RTS Cat.:** Standard
App Desc: Design Data Management System (DDMS) is the emerging KSC product data management system and supporting infrastructure necessary to ensure that NASA's spaceport information and knowledge based equipment, tools, and procedures are in place and capable of supporting the demands of the Agency's future programs and goals in an efficient, cost effective, and sustainable manner. Provides Computer-related services to the Contractor and NASA Engineering communities, including Windows 2003 Active Directory Domain and Workstation administration; Network Services; Data Management and Server services; Windows Printing and Plotting services; Licensing services for MicroStation and Pro Engineer; Installation and Support services for MicroStation and Pro Engineer, Trouble Call services, support for standard Office applications, and Data Backup and Restore services. This level of support is provided to a Primary audience of approximately 200 End-Users, with casual support to an additional 150 MicroStation

Users outside of our Primary audience. The DDMS support group will eventually become the Primary Licensing and Support group for both MicroStation and Pro Engineer at KSC. The current DDMS configuration is comprised of a primary Windchill server running Apache, Tomcat, Aphelion (LDAP) and FAST Instream (Indexer) and includes a multi-user version of ProE and Microstation. A second server is used to host Oracle, while a third is dedicated to support testing and prototype development and is configured similar to the primary Windchill server with the addition of also hosting an instance of Oracle. A more robust configuration will be implemented in the future to include redundant servers and a dedicated SAN to provide increased reliability and to accommodate future system growth..

Appendix 8
Current System Descriptions

For

Information Management and Communications Support (IMCS)

B.3.0 Technical Services

This appendix describes the current state of the systems used to provide the services listed in PWS Section 3, Technical Services. System locations are listed in Appendix 11 – System and Service Location Matrix.

B.3.1 Computer Services

B.3.1.1 Data Center Operations

The current Data Center environment encompasses several locations across KSC. The Data Center supports approximately 300 servers and most of them are housed within 3 main locations: CIF room 243 with 233 servers including the KSC Internet System (KIS) and the KSC Applications System (KAS), HQ room 3470 with 50 servers, and LCC room 1P11 with 25 servers, of which 10 are Agency-owned and support NASA Agency applications. The remaining servers support a variety of KSC Government and contractor customers in various locations. Servers in remote locations are usually in close proximity to the users. The Data Center supports approximately 255 applications and websites. The majority of applications and web sites are used internally, but a limited number support users are external to KSC.

There are plans to consolidate these environments into a single Data Center during the performance of this contract. The Data Center will provide the basic infrastructure to house hardware and software systems. The basic requirements of this infrastructure include redundant power, redundant cooling, and redundant network capabilities.

CIF 243 houses:

- A combination of Hewlett Packard and Dell servers. Windows Server 2003 is the primary server operating system; however, some servers use Windows Server 2000, Windows NT, Solaris, UNIX, OS/2, Netware and others. In some cases, hardware maintenance and operating system software licenses for systems are the responsibility of other organizations. These systems support the applications listed in Appendix 7 - Software Applications Listing.

- Peripherals supporting the Data Center include disc storage units, automated tape storage and backup units, RAID disc storage units, network switches, domain controllers, firewall, Fibre Channel Storage Area Network (SAN) switch, server monitoring systems, and uninterruptible power supplies (UPS).

- The KIS which hosts the KSC Internal and External home pages and provides web and streaming video services during launch and landing activities. The KIS utilizes high-end web/application servers, video streaming servers, and video encoding servers.

- The KAS is comprised of three environments - production, development/test, and evaluation. Production provides a secure environment for NASA-sensitive data. Development/Test provides a unique capability to develop, test, stage, and move applications to Production, all within an infrastructure that is configured and managed identical to Production. Evaluation provides the capability for NASA to evaluate and test new architectures and new technologies.

- The TechDoc Application Support Services is a GOTS product that is offered as a Center-wide institutional service for document management, document configuration management, publishing documents, electronic records management, and TDSearch search infrastructure integration. Major users may be responsible for providing their own TechDoc application support for document management, document configuration management, document publishing, electronic records management, TDSearch infrastructure integration, etc. However, all other contracts obtain TDSearch and search infrastructure support from the IMCS contract. Development and maintenance of this application is not the responsibility of the IMCS contractor.

- The Maximo 6.2 Application is a COTS product used for the management of work, assets, inventory, receiving, procurement, equipment maintenance, vendor contracts, and Service Level Agreements (SLAs) for the IMCS and ISC contractors. Maximo is also used for managing service/help desk calls.

  The production environment is composed of five Dell PE2950 Servers and two Dell Power Vaults. The development environment contains three Dell PE2950 Servers. Software used to support Maximo includes WebSphere 6.0.2.17, Oracle 10g, and Actuate 8. Modules currently implemented are Asset Management with 300 User Licenses, Field Control with 300 User Licenses, Self Service Requestor with 300 User Licenses, Project Adapter with 20 User Licenses, Service Desk with 20 User Licenses, and Inventory Manager with 15 User Licenses.

  The Government envisions that the Institutional Services Contract (ISC) will be a user of the IMCS Maximo 6.2 services, and will be responsible for providing Maximo application support for creating and maintaining work flows, screens, field lists, and reports to accomplish their work control requirements. Other institutional contracts, such as Medical and Environmental Support Contract (MESC), may obtain full Maximo application support under PWS 3.15.

HQ 3470 houses:

- The CAD/CAE system supporting computer-related services to contractor and NASA Engineering communities. It uses MicroStation, with a 59-user concurrent license, and Pro/Engineer, with a 41-user concurrent license center-wide. It also supports 204 Bentley MicroStation workstations: 142 contractor and 62 NASA users and 197 Bentley ProjectWise workstations: 194 contractor and 3 NASA users. The CAD/CAE support group is the primary licensing and support group for these systems at KSC and it directly maintains 15 Windows NT Servers (for Domain Administration, as well as File Services). Most CAD/CAE servers are standalone Windows 2003 Server machines, while seven of the servers are Level-5 RAID Fault Tolerant file server. The CAD/CAE group is also responsible for providing help desk service for users of CAD/CAM and engineering analysis workstations (e.g. problems involving printing, network communication, Windows Admin Server access, workstation access, etc.)

- The STI support which includes the Shuttle Data Processing System (DPS). The Data Processing System consists of Loral Open Systems 90 equipment, one Penny and Giles 14-track recorder, a DEC 5000 ULTRIX Telemetry Front End (TFE) Workstation with Ingres database, two Loral Model IV 14-track tape recorders, one Loral 8470 Digital Discriminator, two Time Code Generator units, three sets of subcarrier discriminators, three oscillographs, one 429 Multiplexor encoder, one digital frequency discriminator, one analog to digital converter, two Wavetek signal filters and associated rack assemblies. The launch history data is stored in a 144 cartridge Alphatronix Inspire II magneto-optical jukebox.

Data Reduction services are provided to the Launch Vehicle such as:

- Launch, Launch Abort, Launch Scrub Measurement Data Reduction. Approximately 4,000 analog and digital measurements are extracted and processed in the engineering computer center for each launch flight readiness firing, launch, launch abort, or scrub. These measurements are recorded by sensors on the Shuttle orbiter and on ground support equipment and the many structures around the two launch pads. This data is used to accurately analyze and predict the environmental stresses that are imposed on instruments and structures around the launch pads. Each measurement is assigned a unique number that classifies the measurement location and type. The engineering computer center is capable of providing detailed analysis requiring high volume and high sample rates to exhibit conditions of anomaly or variations which may impact performance of ground support equipment or systems on the Orbiter. Specific ongoing launch measurements being provided to engineering include data from sensors on the External Tank GOX Vent Arm, LOX Pump Vibration, H2 Leak Detection, H2 Vent Arm, MLP Hold Down Post, air compressors, and several acoustic sensor locations. In addition to collecting, filtering, and sampling this data, the engineering computer systems offer services to present the data in formats capable of being processed by commercial analytical tools.

- Launch History STS-1 through STS-13, STS-26R through the latest STS mission. Engineers are able to interrogate a database of information pertaining to structures, locations, engineering units, measurement categories for telemetry data from past Shuttle launches, and display this data online at remote workstations in graphical format. The data from these launches includes a significant portion of the ground vibration, acoustics, pressure, strain, and heating rate data collected from STS launches to date. This data is launch-induced environment data is used to analyze existing and future ground launch structures and support equipment.

- Space Shuttle Main Engine (SSME) Data Reduction at High Volume, High Sample Rates. Specific analysis of SSME vibrations and "pops" can be detected by sampling at 100KHz frequencies and filtering the data at lower frequencies. SSME refurbishment is extremely costly and this analysis is one of the ways in which SSME performance/wear is analyzed. This system provides a “waterfall” time frequency domain (FFT) plot of each of the measurements to main engine cutoff.

- Shuttle Landing Facility (SLF) Winds Return to Launch Site, SLF Shuttle Landing Data Acquisition. SLF telemetry data is acquired three hours prior to launch/landing through thirty minutes after launch/landing from three sites at the SLF. In addition to wind speed, the wind direction is required for the crosswinds vector calculation. This data is used for post launch analysis and is utilized in Return To Launch Site (RTLS) and Shuttle landing constraint analysis.

- Shuttle Launch Commit Criteria Data Acquisition Analysis. There is a requirement to archive meteorological data to support review of launch commit constraint criteria applicable to cloud electrification and "cloud to cloud" or "cloud to ground" lightning, crosswind speed and vector analysis for SLF landing and RTLS constraints, and basic Launch Pad Lightning Warning System (LPLWS) analysis to minimize disruption of launch support activities resulting from lightning and severe thunderstorm activity. Electric potential gradient data and Doppler radar data is processed 24/7 and archived from the Range Operations Control Center (ROCC) and Meteorological Interactive Data Display System (MIDDS). The data is made available for specific dates, locations, altitudes, and time periods from ground systems and Doppler radar systems to support this research to determine if launch constraints may be modified or relaxed.

- Shuttle Processing Operations Adverse Weather Warnings Data Acquisition - Data from the CCAFS ROCC and MIDDS is archived and provided to NASA and researchers in support of Government funded projects to pinpoint the origination of cloud electrification and predict cloud to cloud and cloud to ground lightning. These studies are coordinated by NASA and are used to dictate early warning conditions for Shuttle operations, especially for personnel working up to 200 feet above ground near the Orbiter and ELVs.

LCC 1P11 houses:

The Agency system support for Electronic Security Surveillance-Access Control (ESS-AC) includes the Common Badging and Access Control System (CBACS) system. ESS-AC integrates each of the seven operator workstations in the 911 dispatch center using dedicated KVM switches, audio switches, and computers. CBACS administrators supporting this system are Lenel Master certified. KSC has administration responsibilities for only part of the CBACS system. The Agency provides the main support for the Regional servers as well the communications servers at KSC. KSC provides support for these servers when needed and when the permissions are granted by the agency. The Digital Video Recorders (DVR) and terminal servers are maintained by KSC. CBACS includes end devices such as card readers and intrusion detection devices which are installed and maintained by the facilities group. Programming of the Lenel system to accept and act on these devices and their maintenance is the responsibility of the IMCS contract. CBACS also includes the Agency Personnel Identity Verification enrollment and badge issuance workstations located at badging facilities around the Center. These computers are operated by the badging office in support of the Agency enrollment and badging functions. KSC provides the local support for these applications

and performs local trouble resolution or coordinates resolution with the Agency CBACS team.

Server Operating Systems in the Data center environment include:

- LINUX
- Novel Netware
- OS/2
- Solaris
- UNIX
- Windows 2003 Server
- Windows 2000 Server
- Windows NT

Server software used in the Data Center environments includes:

- Adobe Cold Fusion MX Server
- Juniper Networks NetScreen
- KSC Event Log Query System
- KSC System Change Log
- List server software
- Microsoft Monitoring Software
- Microsoft SQL Database Server
- MicroStation-J
- MicroStation-SE
- MoinMoin
- NetIQ AppManager Suite

- Real Networks Helix Server
- Symantec Antivirus
- Unlimi-Tech Files2U
- Veritas Backup Exec

These systems support the services referenced in PWS 3.1.1.

B.3.1.2 Software Engineering

Applications developed, maintained, and/or sustained are included in Appendix 7 - Software Applications Listing.

Software engineering support is also provided to mainframe applications housed in the Marshall Space Flight Center (MSFC) NASA Data Center (NDC). The operation and maintenance of the mainframe is not part of this contract. The NDC Computer System is an IBM Z9 Processor as outlined in the Office of Space Flight (OSF) Automatic Data Processing (ADP) Consolidations Concepts Document and KSC's share is known as K14 LPAR (logical partition). Applications provided by the mainframe include: Human Resources, Financial Management, Equipment Management, Procurement Systems, etc. Email is sent every weekday indicating the status of backups for the systems identified by the Government. If the backup did not occur, an explanation is included documenting what is being done to resolve the issue.

