

MEMORANDUM OF AGREEMENT
BETWEEN THE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
FOR THE
NATIONAL POLAR-ORBITING OPERATIONAL ENVIRONMENTAL SATELLITE
SYSTEM (NPOESS)

I. PREFACE

On 5 May 1994, the President directed convergence of the Department of Commerce (DOC) National Oceanic and Atmospheric Administration's (NOAA) **Polar-orbiting Operational Environmental Satellite (POES)** program and the Department of Defense (DoD) Defense Meteorological Satellite Program (DMSP). **These** two programs will become the National Polar-orbiting Operational Environmental Satellite System which will satisfy civil and national security operational requirements. In addition, the **National** Aeronautics and Space Administration (NASA), through its Earth Observing System (**EOS**) efforts, offers new remote sensing and spacecraft technologies that could **potentially** improve the **capabilities** of the operational system. The President also directed **DoD**, DOC, and NASA to establish an Integrated Program Office (**IPO**) to manage this converged system.

II. PURPOSE

This document constitutes the formal agreement, including roles and responsibilities, between DOC, **DoD** and NASA, to ~~the~~ agencies," to implement the President's **directive** to establish the National Polar-orbiting Operational Environment. Satellite System (NPOESS).

III. AUTHORITY

This agreement implements Presidential Decision Directive NSTC-2, 5 May 1994, and implements the **White** House Office of Science and Technology Policy's "Implementation Plan for a Converged Polar-orbiting Environmental Satellite System," dated 2 May 1994. This document provides the necessary authority and responsibility to manage all aspects of **the** NPOESS. NOAA enters this agreement pursuant to its authority at 15 USC 1525; 49 USC 1463 and 15 USC 313.

4/2002-3

IV. NPOESS PROGRAM ORGANIZATION AND RESPONSIBILITIES

The NPOESS program will satisfy the U.S. Government's fundamental civil and national security requirements for collection and distribution of operational polar **satellite**-based, **remotely**-sensed meteorological, oceanographic, climatic, and space environmental data. The NPOESS will be **composed** of four components: spacecraft and sensors; launch **support**; command, control, and communications; and user interface. Management and implementation of the NPOESS program will be accomplished by the Integrated Program Office (IPO) under a **triagency** Executive Committee (EXCOM). The responsibilities and functions of these organizations are as follows:

A. Executive Committee

The Under Secretary of Commerce for Oceans and Atmosphere, the Under Secretary of Defense for Acquisition and Technology, and the NASA Deputy Administrator will **form** the NPOESS EXCOM. Each EXCOM member will be accountable to the EXCOM for **his/her** agency's support of the NPOESS. The EXCOM will provide policy guidance; ensure sustained agency support (to include funding); approve the annual budget; approve the NPOESS **staffing** plan; approve the acquisition program baseline (cost, schedule, performance) and major changes to the baselines as proposed by the System Program Director (SPD); endorse the NPOESS requirements baseline; and approve or recommend approval of modifications or waivers to existing agency policies as they pertain to NPOESS. The EXCOM will also review an annual business plan and approve the Convergence Master Plan (**CMP**) as defined in Section VII.

B. The Integrated Program Office

The IPO, under the direction and management of the SPD, will be the single functional entity responsible for the planning, budgeting, development, acquisition, launch, operation, and management of the NPOESS. The SPD is ultimately **responsible** to the **triagency** EXCOM for NPOESS. **The** SPD has decision authority for NPOESS matters, **subject** to the statutory authorities of the designated agencies, and reports to the NOAA Administrator, through the NOAA Assistant Administrator for the National Environmental Satellite, Data, and Information Service (AA NESDIS). Reporting through the AA NESDIS means that the SPD must have the **concurrence** of the AA NESDIS prior to the **SPD** making any NPOESS decisions

The AA NESDIS has the lead within DOC for resolving **issues** that arise between the IPO and DOC/NOAA/NESDIS components prior to decisions being made that impact **DOC/NOAA/NESDIS/NPOESS**. Issues that cannot be resolved by the **SPD** and the AA NESDIS will be brought by them to the NOAA Administrator for resolution.