An Associate Account Authorization Official (aAAO) for the NASA Account Management System (NAMS) provides help desk support for users with NAMS accounts. The aAAO will be responsible for users' local support, for entering the date the subscriber agreement is signed, the date when the IT Security Training was taken by the user, and for researching information on new account requests.

These custom applications are developed and maintained using various programming languages and standard applications including:

- Adobe Cold Fusion Version 5 and higher
- Adobe Dreamweaver Version MX
- Adobe Flash Version MX
- Adobe Photoshop Version CS
- Adobe Premiere Version CS
- ASP, ASP.NET, and .Net Frame work support

- Autodesk 3D Studio MAX
- Veritas Backup Exec
- C, C++, C#
- Clipper
- CSS Flash
- ESRI ArcGIS
- FORTRAN
- HTML
- JAVA, JAVA Script, JAVA SVG
- Mercury Test Director
- Microsoft Internet Information Server Version 6 and higher
- Microsoft Office Professional
- Microsoft Operations Manager
- Microsoft Project Version 2005 and higher
- Microsoft Share Point Version 2 and higher
- Microsoft SQL Server Version 2000 and higher
- Microsoft WinBatch
- Microsoft Windows Encoder
- Microsoft Windows Media Server
- MySQL
- Nero
- Norton Antivirus Corporate Edition

- Oracle PL/SQL
- PTC Pro/Engineer
- PTC Windchill
- Python
- Real Networks Helix Server
- Real Networks RealProducer
- Select Business Solutions: NOMAD
- Software AG ADABAS
- Software AG “Natural”
- Sound Forge Version 8 and higher
- SpotLight
- Visual Basic

These systems support the services referenced in PWS 3.1.2.

B.3.2 Cable Plant

KSC has both copper and fiber cable plants that provide transport for operational and institutional communications requirements at KSC and the NASA occupied facilities at the CCAFS. Approximately 800 miles of major cables traverse over 54 miles of duct banks, 550 manholes, handholes, associated conduit systems, and facility cable trays. Some cables support unique systems at the Launch Complex (LC) 39 pads. Facility premise wiring is considered to be part of the cable plant.

Cable records are managed using the Circuit Assignment Management System (CAMS). CAMS was developed in-house. It automatically selects available circuits and specifies the cross-connects necessary to provide a complete a path between endpoints. In addition, CAMS provides information about which users will be affected when planning circuit outages.

B.3.2.1 Copper Cable Plant

The copper plant consists of approximately 3,000 backbone and distribution coaxial cables and over 1,000 various gauge twin-axial cables. Within these cables there are over 500,000 19-, 22-, or 24-gauge copper twisted pair cables. The cables terminate at over 107 Main Distribution Frames, 54 Intermediate Distribution Frames, and 1,700 Telephone Terminal Cabinets. There are over 42 cathodic protection rectifiers and over 22 air dryers with associated flow meter panels.

Frame Lights are used to display the frame access status (open, controlled, or closed). Typically, the frames are in controlled or closed status during launch and landing operations.

A Wire Test Board is located at the CD&SC.

B.3.2.2 Fiber Optic Cable Plant

The KSC fiber optic cable plant contains over 3,000 multi-mode and single-mode fibers with FOTs for system connections. This includes the cable management system which provides the physical infrastructure for the fiber optic system. The systems supported include the Fiber Optic Wideband Transmission system, Orbiter S-Band uplink monitor, and external customers.

The fiber optic system consists of approximately 290 miles of fiber optic cable, 300 fiber optic cables, and 230 fiber optic terminals.

The single-mode fiber plant supports point to point and Coarse Wave Division Multiplexer (CWDM) technologies on 9/125 um single-mode fiber. This fiber plant supports the Digital Video Transmission System (DVTS), point to point, Kennedy Institutional Network (KNET), SONET, fire alarm, electronic security systems, and specialized program requirements.

The multi-mode fiber supports the 1300 and 1550 nanometer (nm) wavelength on 50/125 micrometer (um) multi-mode fiber. This fiber supports the legacy fiber optic wideband systems, NTSC video, Launch Processing System, 12 MHz analog interface, KNET, and KSC fire alarm system. Systems currently supported by this fiber will migrate to the single-mode fiber plant.

A CWDM tool provides detail tracking and visual representation of the fiber plant utilization. Fiber records are also maintained for the intra-facility fiber and multi-mode fiber plant. Fiber records are coordinated with external customers such as CCAFS, NISN, and commercial companies who provide vehicle or payload processing to KSC, CCAFS, or other Federal agencies.

B.3.3 Transmission

B.3.3.1 Data Transmission

The Fiber Optic Transmission System (FOTS) transmits RS-170 or NTSC color video signals, analog signals within a 12-Megahertz (MHz) bandwidth, or asynchronous digital data up to 8 Mb/s No Return Zero-Level (NRZ-L), depending on the application. The system provides a balanced 124-ohm or unbalanced 75-ohm electrical interface for the optical transmission of video, analog, or digital data signals over a single fiber. The system processes a 1-volt input signal between 10 Hertz (Hz) and 12 MHz and transmits it optically at either 1300 or 1550 nm via Injection Laser Diodes (ILD) or Light Emitting Diodes (LED) to the receive location where the signal is restored to the original electrical input signal. ILD transmitters are used in conjunction with optical dividers to create multipoint circuits.

The frequency division data multiplexer can accommodate eight data channels (four channels from 0 to 128 Kilobit per Second [Kbps] and four channels from 0 to 512 Kbps). Asynchronous data, either balanced or unbalanced, can be transmitted at any data rate using RS-422 voltage levels or a one-volt peak-to-peak variant. The aggregate output of the multiplexer is transported via the fiber optic wideband transmission system.

The WDM equipment doubles the capacity of the existing fiber optics cable plant. WDMs are installed at facilities throughout KSC to enhance the optical fiber's capacity. The WDMs multiplex signals at 1300 and 1500 nm and are primarily used with the wideband fiber optic transmission system.

A 32 x 32 Sigma Electronics analog matrix at the CD&SC is used as the KSC off-site routing switch in support of Shuttle processing, launch, and landing video. The fiber optic wideband transmission system has more than 1,300 transmitter/receiver pairs that service more than 35 facilities on KSC and CCAFS. At present, approximately eight facilities are equipped with frequency division data multiplexers. There are two full duplex 50-Mbps data links – one between the O&C building and Orbiter Processing Facilities (OPF) 1 and 2 and the other between the O&C building and OPF-3. The Orbiter S-Band Uplink Monitor transmits a 2 GHz analog signal between Pads A and B and the OPFs. The system utilizes single mode lasers and 2X2 optical couplers.

Fiber optic transmission for short distances includes RS-250-C short haul video, and Serial Data Interface (SDI) video. This also includes point-to-point variable rate telemetry circuits at KSC and CCAFS.

The Remote Monitoring and Alarm System (RMAS) consists of hardware and software to monitor the health of the Video Products Group Plessy Corning Optronics (PCO) 12 MHz analog transmission equipment located at KSC. RMAS can monitor any equipment generating discrete contact closures and/or analog voltages. The Sun Microsystems RMAS console uses Hewlett-Packard Open View Network Node Manager to provide the user interface and reporting mechanism. The RMAS Remote Terminal Unit (RTU) is

polled for alarm status utilizing a Simple Network Management Protocol (SNMP) proxy agent via a COTS Code Activated Switch (CAS). The RTU uses KSC designed hardware and software. The RTU software is written in the C language and is compiled to machine language in order to run on the RTU.

The fiber optic wideband (FOTS) system is being phased out and the circuits and functions are being transitioned to the Digital Video Transmission System (DVTS).

Standards Based Data Transmission systems include the ATM Transmission System (ATXS), T-Carrier/SONET, fiber optic end equipment, DVTS, and Voice Distribution Management System (VDMS). KSC has initiated a project to replace the existing systems functionality and add new capabilities with a common transport system. This system is expected to leverage technologies such as CWDM, optical switching, signal recognition, Next Generation SONET, emerging Ethernet technologies, innovative optical architectures, environmentally hardened equipment, Controlnet, Devicenet, Industrial Ethernet, and Fiber Optic RF Transmission.

ATXS

The ATXS is a commercial off the shelf, standards based switch network consisting of four 10 gigabyte per second (Gbps) Cisco 8600 and four 20 Gbps Cisco 8540 Multi-service Switch Routing (MSR) backbone switches, four 10 Gbps FORE ASX-1000 ATM switches, four 5 Gbps Light Stream 1010, two 20 Gbps Cisco 8540 MSR facility switches, and over 100 edge switches consisting of Cisco 2924, and Riverstone 3100. The ATXS is a mesh connected system integrated with the SONET transmission system to take advantage of the SONET ring physical layer protection. It serves as the KSC operational data transport system, integrating separate operational LANs over virtual circuits. These virtual circuits utilize RFC-1483, Classical IP over ATM, or direct OC-3c ATM connections.

ATXS network management is accomplished by an in-band SNMP based platform running Hewlett Packard Open View Network Node Manager software and vendor specific management software. An out-of-band system utilizing point-to-point modems provides security and maintenance alarms.

T-Carrier/SONET

The T-Carrier/SONET backbone supports both administrative and operational customers at KSC and CCAFS. The backbone utilizes SONET OC-48, SONET OC-3, and M-13 multiplexers. The system provides OC-12, OC-3, DS-3, and DS-1 connectivity between major facilities at KSC and CCAFS.

The T-carrier system consists of fiber optic multiplexers at twenty-one locations at KSC and one location at CCAFS. Office repeaters are installed at all multiplexer locations to improve signal quality at the multiplexer. Customer Service Unit (CSU)/Data Service Units (DSU) and Smart Jacks are supplied at customer demarcation points for data

conversion for V.35, RS-422, and RS-530 interfaces. The T-carrier system utilizes High-bit-rate Digital Subscriber Line (HDSL) equipment to reach selected customers in some of the outlying areas of KSC.

The SONET system consists of 16 OC-48 multiplexers and 17 OC-3 multiplexers at major facilities at KSC.

All M-13 and SONET multiplexer locations have UPS or battery back up.

The T-Carrier/SONET management system consists of SNMP control devices and proprietary control devices.

DVTS

DVTS consists of CWDM, video transmitter (TX) and receiver (RX) cards, data TX and RX cards, and audio TX and RX cards. It supports Orbiter processing and launch operations, payload test and checkout, Electronic Security Surveillance (ESS)-Access Control (AC), Ground Camera Acquisition Imaging Project, Electronic Hold Fire, shoreline intrusion detection, and Digital Broadband Communications Distribution System (BCDS).

DVTS provides all of the services listed under the FOWB analog system and includes the additional digital services:

- HD digital video
- SDI digital video
- Asynchronous serial interface (ASI) streaming video
- Digital video multiplexing (8 SDI/ASI channels on one wavelength)
- Digital audio (including analog audio)
- Increased bandwidth RS422 data (up to 2 Mbps)
- Bi-phase L data
- 10/100 Mbit Ethernet
- Gigabit Ethernet
- Analog to Digital converters and Digital to Analog converters

The DVTS system has an integrated SNMP for system monitoring and alarms.

DVTS also incorporates the CWDM Optical Remultiplexer and Regenerating System (CORRS), which provides both passive CWDM optical patching and active regeneration patching.

CORRS will integrate with the future system deployment of the Optical to Electrical to Optical (OEO) switch which will provide point-to-point and point-to-multi-point optical switching of the CWDM wavelengths. Point-to-point provides redirection of the wideband services to different facilities through major hub points such as the VABR and

CD&SC. Point-to-multi-point provides multi-casting of select wideband services to multiple facilities through major hub points.

VDMS

VDMS is a COTS multi-nodal, multi-aggregate multiplexer system for local routing of communication signals in the KSC vicinity. The system routes approximately 300 operational voice and data circuits at KSC and CCAFS. The VDMS is the primary interface between the KSC OIS-D system and the NISN interface which routes KSC circuits to other NASA Centers.

VDMS is comprised of 37 General DataComm (GDC) Megamux Transmission Management System (TMS) multiplexers and 23 ADC Fibermux Magnum 100 Mbps fiber optic multiplexers on five100 Mbps backbone rings. The System utilizes computer automated performance monitoring and control. The TMS and Magnum systems are designed to be highly reliable and will automatically reroute circuits around system failures to the full extent possible. This auto routing feature is essential due to the critical nature of the VDMS function.

The system is located at the CD&SC with multiplexers throughout the primary communications locations at KSC and CCAFS.

These systems support the services referenced in the PWS 3.3.1.

B.3.3.2 KFRL

The KFRL consists of communication systems and functions provided by the Ground Networks for support of space flight operations, testing, and simulations. This includes data and voice combined to form the telemetry and command stream transmission.

The Forward Link function utilizes the KFRL system to process commands and A/G voice (V1 and V2) and then transmits the Forward Link Pulse Code Modulation (PCM) stream to the uplink site. The two Astrocomm analog voice channels and the LPS-generated Forward Link command stream (with voice fill) are sent into the KFRL system where the voice is digitized and multiplexed into the Forward Link stream. The Forward Link stream (32 Kbps/72Kbps) is then encrypted, if required, and blocked for transmission through the NISN mission network(s) to the ground station at MILA, JSC, Dryden Flight Research Center (DFRC), or White Sands Complex (WSC). Additionally, the KFRL system can route both Forward Link and Forward Link Echo streams from any uplink site to RPS for recording purposes. These data streams are de-blocked and decrypted prior to transmission to RPS.

The KFRL system will process the Return Link PCM stream (192/96 Kbps) by first de-blocking the data, decrypting it if necessary, demultiplexing the data and two voice channels (V1 and V2), generating the output Operational Downlink PCM stream (128/64 Kbps), and finally distributing the data and analog voice channels to the appropriate LPS

Firing Room, RPS, and Astrocomm. Nominally, when the source is either MILA/PDL, JSC, DFRC, or WSC, the Return Link (or direct Operational Downlink from DFRC) will be decrypted, as required, then routed directly to the appropriate LPS Firing Room and RPS without any further processing.

KFRL is in the installation phase with completion anticipated prior to contract start.

These systems support the services referenced in the PWS 3.3.2.

B.3.4 Networks, Telephones and Network Security Perimeter

B.3.4.1 Network

KNET provides approximately 20,000 network connections. KNET currently supports IP based protocols and is controlled using approximately 30 routers, 600 switches/hubs and 150 access points to provide networking to over 240 buildings and trailers throughout KSC and NASA occupied facilities on CCAFS. KNET also supports various offsite facilities. For the NASA facilities located on VAFB, the following is required:

- Provide and remotely manage the point of presence in Building 836. Incidental touch labor is provided through an ACA with the Launch Services Program (LSP) managed contractor.

- Provide and remotely manage wireless equipment

- Assign a block of IP addresses for use by NASA and NASA contractors

- Provide (as required) equipment and installation drawings for incidental system changes. Touch labor will be provided through an ACA with the LSP managed contractor.

- Manage the NISN T-1 extension between KSC and VAFB for administrative networking on both the OPEN and PRIVATE networks including provisioning routers on both ends, including troubleshooting with NISN on the T-1.

- Perform on-site installation of major upgrades. Subsequent incidental changes may be accomplished via an ACA with the LSP managed contractor.

The current network consists of 10/100/1000 Mbps Ethernet and associated cable for data transmission to desktop, servers, VoIP phones, IP cameras, and other end user devices. KNET is built upon and utilizes cabling and capabilities discussed in section 3.2 Cable Plant. KNET sustaining engineering efforts for the wired network include upgrading bandwidth limiting 10Base2/Category 3 cabling to Category 6A premise wiring and 10 Mbps switches/hubs to 10/100/1000 Mbps switched Ethernet. Several remote locations where fiber optic cable is not available are served by Digital Subscriber Line (DSL) equipment at lower speeds. KNET also provides wireless LAN service. Wireless LAN sustaining efforts include upgrading autonomous wireless access points to a centralized management wireless system.

KNET interconnects geographically dispersed facilities with a redundant Kennedy Metropolitan Area Network (KMAN) 100/1000 Mbps Ethernet switched backbone. KNET connects to external providers such as NISN through KMAN and the NSP

KNET uses policy based routing and virtual LAN's to provide three segmented/logically isolated networks referred to as internal (private), public, and open (three islands) across KSC and NASA occupied facilities on CCAFS.

KNET operates and maintains many network services. These include:

- DNS – Sun/Solaris Server and BIND
- DHCP – Intel/WIN Server and Cisco Network Registrar Service
- Network Time Protocol (NTP) – Truetime and Symmetricom Appliances
- Authorization, Authentication, and Accounting Service – Cisco Secure Control Server (RADIUS and TACACS+) and Juniper Steel-Belted Radius Server

Note: The Government expects to deploy an Agency-wide tool(s) for DNS and DHCP management during the base period of the contract. The contractor shall be responsible for transitioning to and using the new tool(s).

KNET's Network Control Center (NCC) operates from a primary location at the CIF and a limited functional backup NCC located at the O&C. Network management uses software and protocols including, but not limited to:

- Network Management Application – 3COM Transcend, CiscoWorks, Cisco Wireless Control Server, Spectrum, and What's Up Gold
- Network Operations Database Servers – Microsoft SQL Server
- Network Web Servers – Microsoft IIS and Apache
- Network Troubleshooting Tools – Sniffer, F-Secure, and Solarwinds

New or revitalized facilities are typically premises wired with a minimum of one Customer Face Plate per 100 square feet of area each delivering 2 Category 6 augmented cabling. Additional CFP's can be installed per user requirements.

The majority of the KNET routers, gateways, switches, and hubs are manufactured by Cisco Systems. However, there many 3COM and Cabletron hubs and switches still operating within the network. The bulk of the wireless devices are manufactured by Cisco Systems. The DSL devices are manufactured by Tut Systems, Pairgain, and Cisco Systems.

These systems support the services referenced in PWS 3.4.1.

B.3.4.2 Network Security Perimeter

The KSC NSP system is comprised of a series of interrelated/interconnected networking, security, and monitoring subsystems that provide a variety of functional services that are both protective and service delivery oriented.

The NSP functions as the primary KSC Wide Area Network (WAN) ingress/egress point to the outside world (including the other NASA Centers, partners, contractors, and the Internet). Via NISN, the NSP delivers primary, first level Center perimeter access control services and provides remote access services, intrusion detection, ingress/egress monitoring, network troubleshooting access, and performance measurement capabilities at the Center's network edge. The primary locations of this system are in the CD&SC and CIF facilities with secondary monitoring locations in the HQ building and a small lab facility in the Engineering Development Lab (EDL) building.

The connectivity architecture is a basic three layer external router-firewall-internal router configuration with passive monitoring points located throughout the layers and subsystems to permit the completion of transparent system management, traffic monitoring, and network troubleshooting. Firewall filtering and other forms of traffic intervention are performed in some capacity at every layer of this architecture using "stateful" network firewalls, router access control lists, and route filtering. Direct interface to a number of "near-site" contractor/partner facilities (e.g. Boeing "Bldg 100," the Astrotech spacecraft processing facility, and the 45 SW network at CCAFS and PAFB) is completed via a dedicated set of partner switches connected at KSC and remote locations. Additionally, the two major network environments (internal and open/guest) at KSC are defined and delivered to the Center LAN through a variety of logical and physical means.

The routers and switches that interconnect the various system components and functions are a combination of Cisco Catalyst 6xxx, Catalyst 4xxx chassis based switches, Cisco 72xx and 26xx based Ethernet routers, and a number of non-modular Cisco Catalyst 35xx and 29xx switches. These switches and routers are interconnected through a mix of 1 Gbps primary network paths and 100 Mbps secondary network paths. The two primary sets of KSC firewalls (for the internal and guest networks) are redundant Checkpoint Firewall NGX-based Intel server platform clusters with a smaller number of Juniper Netscreen firewalls performing internal system protective functions.

Two redundant instances of the RADIUS and SecurID services are functional in different facilities with one in the CD&SC and one in the CIF KNET Control Center on separate "Center services" network segments and adjacent to other key network services nodes. The Center services network segment in the CD&SC includes an open source SQUID proxy server cluster running on generic Intel server platforms providing external http/https connectivity for a limited number of on-site networks/hosts that would not otherwise be routed off-site as a NASA managed network.

Within the NSP management and monitoring subsystem, there are a number of sub-functions that are performed by multiple components within this logical grouping.

The firewall clusters are supported by a pair of Checkpoint firewall management and logging servers that manage the individual firewall clusters and perform flow-level logging of all network traffic crossing the Center's network perimeter.

Intrusion detection and anomalous traffic identification functions are delivered using a mix of intrusion detection sensor servers running the open source SNORT Intrusion Detection System (IDS) applications/sensors, TCPDump raw packet capture systems, and the legacy ISS Real Secure COTS IDS application. The raw data delivered by these systems is post-capture processed by a series of internally developed Perl scripts and other open source reporting tools. These sensors are located both at the Center's perimeter, as well as spread across the KSC campus backbone networks at key monitoring/transit locations.

This system also houses Agency remotely supported intrusion detection and monitoring capabilities based on a variety of COTS software products using Intel-based server platforms that are supported as part of the local NSP infrastructure.

These systems support the services referenced in the PWS 3.4.2.

B.3.4.3 Telephones

The KSC telephone system is primarily a Siemens EWSD Class 5 Central Office Host Switch (located in CD&SC, Room 128) with six Smart Remote Units (RSU) and eight remote Digital Line Remote Control Units (RCU) located in major KSC facilities. The switch has all of the features and functionality of a Class 5 Central Office (CO) including Custom Local Area Signaling Service (CLASS), SS7, and Integrated Switched Digital Network (ISDN). The system has an integrated Centigram voice mail system, two conference bridges (Latitude and Polycom), and a SecureLogix telephone firewall. The system integrates with an E-911 switch to provide Public Safety Answering Point (PSAP) services to KSC. The switch provides outside KSC connectivity through Primary Rate Interface (PRI) trunking to the local calling area and between NASA Centers and long distance through Federal Telecommunications System (FTS) General Services Administration (GSA). The LCC Firing Rooms are served by a Siemens HiPath PBX.

The phone system provides point-to-point links for launch critical operations. The majority of KSC phones are single line display phones with Caller ID, speakerphone, voice mail, and CLASS features. Additionally, there are a large number of ISDN multi-line speakerphones with display. VoIP has been deployed in select KSC locations and has been designated as the future configuration for the Center. The VoIP system consists of Call Managers, Unity Voice Mail, Emergency Responders (E-911 location information), and gateways. There are approximately 18,500 instruments and ports in approximately 275 buildings. There are several PRI spans servicing video, gateways, Reports and Information Distribution (RAID) and other data requirements.

These systems support the services referenced in PWS 3.4.3.

B.3.4.4 Secure Remote Access

The KSC Secure Remote Access Services (SRAS) subsystem is a collection of remote access services that permit access to the KSC/NASA IT infrastructure from locations external to the Center. These remote access services include basic dial-in modem access service via analog Plain Old Telephone Service (POTS)/ISDN digital lines and redundant dial-in servers (Cisco 37xx class routers with single PRI interfaces), a limited services functionality Secure Sockets Layer (SSL) based Virtual Private Networking (VPN) solution using the Agency standard web browsers as access clients (using redundant Juniper Networks Access 6000 series SSL VPN gateways), and an Internet Protocol Security (IPSEC) client based VPN gateway services using a set of redundant Cisco 3000 series VPN concentrators. This IPSEC client based service provides both full remote host connectivity, as well as a subset of that connectivity to certain remote user groups, based on group access profiles, and ultimately will perform full remote client configuration auditing via network admission control agents. This full VPN client is supported in Windows, MacOS X, and Linux environments.

A redundant Remote Authentication Dial In User Service (RADIUS) system, based on the Juniper/Funk Global Enterprise Edition RADIUS software application running on Intel based server platforms, provides basic DHCP, account logging, and pass-through authentication functions for these SRAS components. Secondary support servers providing Microsoft (MS) Windows Internet Naming Services (WINS) and Domain Name Services are also functional within this subsystem.

A two-factor authentication system based on the COTS RSA Security SecurID hardware tokens and redundant ACE servers running on Solaris based servers provides two factor authentication for the SRAS servers. Although this system primarily provides authentication for the SRAS components, it also provides strong authentication for selected systems across the Center, such as the KSC “TechDoc” document management system. Ultimately, this system will be passing the authentication requests to either the NASA Consolidated Active Directory (NCAD) or Agency Enterprise Authentication systems for final user authentications/authorization.