The **IPO** will be a separate entity located within the NESDIS, which is the organizational **component** in NOAA having responsibility for DOC satellite programs, and therefore, will provide the primary **NOAA matrix support** for the IPO. The **AA NESDIS** is responsible for all **aspects** of the **current** NOAA Polar-orbiting Operational Environmental Satellite (POES) program through the life of the N and N' satellites to include coordinating POES fully with

NPOESS. In addition, the AA NESDIS has the lead responsibility within the DOC/NOAA to ensure that the IPO and the NPOESS are properly supported and the NPOESS is properly integrated with the NOAA civil environmental satellite remote sensing mission.

The SPD will also coordinate decisions on NPOESS matters that affect DoD with the Assistant Secretary of the Air Force for Space (ASAF/SPACE) to ensure resolution of potential issues or forwarding of issues to the appropriate official for resolution. **All** NPOESS acquisition decisions made by the SPD that affect DoD will be coordinated with the Air Force Service Acquisition Executive and any related issues resolved **prior** to decision execution.

During the transition to an operational NPOESS, the AA NESDIS and ASAF (Space), in consultation with the SPD, are responsible for **coordinating** and integrating the existing POES and DMSP activities with the NPOESS by promoting commonality, developing consistent budget submissions, and ensuring compatibility and **interoperability**. Further details regarding the relationship between the IPO/SPD and agency **organizations/officials** affected by or **supporting** the NPOESS will be described in the Convergence Master Plan.

The IPO shall consist of three functional line offices and an SPD staff operating under **the** management and direction of the SPD. Functions and responsibilities of the directors are **as** follows:

- (1) **The** System Program Director (SPD) will:
 - (a) Direct the converged program and be responsible for financial, programmatic, and technical and operational **performance** of the NPOESS.
 - (b) Direct all IPO management functions, centrally control the distribution of **all** funds appropriated for or **transferred** to NPOESS and have or delegate final **approval** authority over all appropriate contract actions as defined in the CMP.
 - (c) Have final approval of the individuals nominated by the agencies for the positions of the Deputy System Program Director and the three **Associate** Directors (Acquisition, Technology Transition, and Operations).
 - (d) Be **the** Source Selection Advisory Council Chairman for NPOESS major component acquisition.
 - (e) **Have** primary responsibility on behalf of the EXCOM member agencies for **all** **NPOESS-specific** international **agreements** to include developing and **negotiating terms** and conditions to ensure compatibility with NPOESS goals and objectives. The SPD **will** participate in any activities resulting in U.S. national policy **and/or** U.S. Government international agreements that impact NPOESS.
 - (f) Prepare the NPOESS budget consistent with the agencies' internal **budget processes**. **Execute** the **NPOESS** budget in **accordance** with the approved program **baseline**.

(g) Participate in and coordinate on all interactions by the agencies with the Executive and Legislative branches regarding NPOESS.

(h) Develop the CMP and annual business plan.

(i) Propose, for EXCOM decision or **recommendation**, changes to agency policies or procedures **as** they pertain to the **NPOESS**.

(j) Approve all **NPOESS** acquisition documents prior to submission to the designated acquisition agency for action and approve of all **acquisition/procurement** decisions made below the EXCOM **level** prior to implementation.

(2) Associate Director for Acquisition (ADA) will:

(a) Be responsible to the SPD for developing, acquiring (including test and evaluation) and fielding the NPOESS components and for launch and early on-orbit checkout.

(b) Conduct **developmental** activities necessary to support the acquisition program baseline.

(c) Conduct, in concert with the Associate Director for Technology Transition (**ADTT**), studies to determine the potential impact upon system resources of **accommodating** new technologies being evaluated by the ADTT.

(d) Prepare the acquisition budget submissions for SPD approval.

(e) Prepare **acquisition** documents.

(f) Manage the **acquisition** budget **as** directed by the SPD.

(g) Ensure effective integrated **logistics/life** cycle support.