These two-factor strong authentication services are also utilized with the on-board ACE Server TACACS+ server daemon built into the redundant ACE Servers to provide centralized strong network authentication to the individual components of the Network Security Perimeter. A server reporting application provides a more user friendly reporting function over the built in reporting functions of the servers. A SRAS support web server that provides some user self service token management functions and an SRAS client download repository is also operational.

These systems support the services referenced in the PWS 3.4.4.

B.3.5 Imaging

B.3.5.1 Surveillance Television

Operational Television (OTV)

The OTV system provides closed circuit television support to NASA operations at KSC. The system includes visual surveillance support to spacecraft, payload, and security operations and has equipment located in the LC-39 and Industrial Areas.

In the LC-39 area, video cameras are mounted in protective housings on pan and tilt units throughout the LC-39 Pad sites, Vehicle Assembly Building (VAB), and OPFs and are remotely operated from the Television Control Center (TCC) in the Launch Control Complex (LCC). An analog video switch and control system in the TCC allows for the input of 192 cameras to be sent to 512 output destinations. The switch may also be controlled from individual console locations located in Firing Rooms 1 through 4 and associated management areas. Additionally, remote controls for the video switch assigned outputs are located in the KSC Industrial Area, JSC, and MSFC. Also in the TCC is the video recording system for original recordings, duplication, and dubbing. The OTV system provides recording formats in both digital broadcast quality and commercial analog quality depending on the identified requirement. Timing equipment for time registration on the live and recorded video is also located in the TCC.

Approximately 75 video cameras and their associated pan and tilt apparatus at each pad are connected to the Pad Terminal Connection Room (PTCR) via the NASA designed TV-39 cables. In the PTCR, the Camera Control Unit separates the TV-39 signals, separating control from video. Baseband video signals are multiplexed (WDM) for transmission back to the TCC on fiber optic cables. In the TCC, the video is demodulated from the carrier frequencies, amplified, fed into a 192 X 512 Grass Valley video switch, and directly transmitted to over 500 monitors and test locations. Approximately five channels of the switcher output are fed to Broadband Cable Distribution System (BCDS) for general distribution.

Additional surveillance cameras include nine color cameras located in the transfer aisle of the VAB and three color cameras in each of the three OPF Highbays.

The existing LC-39 OTV system consists of three standalone routing switches, the analog switch is used to route existing color and black and white NTSC analog camera signals, the Standard Definition switch is used to route both existing analog and standard definition video camera signals, and the High Definition switch is used to route the recently installed high definition camera signals. The system is currently being upgraded to a digital system through the OTV-Digital (OTV-D) project. This project will transition the current analog camera, routing, and control system to permit the implementation of a SDI closed circuit surveillance system. The digital transition schedule requires that the new digital system and the current analog system co-exist for a number of years. The analog routing switch will be de-commissioned at the completion of the OTV-D

transition. The OTV-D project will also implement a new digital control system which will unify the control capability for all OTV camera formats and provide control of all video routing switchers from digital control panels. Currently, the OTV-D Digital Switch and the Video Processing and Distribution system are installed and operational.

The Industrial Area OTV System provides visual information distribution between several payload handling facilities including the O&C Building, the Payload Hazardous Servicing Facility (PHSF), Vertical Processing Facility (VPF), and the Space Station Processing Facility (SSPF).

The Industrial Area system has a central routing center which distributes video information from the payload handling facilities to various user groups, safety, and security personnel located throughout KSC. The Industrial Area system is comprised of approximately 150 black and white or color cameras and remote controlled pan and tilt units; 500 monitors; routing switches; and distribution, synchronization, video recording, duplication, and dubbing equipment.

The O&C Television Control Center is the operations center for the Industrial Area OTV system. A 128 x 400, XY routing switch at this location interfaces directly with outputs from the SSPF switch (96 x 200) and the LC-39 OTV switch (192 x 512).

ESS Access Control (AC) Cameras

The ESS AC cameras are Pan, Tilt, Zoom (PTZ) configured video camera systems that support visual surveillance around the perimeter of most major facilities at KSC. The camera systems are remotely controlled from the KSC Security Control Center. There is decentralized recording of video that is made available to security personnel at operational consoles.

Web Cameras

Web cameras provide digital video over standard KSC networks from remote locations to customer monitoring computers. The webcam capability provides an alternative to traditional video surveillance methods through the use of IP addressable video cameras. Currently, webcams are used at the SLF, the Railroad Depot area, and the Child Care Facility.

These systems support the services referenced in the PWS 3.5.1.

B.3.5.2 Multimedia Production and Distribution

KSC TV

KSC-TV is a television acquisition, production, and distribution system. KSC-TV provides both an open public (NASA Television) and a closed enterprise wide (NASA Select) broadcast system. The system includes input sources; video and audio control

rooms; post production processing equipment; video and audio switches; RF, video and audio distribution equipment; dubbing and playback equipment; and satellite uplink and down link systems.

During NASA missions, KSC TV produces live, continuous, broadcast quality audio and high definition video coverage of launch and landing, Shuttle downlink video, news conferences, and other events in response to customer requirements. The system at the Press Site provides technical operations for both broadcast quality audio and video programming. The Press Site television system creates original programming in both the NTSC and ATSC HD 720p/59.94fps formats.

During launch and landing, Engineering News Gathering (ENG) teams are sent to sites at KSC to provide primary video sources used to create NASA TV programming. These isolated video feeds are individually distributed live to the media for creating independent programming. Unedited tracking views from each camera are replayed on NASA TV shortly after the event. For major mission milestones and special events, NASA TV events originating at KSC are transmitted to other NASA Centers, and disseminated to the public through the use of the KSC video inter-center digital video capability, either as real time or near real time delayed broadcasts.

KSC TV provides original multi-camera program development, post-production editing, and original broadcast quality NTSC and ATSC HD recordings of NASA Media Services Division requirements. KSC TV also produces both broadcast and commercial quality videotape and DVD format duplications and dubs.

News briefings are conducted before, during, and after missions to inform the news media and public of mission status. Most briefings are moderated by a NASA Public Information Officer and may include graphics, videotape, animation, and multipoint two-way audio for media participation from remote locations such as other NASA Centers and, when applicable, international venues.

KSC TV provides technical support to operational requirements at the KSC Press Site. The Press Site provides a central location for media personnel to assemble and interface with the KSC TV system. The Press Site has provisions for direct video feed distribution of the NASA remote cameras to the news media. NTSC distribution includes approximately 20 distribution boxes located around the Press Site with 24 isolated video outputs and one RF feed which includes the local broadcast channels. ATSC HD (HD-SDI) distribution includes approximately 12 distribution boxes with 24 isolated video outputs, located at the Press Site Annex Building.

In addition to these feeds, there are also four small stump boxes each providing five NASA TV baseband NTSC feeds and five RF feeds. A total of 52 RF cable drops are provided in the stump boxes. Three additional ATSC HD (HD-SDI) distribution boxes exist with approximately 20 each NASA TV program and approximately 20 each KSCTV program, located at the Press Site Annex Building and as portable enclosures in the parking lot for media satellite trucks distribution.

BCDS

BCDS is a hybrid fiber/coaxial cable television distribution system that transports limited non-critical data, television, and advisory services directly to customers where other communications systems are not economically feasible or warranted.

The system provides digital high definition, standard definition, and analog channels. The system is designed to provide television distribution in several tiers. The first tier is basic analog television programming. This includes off-air commercial television channels as well as operational views of various KSC locations. The second tier is MPEG Annex B digital formatted video programming. This tier is used to distribute digital programming for receivers and set-top boxes that use the American standard encoding format. This tier includes off-air channels that have transitioned from analog to digital for their satellite delivery service. The third tier of programming is MPEG Annex A. This tier is based on the European standard digital encoding format and has conditional access restriction capabilities. This tier allows for secure distribution of sensitive video programming to select customers using the broadband cable infrastructure. The basic function of the broadband system is to provide both programming originated at KSC and off-air television channels to users at KSC and CCAFS.

The KSC BCDS is a mid-split cable television broadband system that provides distribution of television to most of the major KSC facilities and acts as a headend feed for cable television distribution at CCAFS. The BCDS is comprised of a consolidated headend that delivers signals to the cable distribution system in the Industrial Area, LC-39 Area, and to CCAFS. The system is capable of providing 63, 6 MHz cable television channels. Program sources include local KSC operational video from spacecraft and payload operational areas, off-air commercial television, C-band and Ku-band satellite feeds, and video taped material. The system currently services approximately 12,000 television drops.

Origination sources include local off-air antennas, satellite dishes, and outputs from Grass Valley and Sony HD video switches located in the LCC and the Payloads/SSPF switches located in the O&C and SSPF. Baseband signals from the video sources are encoded, modulated, processed, and distributed using COTS television equipment.

The NASA Training and Information Channel is distributed on BCDS. This is a dedicated channel that broadcasts training and informational programming twenty-four hours per day. A COTS system stores program video as MPEG files on a hard drive. Playback is controlled by a PC based scheduling system. Operator intervention is required only if a new program must be added or a schedule change is required. A second channel will be added in 2010.

Webcast Studio

The webcast studios are located at the KSC Press Site and CCAFS Building 1605. The Press Site system consists of six racks, approximately five servers, and, 10 video editing workstations, and a TV studio. The CCAFS system consists of six racks, three video editing suites, a TV studio, video switch, and video dubbing areas. The webcast studios are part of the Kennedy Internet System and are used to develop multimedia products to be hosted on the KIS for distribution to the Agency public web portal. Webcast studios also perform live webcast programming and podcasting to support NASA activities such as Shuttle and ELV launches from Kennedy Space Center and Vandenberg Air Force Base. These products are delivered through the KSC Internal/External home pages, organizational web applications, and the NASA portal web site. The webcast studios are connected to the KIS through the KSC networks and require special permission to access the KIS. The webcast studios utilize high-end Axio HD video editing workstations, file servers, tape backup units, uninterruptible power supplies, RAID disc storage units, video streaming encoders, GlobeCaster video switching technology, 3D Studio MAX animation software, and Adobe Premiere Pro video capture and editing software.

These systems support the services referenced in the PWS 3.5.2.

B.3.5.3 Processing, Launch, and Landing

The Processing, Launch, and Landing Imaging systems provide tracking, motion picture, still photographic, digital, and video products and services. This includes support to institutional and engineering requirements.

Program Engineering Photographic Imagery

Program Engineering Photographic Imagery acquisition provides motion picture, photographic still, and digital still images for major milestones of NASA programs. A mixed media solution is used to provide a high degree of spatial and temporal resolution. Camera types used include Photosonic 16mm, 35mm and 70mm motion picture cameras, various 35mm and large format photographic still cameras, professional digital still cameras, and high definition video cameras operating at 720P lines of resolution, 60 frames per second (fps). Currently the Photosonic motion picture cameras provide our highest temporal capability for operations at up to 400 fps. Investigations into high-speed digital cameras are currently underway for potential future as a replacement to or augmentation of high-speed motion picture film.

A large supply of lenses and telescopes is maintained in house. Lenses range from macro to long telephoto types for both film and video. Both fixed and active zoom lenses are available. Telescopes are both fixed and actively focused with a focal length range from 50” to 180”.

The system also includes the tracking mounts and associated support vehicles such as trucks for towing and mobile control rooms for control of video cameras and recording

equipment. There are two major classes of tracking mounts. The first mount is the remotely controlled Kineto Tracking Mount (KTM). This unit uses a remote control system that allows the tracker to be used in Blast Danger Areas such as short range sites around the Pads. There are approximately 14 of these units in inventory. The second type of tracker is the Intermediate Focal Length Optical Tracking Mount (IFLOT). This tracker is a manned unit that has been recently refurbished to include digital tracking technology to improve performance and reliability. There are approximately six of these units in inventory.

Photo Optical Control Systems (POCS)

The POCS supports LC-39 engineering and NASA Media Services Division documentary requirements. The POCS is a motion picture, photographic still, and digital still remote control system that is capable of camera start/stop, lens control, and performance data logging.

A POCS Control and Acquisition Module (CAM) is located at the cameras. The CAM interfaces directly with a camera and controls and monitors the camera functions and parameters at remote camera sites. Also housed at these sites are the FOT along with the multiplexers/demultiplexers required for remote operations. The CAM to FOT interface is serial RS-422 with a base function rate of 9600 baud. The FOT links between remote locations and the central control area operate at 1550 nm and 1300 nm. The central control area for POCS is located in the LCC room 2P10.

There are two NASA custom designed Communications Control Systems (CCS) with redundant connections to the FOTs in the Payload Control Center. The CCS can be controlled and monitored from a number of workstations via Ethernet connections.

The POCS software has the capability to support 512 CAM units each at Pad A and Pad B. There are 300 operational CAM units.

HD/SDTV Image Acquisition

HD/SDTV Image Acquisition assets include HD cameras and lenses, SD cameras and lenses, camera control hardware and software, and HD and SD recorders.

Ground camera imagery is acquired by operation of camera tracker mounts and camera controls using a mix of both locally and remotely operated devices. The image acquisition system includes transmission equipment to move HD and SD signals from the cameras to recorders and live viewing locations. A 64 x 64 HD video routing switcher is used to configure live feeds for a variety of locations. SD signals are routed through the OTV switch.

For remote camera sites with fiber-optic connectivity, HDTV imagery files are moved from on-site recorders to the OTV area post event. For remote camera sites without

fiber-optic connectivity, HDTV imagery files are moved from on-site recorders to the OTV area on removable media by couriers.

For remotely controlled devices, signals are multiplexed over fiber optics using data transmission equipment. Universal Time Code (UTC)/IRIG-B timing information is inserted just prior to the image being recorded.

Mission Support Imagery

Mission Support Imagery is acquired from sources outside of KSC and the Eastern Range (ER). The acquisition of these types of images is achieved by sources that are outside of the scope of this contract. These sources include cameras mounted on the launch vehicle and images acquired during on-orbit operations and down linked to JSC.

BCI

BCI is visual data captured in the form of high resolution digital images of the Space Shuttle vehicle, external tank, and solid rocket booster surfaces prior to launch for engineering evaluation of the Space Shuttle vehicle Thermal Protection System (TPS) performance. The baseline imagery will be compared with imagery captured on-orbit to assist NASA image analysis facilities in determining if there are problems that require corrective action.

BCI system consists of four major elements:

a. Acquisition and validation: The contractor currently uses digital imaging equipment consisting of Kodak Pro SLR/n cameras, Better Light 4x5 Scanning Backs, Altman Proline 1200 SE lights, and Quantum Flash Units. Images are validated by personnel to ensure captured images meet both qualitative and quantitative data requirements and that the required geographic coverage of the TPS surface is achieved.

b. BCI file management - Validated images are assigned a file name and associated image metadata is imported, created, and entered into the archiving system

c. BCI distribution - Image data is distributed through manual and internet access mechanisms to KSC, JSC, and MSFC image analysis facilities.

d. BCI archiving - Image data is archived in accordance with Space Shuttle Program requirements, NASA Records Retention Schedules, and requirements established by NARA.

Image Archival Server

The Image Archive Server is located at KSC and supports archiving the following types of imagery:

- **External Tank Camera Video** – This imagery is transferred to the Archive Server from the MILA, Ponce DeLeon (PDL), Wallops Flight Facility (WFF), and Jonathon Dickinson Missile Tracking Annex (JDMTA) tracking stations.

- **Solid Rocket Boosters (SRB) Camera Imagery**– This imagery is acquired from cameras mounted on the SRBs and is delivered to the KSC for archiving and distribution after SRB retrieval.

- **WB- 57 Camera Video** – This imagery is captured from the NASA WB-57 aircraft and delivered to KSC post ascent for archiving and distribution.

- **Baseline Configuration Imagery** – This imagery is a set of high-resolution digital still images in TIFF format of pre-launch Shuttle elements for comparison with on-orbit views of similar sets.

- **Engineering playback views (as defined in NSTS 08244)** – This imagery includes engineering and NASA Media Services Division sources as defined.

- **NASA Media Services Division Video** – This imagery includes other NASA Media Services Division select feeds.

- **Radar Data Imagery** – This imagery is provided by radar sites at KSC and the ER.

- **Other Sources** – These imagery formats include standard NTSC analog, Super-Video Home System (S-VHS), Digital Video (DV), DVD - ROM, Institute of Electrical and Electronic Engineers (IEEE) 1394 “firewire”, USB, SDI, HD-SDI, and other digital imagery files.

The archive server can store online at least three missions of the imagery described above. All other missions are stored in either online tape storage or offline tape storage. Images are stored with metadata to facilitate retrieval. An automation system is used to manage all images in storage.

Image Distribution Mirrored Servers

The image distribution mirrored server system consists of two major elements:

- NISN Dedicated Network with constant allocation of 200Mbps with burst rates of up to 400 Mbps.

- KSC, JSC, and MSFC Image Analysis Facility hardware and software platforms for imagery data access.

Imagery data is distributed to the image analysis facilities using a configuration of “mirrored servers” located at JSC, MSFC, and KSC. The mirrored servers are identical

in storage capacity and computing power. Imagery placed on a mirrored server at one Center is automatically replicated on the mirrored servers at the other two Centers. Firewalls are used to protect the data and the system components. Communications between the Centers is via a dedicated NISN link.

Imagery content is placed on the mirrored servers from the Image Archival Server in support of mission requirements. User areas are also provided so the users at each Center may place content on their mirrored server for distribution to the other Centers.

Institutional Computerized Archival System (ICAS)

ICAS provides for efficient image data searches and retrieval from various collections using a graphical and text based search tool through the convenience and accessibility of a web-browser interface.

Major collections of data managed by ICAS include BCI, NASA engineering video, institutional stills, institutional videos, and operational documents.

ICAS utilizes InMagic Content Server, GathererPLUS, and Presto for InfoCenter software applications.

The hardware includes a web server, an image file server (3.6 GHz, dual processor Dell PowerEdge 2850 Servers, one with five 146 GB hard drives), and a database server (Dell PowerEdge 2850 Server with four SCSI controllers for three PowerVaults and a PowerVault 136T tape drive).

These systems support the services referenced in the PWS 3.5.3.

B.3.5.4 Non-Engineering Imaging

Imaging services provides motion picture, still photographic, digital, and video products and services for customers at both KSC and CCAFS. This includes support to institutional and engineering requirements.

Institutional products include processing of negative film, 8x10, 11x14, and 16x20 inch color prints; digital still hardcopy; video products including broadcast and commercial formatted video tape recordings; duplication; dubbing; film to tape transfer; multimedia presentations; and digital video CD and DVD archiving and duplication. The services include on-call photographers and videographers, media customer service interface, digital video production programming development, distribution, duplication, dubbing, archiving, optics and photo equipment repair and maintenance, broadcast and HD video productions, and digital still image services including scanning, digital image manipulation, and CD/DVD archiving. Official KSC motion picture and still film photographic and digital products are archived in the KSC HQ building. The NASA Media Services Division photo, video, and digital products archives are located at the Press Site.

These systems support the services referenced in the PWS 3.5.4.

B.3.5.5 DOD Technical Multi-Media Support

Systems described in B.3.5.3 are used to support services referenced in PWS 3.5.5.

B.3.6 Graphics

Software applications include Adobe Creative Suite 2, Carrara 4, Corel Bryce 5, and Microsoft Office 2004. Both Mac and Personal Computer (PC) platforms are used with peripherals including Epson Stylus Pro 10000 P260A plotters, an HP 7300DN 2400 dot per inch (dpi) laser printer, scanners, and external hard drives. Other hardware includes mat cutters, laminating equipment, and digital cameras.

These systems support the services referenced in the PWS 3.6.

B-3.7 A/V and Presentation Support Services

There are approximately 25 conference facilities ranging from 15 seat rooms to a 280 seat auditorium. Depending on user requirements and facility size, a variety of A/V equipment is available in each conference facility.

- Audience and presenter microphones, mixers, amplifiers, and loudspeakers
- Teleconferencing system
- Motion picture and slide projectors
- Video projection equipment
- VHS video recorder/player
- Audio recorder/player
- DVD player
- Viewgraph projector
- Electrically operated projection screen
- Ceiling mounted video projector
- Network connected PC
- Audio, video, network, and power "pop-ups" on the conference table
- Universal, programmable remote control for audio/video equipment
- Motion-activated *Meeting in Progress* sign outside the main door
- Touch screen system controller
- High Definition television set

There are multiple dedicated video teleconferencing (ViTS) rooms. The typical room has two video cameras, two video projection screens, audio conferencing equipment, an interactive graphics and document sharing workstation, associated system hardware and software, and a ViTS room operator console. Dedicated ViTS are in HQ 3125, 3201, and 3210; LCC 4P10; 16 in OSB II, OSB I, O&C; and two in SSPF. There are also two portable ViTS units.

The A/V equipment loan pool consists of:

- Microphones, mixers, amplifiers, and loudspeakers
- Lecterns
- Slide projectors and screens
- Overhead video camera for documents
- VHS video recorder/players
- DVD players
- Television receiver/monitors
- Video projectors
- Camcorders
- Equipment stands

These systems support the services referenced in the PWS 3.7.

B.3.8 Timing

Timing, countdown, and frequency signals are generated and distributed from Central Timing Stations in the LCC and Central Instrumentation Facility (CIF) buildings. These signals are distributed to all areas of KSC and to KSC communication systems as needed including LPS, OTV, photo, transmission systems, calibration labs, and network servers. Timing and frequency reference signals are distributed on a continuous basis while countdown signals are provided as needed for launch, landing, and testing including payload checkout.

Each Central Timing Station consists of more than 15 equipment racks, operational consoles with timing management computers, test equipment, and bench repair stations. Additional distribution/signal conditioning equipment is found throughout KSC in communication rooms and user controlled areas. Also, over 400 timing and countdown displays are distributed throughout KSC.

The core of a KSC timing station centers on multiple GPS clocks with Cesium Standard frequency reference. Voting logic is used to determine which system is used as the primary source in the event of a failure. From the primary timing source, multiple signal generators are used to provide the various time and countdown formats required. The Cesium standard also provides precise frequency signals which are provided to customers throughout KSC. Most signals are carried on copper lines between facilities with remote amplification and signal conditioning at distant sites. A few signals are routed between the Timing Stations over fiber-optics for redundancy.

These systems support the services referenced in the PWS 3.8.

B.3.9 Voice Systems

B.3.9.1 Paging and Area Warning System (PAWS)

The KSC PAWS is a center wide system designed to provide emergency, operational and administrative announcements to KSC personnel. The system also provides a series of warning signals for various emergency conditions. The Area Warning signal is used to precede evacuation instructions and/or emergency directives. The Weather Warning Signal precedes weather status announcements. Along with the audio announcements, the PAWS provides flashing beacon and strobe lights in high noise areas.

The PAWS is controlled from two identical control systems, one located in the LCC and the other in the CD&SC. Each serves its respective area. Paging panels are located throughout the LCC and other control areas throughout KSC. All panels are wired to their associated control system. Each control system feeds the paging zones in its respective area. The LCC system feeds all of the LC-39 area, while the CD&SC System feeds the KSC Industrial Area. The two systems are linked together to facilitate all area paging. PAWS has one Bytex matrix switch to deliver T-1's to VDMS.

Each paging area (building/facility) has a subsystem for its own audio distribution and warning lights (if equipped). The associated PAWS Control System interfaces to these local audio distribution subsystems through a standardized PAWS interface called a control tray. The audio distribution system takes audio and control signals from the control tray and distributes them to the speaker networks with one or more power amplifiers. The control tray offers audio feedback and control status back to the control system.

The hazardous operational areas of KSC are required to have redundant PAWS systems. Such areas will have identical redundant paging networks. Some of these areas have reserve power systems as well. The system consists of 50 warning beacons, over 300 power amplifiers, and over 3000 speakers located throughout KSC. PAWS is a KSC designed system utilizing both custom and COTS hardware. Software for the system was written in a mixture of 'C' and Assembly language.

PAWS includes a test-bed where limited troubleshooting by skilled operators supports repairs of in-house developed electronics.

These systems support the services referenced in the PWS 3.9.1.

B.3.9.2 Radio Systems

The KSC radio systems are composed of handheld and mobile transceivers with associated fixed base stations and remote control units. There are both conventional and trunked land mobile radio systems.

The following describes the conventional system: Direct Radio System (DRS), MedComm, Cranes, Administrative Radio System (ARS) and Aircraft Radios.

DRS - DRS consists of three conventional base station radios which provide one-for-one voice connectivity between Operational Intercommunications System Digital (OIS-D) channels and radio nets. DRS frequencies are programmed into a controlled set of radios, 55 of which are closely managed by the crewed-vehicle program, and dispensed from a loan pool area which this contractor operates. DRS communications are recorded.

Medcomm - Medcomm consists of three base station transceivers and one repeater connected to OIS-D, two base stations remotely controlled from the Occupational Health Facility (OHF), radios in emergency response vehicles (such as ambulances and helicopters), handheld radios (which are trunking capable and may contain talkgroups). Medcomm base station transceivers are supported by backup power sources.

ARS - ARS consists of unrecorded radio channels which are not available via a wired communication system such as OIS-D or tone-remotes. ARS consists of narrowband VHF conventional radios and is in use at the Space Life Sciences Lab (SLSL), but is not restricted to the facility.

Fixed and mobile cranes - Fixed and mobile cranes on KSC rely upon conventional radio communications between the operator and ground crew. Radio communication associated with fixed cranes is recorded via receivers and comparators. Audio networks support centralized receiver comparison, recording, and playback. A network of transmitters, which simulate handheld crane radios in key facilities, facilitate regular health monitoring of the crane recording system. Base station aircraft radios exist at the SLF, some of which are operated via the Solacomm system. Aircraft radios also exist in automobiles, including the Convoy Command Vehicle.

Helipad Light Activation – This radio control system activates the helicopter landing pads lights at the Occupational Health Facility and north of the Press Site

The following describes the trunked system:

Smartzone - The system is a Motorola Smartzone 3.0 system with both a simulcast site and four non-simulcast sites. The simulcast site consists of two transceivers locations, one on the 500 foot weather tower in the LC-39 area, and one on the radio shop tower (M6-791) in the Industrial Area. The non-simulcast sites are at Malibar, Shilo, PAFB, and CCAFS. The Air Force also operates consoles, radios, base stations, and audio interfaces. This system provides support for such functions as security, fire, medical, safety, base support, and maintenance operations.

Interfaces - In addition to the equipment associated with a typical trunked system, KSC has 16 interfaces to allow audio cross-patching between conventional radio nets and trunked talk groups (using Base Interface Modules [BIM]), and 56 interfaces to allow audio cross patching between OIS channels and trunked talk groups. Each OIS-to-talk

group interface is achieved in part via a Radio Control Panel (RCP). This arrangement appears to the trunked radio system as if there is a console for every OIS-to-talk group patch, and makes KSC very atypical among users of trunked radio systems.

Consoles - Three locations on KSC contain consoles: the LCC contains seven consoles; the CD&SC contains one, and the Center Operations Facility (COF) in the LCC contains one.

Base Stations - Three base stations are dedicated to providing communication between OIS-D and three key safety talkgroups in the event of a trunking radio system failure, such as site trunking or failsoft. These three are constantly available. One base station transceiver is located in each rack of RCPs to be available to serve as an alternative communication path between OIS-D and a selectable talkgroup, after manual patching, in the event of a trunking radio system failure.

Radios - There are approximately 1600 portables, 500 mobiles, and 25 base station radios. Trunking radios are installed in helicopters, trains, automobiles, desktops ("base mobiles"), ambulances (with multiple heads), fire trucks, armored vehicles, and other modes of conveyance.

Trunked Radio Monitoring System –This system monitors the health, status, and history of the trunked radio system and its subscribers using the over-the-air control channel data streams. Through radio receivers, this system demodulates the control channel data streams of the Simulcast, Shilo, and CCAFS trunked radio sites. Through computers connected to the receivers, this system displays the real-time system health, status, radio affiliations, repeater assignments, and call types as well as log this information. The particular system which is being used at KSC is Treport. In addition, the trunked radio system must be monitored by Motorola on a 24X7 basis.

These systems support the services referenced in the PWS 3.9.2.

B.3.9.3 OIS

OIS-D

The OIS-D is a fully digital, multi-channel, voice conferencing communication system. There are two system centers, one in the LC-39 area and one in the Industrial Area, with a common channel interface to allow intercommunication. The major hardware components are the End Instrument (EI), Group Processor Assembly (GPA), Data Transmission Equipment (DTE), Central Summing Network (CSN), Technical Control (TC) workstations and Offnet Processor Subsystem (OPS). OIS-D consists of approximately 3,500 EIs, 57 GPAs, 49 DTE racks, two CSNs, the OPS, 14 channel banks, 72 battery banks, 65 battery chargers, and three UPS systems. OIS-D is a KSC designed system utilizing both custom and COTS hardware. Software for the system was written in a mixture of 'C' and multiple assembly languages, and is in excess of a million lines of code.

Brief descriptions of all hardware components follow:

EI - The EI is an operator controlled, multi-channel, microprocessor-based device that provides the interface to the GPA. They communicate with the GPA over a 19-American Wire Gage (AWG) twisted pair using a 130 kbps bipolar bit stream. Descriptions of the six types of end instruments are provided below.

a. The 51D EI is a multi-monitor, 19-inch rack mounted, single user-8 channel or dual user-4 channel unit for indoor use.

b. The 52D EI is a multi-monitor, 19-inch rack mounted, single user-4 channel or dual user-2 channel unit for indoor use.

c. The 53D EI is functionally equivalent to the 52D; however, it is contained in a sealed, deep-drawn aluminum housing which can be purged for use in hazardous environments. The unit is designed to be wall mounted or mounted on a portable cart.

d. The 55D is a desktop unit with 4 channels and a speaker for indoor use.

e. The 57D is a rack mounted speaker monitor that can be used with a 51D or 52D unit. The unit is muted when the EI user is transmitting.

f. The 58D is a wall mounted speaker monitor that can be used with a 53D unit, but not in outdoor locations or hazardous environments.

g. 59D - The 59D is a desk-mounted speaker monitor for use in office areas.

GPA - GPAs provide the first level of digital audio summation in the OIS-D system and are the interface between the user EI and the CSN. Each GPA can support up to 119 EIs. They are installed at all major operational facilities.

DTE - DTE supports data transmission on fiber between the GPA and CSN for distances over 50 feet. The equipment converts an electrical T3 signal to an optical signal and back to an electrical T3.

CSN - The CSN performs top-level digital audio summation and conferencing for all GPAs. Each system center has its own CSN. The CSN creates a global sum of digital audio traffic by successively adding pairs of 512 channel DS3 inputs until a 512 channel global sum is produced.

Technical Control Workstations (Tech Control) - Tech Control provides monitoring and control capability for the OIS-D system. The Intel-based workstations use a UNIX System V operating system and an X Windows user interface.

OPS - OPS is a redundant conferencing voice switch that provides the interface between the CSNs and external audio sources. OPS uses T1 interfaces for off-Center communications through both NISN and TMS. Channel banks provide the interface between OPS and analog audio sources including radio nets. OPS connects to the two CSNs via a T3 interface.

Test facilities - OIS-D has two test facilities - the Off-Line Test Set located at the Comm Shop (M6-791) and the OIS-D lab in the CIF building (M6-342). Each test facility is equipped with GPAs, a CSN, and an OPS which are used for testing new software and recreating and troubleshooting field problems.

Operational Intercommunication System Quintron (OIS-Q)

The OIS-Q is a commercial off the shelf provided by Quintron Systems Incorporated using their DICES III equipment. OIS-Q is used in locations that have minimal or unique communication requirements. Each system consists of a centrally located redundant microprocessor controlled digital switch and the user instruments are fed by twisted pair cable or multi-mode fiber optic cable at T1 data rates. OIS-Q has the ability to integrate telephones, both conventional and point-to-point, paging, radio nets, and voice conferences.

There are three systems in place at KSC located at SLF, Crawler Transporter I and II, and two sub-muxes with 10 units on the Convoy Command Vehicle. The systems consist of three system controllers, five 40-channel communication units, thirty-five 10-channel communication units, and eight T1 channel bank assemblies. A test equipment rack for Quintron is located in the CD&SC (M6-138, room 131). A Quintron system is located at the DFRC Shuttle Processing Area (SPA).

Astrocomm System

The Astronaut Communications System (Astrocomm) provides redundant, multi-path communication links between the Shuttle crew and selected ground control personnel during launch, landing, and processing operations at KSC. Astrocomm is used for normal operational communications and provides a means to communicate with the Shuttle crew in the event of an OIS-D failure.

Different Astrocomm circuits are available depending on the location of the Orbiter.

- Pad 39 A & B - Two hardware circuits (ICOM-A and ICOM-B), two full-duplex S-band RF links (Air-To-Ground (A/G) 1 and 2 (A/G-1, A/G-2)), and one Ultra High Frequency (UHF) RF link.

- Shuttle Landing Facility (SLF) - A/G-1, A/G-2, and UHF

- Orbiter Processing Facility (OPF) high-bays - ICOM-A and ICOM-B

The principal locations of Astrocomm are key console positions in the LCC Control Rooms and off-site at JSC and Goddard Space Flight Center (GSFC). At the LCC, access to Astrocomm is through the OIS-D system or through Multiple Channel Units (MCU/54 units) located at consoles AB-4, AB-5, AB-7, AB-8, and AC-4 in Control Room 1 and 3. The MCUs are typically used as a backup if the OIS-D were to fail. Selected console positions in the Control Rooms have unrestricted access to Astrocomm and may communicate with Shuttle crew at any time. Other users have restricted access. They can be permitted two-way communications on all or part of the Astrocomm circuits or can be limited to monitor only status. Access permissions for restricted users can be changed at any time. Personnel normally access Astrocomm using the OIS-D system. All Astrocomm channels are interfaced to the OIS-D and to off-site NASA Centers via the Spaceflight Tracking and Data Network (STDN) at the MILA facility.

Solacomm

The Solacomm system resides in the Aircraft Control Tower at the SLF and is used for aircraft operations. Solacomm has the ability to integrate telephones, paging, radio nets, aircraft radio nets and voice conferences.

These systems support the services referenced in the PWS 3.9.3.

B.3.9.4 Audio Distribution System

The Audio Distribution System consists of audio conference bridges (Kentrox and Tellabs 4-wire/2-way bridges and Altec 4-wire/6-way bridges) and line conditioning equipment (amplifiers, attenuators, filters, transformers, etc.) which distribute audio to a variety of voice systems including the Astrocomm system, radio and tone remote circuits, PAWS, and ER audio circuits. The Audio Distribution System is located throughout KSC facilities including the LCC, CD&SC, VABR, Landing Aids Control Building (LACB), and O&C building.

These systems support the services referenced in the PWS 3.9.4.

B.3.9.5 Voice Recording System

A Dictaphone Freedom system, located in the CD&SC, with 36 T-1 recorders and five 16-channel analog recorders provides digital and analog format record and playback capability of any of the 1024 OIS-D channels, all radio nets, most direct frequency radios, certain paging circuits, and certain specified telephones including HiPath digital instruments in the LCC. This service provides voice duplications made on cassette tapes, sound files (such as .ogg) DVD or CD for operational analysis. In addition, there are three 20-channel recorders and one 20-channel recorder to support the two crawler transporters and the TCS. A de-trunking interface supports recording and playback of trunking radio talkgroups. A local recording system exists on each crawler transporter.

A call-check record and playback system exists at the 911 dispatch center. Recording equipment exists at the SLF.

These systems support the services referenced in the PWS 3.9.5.

B.3.9.6 Fixed Audio Systems

Audio support, consisting of audio signal amplification, transmission, conditioning, switching, and distribution is provided by fixed systems. Equipment exists at various sites including viewing sites at Saturn V and Banana River. Audio support is provided for events such as Shuttle launches, landings, and rollouts; astronaut arrivals; unmanned launches; Air Force launches; press briefings; NASA briefings; and other special events.

These systems support the services referenced in the PWS 3.9.6.

B.3.10 Electromagnetic Measurement and Analysis

(Electromagnetic Measurement and Analysis services will be incorporated into the IMCS baseline at the start of GFY 2013. The Government reserves the right to exercise the CLIN 006 - EML Option prior to the start of GFY 2010. If exercised, the Government will incorporate the associated costs of the EML Option into CLIN 001 and CLIN 005.)

Both fixed and mobile assets are available to provide electromagnetic measurement and analysis services. The Electromagnetic Laboratory (EML) houses administrative and engineering offices and technical workspace. Equipment available at the EML includes screen rooms, reference antennas, signal generators, spectrum analyzers, and associated test equipment. The contractor maintains and operates a test console located in the EML building. The console is manned during major tests and is the focal point for coordinating Frequency Control and Analysis (FCA) activities. A "Quick Response Vehicle" contains similar test equipment for making electromagnetic measurements in the field. The contractor operates two FCA vans. These vans contain equipment for monitoring and locating environmental RF signal sources. The vans contain radar interrogators which are used to measure the characteristics of radar beacons located on launch vehicles. Maintenance of the vans drive trains are provided by others. Both the vans and a fixed system at the EML have receivers and motorized directional antennas covering a broad frequency range that are used to locate signal sources.

The RAS is a network of antennas distributed throughout KSC and CCAFS that relay payload communications and telemetry signals between processing facilities and remote Payload Operations Control Centers (POCC). The RAS antenna network is comprised of approximately 100 dish antennas, 700 cables, 60 antenna masts, antenna rotating mechanisms, and GN2 purge systems.

The contactor operates an automated RF monitoring system. There are seven remote sites. Each site consists of an antenna connected to a programmable Hewlett Packard (HP) spectrum analyzer. The spectrum analyzer is programmed to sweep over a band of interest and the frequency and power level of the signals detected is reported back to the central controller at the EML over wire lines. The central controller logs the reports from each site and emails a daily summary of the data to authorized personnel. The data is also archived locally for future reference.

These systems support the services referenced in the PWS 3.10.

B.3.11 Publications Services

Software applications associated with the publications services include COTS products such as Adobe Acrobat Creative Suite, Adobe InDesign, and Adobe PageMaker and in-house applications listed in Appendix 7.

Some examples of publications are listed below:

Recurring publications:

- KSC Bulletin (weekly): Prepare, edit and provide in Portable Document Format (PDF)
- Produce Spaceport News (every other week)
- Countdown document (every other week)
- KSC Annual Report
- KSC Countdown (weekly)
- Siren Security Bulletin (quarterly)
- Emergency Preparedness Bulletin (quarterly)

KSC special events publications include:

- KSC Annual Open House
- KSC VIP events
- Combined Federal Campaign
- Disability Awareness Month
- Working Groups Celebrations
- NASA Savings Bond Drive
- Mission Chronology Reports
- KSC Picnic
- Environmental Awareness Week

- Safety Awareness Week
- VPP Program

Other Publications sporadically updated:

- Abort Landing (TAL) Sites
- Air to Ground Communications
- America's Spaceport
- ARMS
- Building KSC
- Canister Rotation Facility
- Countdown
- Crawler Transporters
- ELV Chronology
- Fact Sheets
- KSC and Area Attractions
- KSC Facts Book
- KSC Facilities
- KSC Transporters
- Landing the Orbiter at KSC
- Launch Complex 39, Pads A & B
- Launch Services Program (ELV)
- Launch Vehicle Data Center
- Lightning and the Space Center
- Living & Working on the New Frontier

- Major NASA ELV Launches (Wall Chart)
- Major NASA ELV Launches
- MILA Spaceflight Tracking & Data Network Station
- Mission Chronology 2005-2007 Volume 3
- NASA's Orbiter Fleet
- Orbiter Processing: From Landing to Launch
- Orbiter Thermal Protection System
- Parachute Refurbishment Facility
- Press Site
- RCC Panels
- Space Shuttle (penny fold)
- Space Shuttle Launch Imagery
- Space Shuttle Milestones
- Space Shuttle Launches (wall chart)
- Space Shuttle Main Engine Processing Facility (SSMEPF)
- Space Shuttle Processing Facility
- Space Shuttle Use of Propellants and Fluids
- Spinoffs
- SRB Processing
- SRB Retrieval Ships
- Space Shuttle Rollout
- Weather Launch Commit Criteria

- Web Content (Internal, External, and Mission)
- What We Do At KSC

Systems and products described in B.3.11 are used to support services referenced in PWS 3.11.

B.3.12 Printing, Reproduction, and Microimaging

The web-based KSC Online Print Request System allows customers to submit their job requests directly from their desktop PCs. This system links to the Printing and Microimaging Information System (PAMIS), which is the current work control system that tracks production units against accounting cost codes for funding and metric purposes.

Production equipment currently used for printing, reproduction, and microimaging is a combination of leased, capitalized, and Government-furnished equipment that includes:

- Document scanners
- Docutech printers
- Digital color press
- Microfilm laser plotter
- Microfiche reader
- Aperture card scanners
- CD/DVD recorders, duplicators, and labeling machines
- Drilling, folding, stitching, "perfect binding," and tying machines.

There are two document storage facilities. One facility is located in the Headquarters building. The other facility, Film Storage Building (M6-0639), is standalone and is climate controlled to National Archives and Records Administration (NARA) standards for documents and film. Aperture cards, are stored in this facility.

Systems described in B.3.12 are used to support services referenced in PWS 3.12.

B.3.13 Engineering Data Center (EDC)

The EDC utilizes the KSC Engineering Documentation System (KEDS), a web-based application that provides the KSC engineering community with easy access to electronic images of facility and ground support engineering equipment drawings and associated documents. The system allows for paperless distribution of engineering drawings, reducing user trips to document centers and minimizing on-site support. Over 200,000 engineering documents are currently available online. KEDS drawings can be accessed by all on-site U.S. persons at KSC.

A new TechDoc server is being implemented to make engineering documentation web-accessible. Existing documents will be transferred from the custom legacy web site to the new software infrastructure.

The Configuration Management Data System (CMDS) supports contractors and NASA in Engineering Document Release, Engineering Change Processing, and equipment/system Configuration Identification Documents (CID). Those recorded on the system are indexed to specific equipment and systems that are identified in the document itself. All document revisions are maintained as well as Engineering Orders (modifications) and Engineering Instructions to support the Engineering Orders. There are three major subsystems. Document Release Subsystem: All new or revised engineering documentation is authorized and released officially by a signed Document Release Authorization (DRA). Some typical documents indexed and identified are electrical schematics, cable assemblies, deviation waivers, operation and maintenance manuals, etc. Some of the elements recorded when a new document or revision is released are the authorizing engineer, authorizing organization, document location, total sheets, sheet size, and equipment item. Configuration Identification Subsystem: Three files of equipment system relationships are maintained. Baseline System Codes identify systems such as Launch Operations Area (LOA), Vehicle Assembly Area (VAA), and Hypergol Maintenance Area (HMA), but this level of identification does not specify equipment items. Subordinate to the baselines are Work Unit Codes (WUC) and Program Model Numbers (PMN) which identify equipment types and specific equipment items. All of these files are indexed to documents. Change Processing Subsystem: Permits tracking of Engineering Support Requests (ESR) for design engineering activities and Configuration Control Board actions. Engineering assessments, CCB directives, and Support Requests are also indexed to the other subsystems.

The EDC customer service area contains a customer service counter, four desks for staff, three computer stations for customer to access drawings, and an aperture card reader for drawings that have been scanned to that media.

Systems described in B.3.13 are used to support services referenced in PWS 3.13.

B.3.14 Library Services

NASA GALAXIE is an online catalog and bibliographic listing of all NASA holdings. The software is licensed to Langley Research Center (LARC) and the maintenance contract and systems administrator is funded jointly by LARC and the NASA HQ STI Program Office which is located at LARC.

The SirsiDynix Unicorn Integrated Library System is used to manage library content. This integrated library system has two main components - the public side and the staff side. The public side consists of a web based search interface to the library's collection. The staff side is used to catalog and update bibliographic records for all types of library materials. Additionally, it is used to track all material orders and related information. A serials function includes check in of received issues, routing the issues to the requesters, and claiming missing issues from the publisher. It also provides the library's circulation system to check out and check in materials that have been loaned and produces overdue notices. It has a reports feature which is used extensively to produce many different types of information based on the data stored on the system. This system is hosted at LARC and the other Centers have clients.

InMagic DBTextworks is commercial database software. The library Archives has been using DBTextworks since 1993 to catalog unique one of a kind items that make up the Archives collections. DBTextworks allows customization of the database structure rather than the typical generic one size fits all. Databases created using this product include: Master shelf list (listing of every box and location within the Archives); Photograph database (includes prints, transparencies, electronic images); Documents Database (includes correspondence, books, documents, manuscripts, institutional materials, and electronic files); Exhibits (topics and items used for display); and the Trivia Database which contains reference questions the Archives have received and answered. This database includes the question and the location within the Archives of the source material used to answer the question. A new database, the Employee Database, contains the work history of those individuals who entered data in the original KSC Employee Hall of Honor web site. This database was removed from the web and a database was created to preserve the data. Each of these databases requires different types of metadata. DBTextworks allows the users to customize the cataloging information in each unique database. Due to the simplicity of keyword searching, customers can search any field within a database.

The main library is located in the Headquarters building. The various library functions (Archives; Documents/Specifications and Standards; Books – circulating and reference, and Serials) occupy approximately 9000 square feet.

Main Library Collection Information: (these numbers are approximate)

Collection	Number of Items
Archives	over 1,000,000 sheets of paper and other items
Documents, specs & standards	91,610
Books – Circulating	18,171
Books including bound serials – Reference	18,585
Serials	1,479

There is a small Law Library located in the Headquarters building. It contains approximately 350 titles though many of these titles have multiple books. The Law Library has one electronic product, Lexis/Nexis, which is licensed by NASA HQ Chief Counsel. Additionally, there is a small legal collection in the O&C building.

The Media Reference Library is located at the Press Site. It occupies approximately 700 square feet and contains over 20,000 books, vertical files, publications and other historical documents.

Systems described in B.3.14 are used to support services referenced in PWS 3.14.

B.3.15 Maximo Application Support

The systems used to support this section are described in B.3.1.

B.3.16 Forms Services

Currently, there are approximately 1,800 KSC and Government forms in hardcopy or electronic format.

Software applications associated with the forms services include COTS products such as Adobe Acrobat Creative Suite, Adobe InDesign, and Adobe PageMaker and in-house applications listed in Appendix 7.

The NASA Electronic Forms System (NEFS) is comprised of FileNet Forms Manager to create and deploy electronic forms, KSC Forms web site interface to FileNet Forms Manager, and the FileNet Desktop client for electronic forms.

Systems described in B.3.16 are used to support services referenced in PWS 3.16.

B.3.17 IT Security

The KSC IT Security utilizes various tools to help perform vulnerability scanning, incident response and IT Security system review and assessment, including the required documentation.

Vulnerability scanning is performed throughout the month across the entire KSC network environment (including the related remote KSC locations), based on a list of potential vulnerabilities developed by the NASA Competency Center for IT Security. Once the scanning is completed using an Agency standard set of software tools. A series of largely automated reports are compiled, generated, and reviewed prior to dissemination for each organization on the type and severity of the vulnerabilities that were detected on the hosts for which they are responsible. These organizations then report back on the status of vulnerabilities that were identified during the scans and this IT Security function tracks the progress of fully mitigating these vulnerabilities. Initial system scans are required prior to the connection of a new system being to the center's network environment or whenever substantial changes to the IT Security posture are made to existing IT systems.

Incident Response & Computer Security Forensics are often required in support of IT Security event investigations. This function provides technical support to the KSC IT Security Manager is the detection, isolation and remediation of IT Security Incidents and issues.

The practice of wireless "war driving" IT security vulnerability scanning is completed periodically to identify unauthorized or insecure wireless networks connected to the KSC networking environment, using a special wireless scanning system. Subsequent IT security investigations are completed to locate the owner of the unauthorized wireless network and to correct the identified security issues.

IT Security plans are submitted to the Government for technical review and assessment. This process follows the approved Agency requirements and procedures for these functions. The IT Security Office reviews every security plan for the required basic content. After this has been completed, IT Security will document, track, and perform the initial levels of assessment of the system security plan before starting the formal Agency certification and accreditation process.

KSC utilizes both the McAfee Foundstone IT security vulnerability scanning/reporting tool as well as the Nessus (open source) tool for the detection and identification of IT Security vulnerabilities. Both the Foundstone and Nessus scanners are Government Furnished Equipment and are configured specifically for this activity. Incident response and computer security forensics capabilities utilize the Encase Forensics disk imaging tool. In the future, a standard Agency Incident Response/Forensics toolkit will be deployed, using mostly open source software tools & Agency developed scripts. In the future, there will also be a center standard IT Security Event Management system that will house the raw investigation data, notes, and analysis results for each of the center's

potential events and actual IT Security incidents over the course of the investigation and for historical purposes.

Systems described in B.3.17 are used to support services referenced in PWS 3.17.

B.3.18 Center-Managed Outreach Services

The Center-Managed Outreach services are mainly offered at the Press Site Building and include displays with informational flyers and fact sheets. Media tours are usually arranged here.

The Media Reference Library (covered in PWS 3.14, Library Services) is responsible for the distribution of imagery and multimedia products. There are two service desks here, one for requesting video products and the other for requesting printed material.

There is a third service desk located in the Headquarters Building Room 1441 where informational packets can be requested. This can be done via e-mail, regular mail, phone calls, and in person. Fan Mail is also handled at this location.

Systems described in B.3.18 are used to support services referenced in PWS 3.18.

Appendix 9
Communication Demarcation Points

For

Information Management and Communications Services (IMCS)

PWS	System	Location	Customer
3.2	Cable Plant Services	ASVC	DNPS
		Banana River Repeater Station (BRRS)	multiple CCAFS
		Beach tip shack	multiple CCAFS
		CD&SC	NISN
		Gate 2	multiple commercial
		Gate 3	multiple commercial
		KSCVC	DNPS
		MILA	NASA
		Observation Tower	DNPS
		Press Site	multiple commercial
		Research Park	multiple tenants
		SLF ACTC	FAA
		SLF Midfield Site	multiple commercial
		SLSL	multiple tenants
		Space Florida Hangar	multiple tenants
		SR 3 / US 1	multiple commercial
		TPQ-18	USAF
3.3	Transmission Services	CD&SC	NISN
		Hangar AE	multiple
		MILA	multiple
		X/Y	multiple
3.3.2	Shuttle Forward Return Link	CD&SC	NISN
		LCC	LPS/RPS
3.4.2	Network Security Perimeter Ops	CD&SC	multiple
3.4.3	Telephone Services	CD&SC	Time Warner / NISN / CCAFS
3.5.2	Media Production and Distribution	CD&SC	commercial uplink
		Press Site	multiple
3.5.3	Spacecraft Processing, Launch, and Landing Imaging	Instrumentation Sites	CSR
3.8	Timing Services	BRRS	multiple CCAFS
3.9.2	Radio	BRRS	multiple CCAFS
3.9.4	Audio Distribution	BRRS	multiple CCAFS

Appendix 10
IT Security Implementation Guide

For

Information Management and Communication Support (IMCS)

10.1 Security Awareness Training

As defined in NPR 2810.1A, all contractor personnel with access to Government data, including off-site personnel supporting the contract shall complete security training annually as required to meet Agency IT security training and awareness requirements. The Contractor shall use the Government provided training systems to meet this annual security requirement.

10.2 Security Training

All contractor individuals who perform tasks as a system administrator, or have authority to perform tasks normally performed by system administrator, shall be required to demonstrate knowledge appropriate to those tasks. This demonstration is referred to as the NASA System Administrator Security Certification using the Agency provided tools.

10.3 System and Application Life Cycle Requirements

The contractor shall comply with NPR 2810.1A, Chapter 5, *System Development Life Cycle (SDLC)*, requirements during all phases of the Systems and Applications Life Cycle.

10.4 Security Risk Assessments and Design Reviews

The contractor shall follow the NIST SP 800-26, *Security Self-Assessment Guide for Information Technology Systems*; NIST SP 800-30, *Risk Management Guide for Information Technology Systems*; and submit a completed security risk assessment on a design prior to the design being provided to NASA. Before or during official design reviews, the contractor shall provide design security risks, including possible mitigations, to the system owner or data owner and OCSO. If the risks are accepted the life cycle may continue; otherwise, the life cycle shall halt or the design and/or mitigations shall be modified until the risks and possible mitigations are acceptable.

10.5 Security Reviews for New or Modified Hardware, Software, and Configurations

The contractor shall provide a written risk assessment and security review for new or significantly modified hardware, software, or configurations, prior to deployment. The products reviewed shall be used as a basis to update IT Security Plans, as applicable. Prior to deployment, all risks shall be presented to the system owner, AO, and OCSO, separate from the security plan. If the hardware or software connects to other systems the risks shall be presented to the system owner or equivalents and OCSO of the interconnected systems for their information.

10.6 Minimum System Security Requirements

Prior to connecting any new non-Government provided computer system or equipment to the KSC Institutional Networks, the contractor shall:

a. Comply FIPS 199, FIPS 200, and any relevant IT SOPs on certification and accreditation.

b. Acknowledge all applicable NIST-SP-800-53 controls.

c. Complete the Privacy Impact Analysis (PIA).

d. Comply with NPR 2810.1A, IT Security Requirements.

e. Install and configure Agency Security Update System (ASUS) or approved Agency Patching and Reporting System to Center specifications.

f. Install and configure Agency Security Configuration Standards (ASCS) to Agency and Center specifications.

g. Provide a NASA approved Certified System Administrator.

h. Perform a vulnerability scan, mitigate findings, and document results.

i. Provide NIST SP-800-53 control acceptance and Plan of Action & Milestones (POA&M) list to be reviewed by the Center's Certification and Accreditation (C&A) Official.

j. Draft Authorizing Official (AO) letter per NASA Authority to Operate (ATO) process.

k. Submit the complete package of items a-j above to the Center ITSM for review.

l. Upon completion of Center ITSM review, submit ATO package to the AO.

10.7 System Configuration Requirements

For any computer system that is not managed by ODIN or its successor, the contractor shall:

a. Meet the current and future requirements in the NASA-STD-2804, *Minimum Interoperability Software Suite*, and NASA-STD-2805, *Minimum Hardware Configurations*, for all computer systems, unless otherwise approved by the COTR.

b. Configure non-NASA managed services desktop systems with the required standard application software suite, if applicable, to stay consistent across the Agency to

ensure that interoperability issues do not arise. The Government has defined a core standard application software suite that is loaded on all NASA managed services computers.

c. Provide and maintain software that is defined in the current and future versions of NASA-STD-2804.

d. Update the computer with new software versions, upgrades, modifications, and non-security and non-bug related patches associated with the operation system and application software within 1 year of the latest release by the software vendor or by the date specified in the current and future versions of NASA-STD-2804.

e. Once the contractor has tested the new release, present the test results and any impacts to associated applications then submit to the CCB in sufficient time to ensure roll out within 1 year of release or by the date specified in NASA-STD-2804, unless otherwise specified by the COTR or designee.

f. Configure regular virus scans on all computer systems which the contractor is responsible.

g. Enable real-time file protection and schedule full virus scans no less frequently than weekly, unless otherwise defined in Center policies or directed by the COTR or designee.

h. Configure automatic updates of virus signatures no less frequently than daily for desktops, unless otherwise defined in Center policies or directed by the COTR or designee.

i. Configure, in addition to NASA-STD-2804, regular adware, spyware, and malware scans on all systems for which they are responsible, but not including servers. The contractor shall enable real-time system protection and schedule full adware and spyware scans no less frequently than weekly for any desktops, unless otherwise defined in Center policies.

10.8 Management and Operations

Vulnerability Assessment and Remediation

The contractor shall provide management control services to implement IT security at KSC.

In performance of these services, the contractor shall:

a. Participate in the Center-wide vulnerability scanning activity. The contractor shall mitigate vulnerabilities identified, track vulnerabilities and fixes, and report the statistics to the system owner, OCSO, and COTR or designee.

b. Obtain approval from the system owner, OCSO, and COTR for a temporary mitigation. For a medium or low vulnerability, the contractor may mitigate the vulnerability or present a researched recommendation that justifies accepting the risk.

c. Evaluate, test, and implement mitigation of these services; depending on the assessed severity (critical, high, medium, or low) of a vulnerability, obtain system owner, OCSO, and COTR concurrence with the severity.

d. Comply with the standard and expedited requirements in the Vulnerability Mitigation Requirements Table below.

e. Notify the system owner, OCSO, and COTR when the vulnerability is mitigated and steps taken to mitigate the vulnerability.

f. Obtain approval by the system owner, OCSO, and COTR for any deviation from the requirements.

g. Submit a statistics report on a monthly basis for all vulnerabilities mitigated with their associated severity. A permanent mitigation is required for a critical or a high vulnerability; though in some cases a temporary mitigation may be necessary.

For High Categorization Systems:

STANDARD REQUIREMENT	CRITICAL	HIGH	MEDIUM	LOW
Time to initial mitigation after severity concurrence	4 Hours	2 working days	5 working days	10 working days
Time to create a plan for permanent mitigation	5 working days	10 working days	20 working days	30 working days
Occurrences expected per contract year	**2**	**20**	**25**	**25**

EXPEDITED REQUIREMENT	CRITICAL	HIGH	MEDIUM	LOW
Time to initial mitigation after severity concurrence	2 hours	8 hours	10 working days	
Time to create a plan for permanent mitigation	8 working hours	2 working days	20 working days	
Occurrences expected per contract year	1	3	1	

For Moderate Categorization Systems:

STANDARD REQUIREMENT	CRITICAL	HIGH	MEDIUM	LOW
Time to initial mitigation after severity concurrence	1 working days	5 working days	15 working days	30 working days
Time to create a plan for permanent mitigation	10 working days	20 working days	30 working days	40 working days
Occurrences expected per contract year	**2**	**20**	**25**	**25**

For Moderate Categorization Systems:

EXPEDITED REQUIREMENT	CRITICAL	HIGH	MEDIUM	LOW
Time to initial mitigation after severity concurrence	4 working hours	16 working hours	5 working days	
Time to create a plan for permanent mitigation	2 working days	5 working days	10 working days	
Occurrences expected per contract year	1	3	1	

For Low Categorization Systems:

STANDARD REQUIREMENT	CRITICAL	HIGH	MEDIUM	LOW
Time to initial mitigation after severity concurrence	5 working days	10 working days	20 working days	30 working days
Time to create a plan for permanent mitigation	10 working days	20 working days	40 working days	60 working days
Occurrences expected per contract year	**2**	**20**	**25**	**25**

EXPEDITED REQUIREMENT	CRITICAL	HIGH	MEDIUM	LOW
Time to initial mitigation after severity concurrence	1 working day	3 working days	5 working days	
Time to create a plan for permanent mitigation	5 working days	10 working days	20 working days	
Occurrences expected per contract year	1	3	1	

System Contingency Planning and Emergency Preparedness

In addition to what is stated in NPR 2810.1A, the contractor shall participate in contingency and Disaster Recovery (DR) planning, training, and testing in accordance with the current Center Contingency Plan, COOP, and system DR plan.

In performance of these services, the contractor shall:

a. At least annually train contingency teams in plan procedures and operations.

b. At least annually develop, plan, and implement a contingency scenario test designed to validate the effectiveness of the assigned plan(s) to quickly restore IT operations and functionality in the event of a disaster.

c. Deliver a lessons learned report from each test and use the results to update the IT Contingency Plan.

d. Participate in Center DR operations, in the event the Center's plan is invoked, in accordance with the Center Contingency and DR Plan.

System Monitoring

In performance of these services, the contractor shall:

a. Ensure equipment or device logging is enabled, review logs, and report anomalies to the KSC OCSO.

b. Retain electronic archival copies of all logs and retain for one year with the exception of activity logs that shall be retained for three years.

c. Perform all necessary support in the event of a Government-initiated investigation, Assessment, or Certification involving the contractor's team or the contractor's customers.

d. Perform all services necessary to properly respond to NASA IT security bulletins or notices from the NASA Incident Response Center (NASIRC), or the NASA CIO that apply to any contractor-supported system or environment.

e. Take necessary and/or immediate corrective actions on any system in response to these bulletins and notices, and notify the system owner, COTR, and OCSO of any suspicious activities per Center security procedures.

10.9 IT Security Reporting Requirements

The contractor shall comply with reporting requirements set by the Federal Information Security Management Act (FISMA), the Office of Management and Budget (OMB), the

Office of the Inspector General (OIG), and the Center and Agency CIO as baseline and agreed to at the start of the contract period of performance.

In performance of these services, the contractor shall:

a. Report IT security incidents to the ITSM or designee(s) within one hour and shall follow the Center's documented IT security incident response procedures.

b. Report using the format and content set forth in each Center's incident response report (Institutional Security Status).

c. Report unexplained system anomalies that, in the judgment of the system administrator, may affect confidentiality of data or integrity of a system/data to the ITSM or designee within one hour. Such anomalies include, but are not limited to, unexplained change of directory or file permissions, unexplained installation, removal or starting/stopping of software, unexplained network traffic, unexplained unavailability of a production service, or any malicious activity.

d. Provide all necessary assistance to the investigating team.

10.10 Distribution of Risks, Threats and Vulnerabilities

The contractor shall encrypt all electronic transmissions and storage of sensitive but unclassified (SBU) information with the Agency approved encryption software and solutions.

10.11 Storage of System Documentation and Backup Media

The contractor shall store duplicate copies of system documentation with the backup media, including updates at an off-site location secure from threats, in accordance the approved security plan.

10.12 Prohibition of Government Data

The contractor shall not store, copy, or transfer NASA SBU data to any non-C&A system, in accordance with NPR 2810.1A or for non-NASA system in accordance with NIST 800-37. The contractor shall comply with OMB Memorandum M-06-15, *Safeguarding Personally Identifiable Information*, OMB Memorandum M-06-16, *Protection of Sensitive Agency Information*, and OMB Memorandum M-07-16, *Safeguarding Against and Responding to the Breach of Personally Identifiable Information*.