(h) Have final approval of the individual nominated for the position of Deputy ADA.

(3) The Associate Director for **Technology** Transition (**ADTT**) will:

(a) Be responsible to the **SPD** for promoting transition of new technologies that could cost-effectively enhance the capability of **NPOESS** to meet operational requirements.

(b) Identify and evaluate new technologies which could be transitioned for further development by the ADA.

(c) **Seek out**, and provide to the ADA for **evaluation**, opportunities to fulfill operational requirements with flight-proven observation **science/research** instruments that **may** also simultaneously satisfy science requirements.

(d) Develop and update annually a strategic plan for technology transition to address **unaccommodated** Integrated Operational Requirements Document (IORD) requirements and enabling technologies.

(e) Prepare the **technology** transition budget submission, based on the technology transition strategic plan, for SPD approval.

(f) Manage the technology transition budget as directed by the SPD.

(g) Have final approval of the individual nominated for the position of Deputy ADTT.

(4) The Associate Director for Operations (ADO) will:

(a) Be responsible to the SPD for operation of the **NPOESS**, which includes: commanding the spacecraft; **recovering/analyzing** health and status; acquiring telemetry **data** for trend analysis; ensuring communications for telemetry and **tracking**; providing a **continuous** sensor data stream, anomaly **support**, mission **planning**, and any necessary ground segment processing (**as** defined in the IORD) required to effectively interface with the users.

(b) Prepare the operations budget submissions for SPD approval.

(c) Manage the operations budget as directed by the SPD.

(d) Be the interface for operational activities with any international **partners** contributing to **NPOESS** in accordance with the appropriate international agreements.

(e) Have final approval of the individual nominated for the position of Deputy **ADO**.

(5) The **SPD** Staff will support the SPD in the areas of:

(a) Program Control, which will provide overall NPOESS programming, **planning** and budgeting functions.

(b) Systems Engineering, which provides system-level coordination of NPOESS **engineering** and integration activities, technical and cost feasibility analysis of **IORD-defined** user requirements, and documentation to support milestone decision activities.

(c) User **Liaison**, which **will** be the **IPO interface for the primary civil and military users** of **NPOESS** data to provide **comments** or concerns on the ability of NPOESS to meet **requirements** outlined in the IORD.

(d) External Affairs, which will support the SPD by managing the development and coordination of activities to ensure the IPO effectively interacts with external (both domestic and international) organizations in fulfilling the SPD's responsibilities regarding the NPOESS.

V. AGENCY RESPONSIBILITIES

The lead agency will have the primary role in providing required support for the execution of a specific function under the management of the IPO. Lead agency in this agreement does not **mean** the total delegation of the activity to that single agency. The agency with the lead for a particular function will provide the Associate Director and core personnel as part of a **triagency** NPOESS team performing that function using appropriate agency policies, procedures and statutory authorities (with modifications recommended by the SPD to the proper authority or approved by the SPD as appropriate).

A. DOC Responsibilities:

The DOC, through NOAA, will have lead agency responsibility to the **triagency** Executive Committee (EXCOM) for the converged system. **Specifically**, NOAA will nominate the System Program Director (SPD), who will be approved by the **EXCOM**. NOAA will have lead agency responsibility to support the IPO for satellite and ground segment operations; and NOAA will have the **lead** responsibility for interfacing with national and international civil user communities, consistent with national security and foreign policy requirements. NOAA will **also** provide the Associate Director for Operations, the Deputy Associate Director for Acquisition, **and** sufficient **personnel** (as defined in the NPOESS staffing plan) to support each of the **IPO's** directorates and functions.

B. DoD Responsibilities:

The **DoD** will have lead agency responsibility to support the IPO in NPOESS component acquisitions necessary to execute the acquisition program baseline. Acquisition decisions made by the **DoD EXCOM** member affecting NPOESS will be undertaken with concurrence of the other **EXCOM** members. The statutory authorities resident within **DoD** for acquisition and **contracting** of the acquisition program baseline will be used to **carry** out this lead agency responsibility. Should other procurements be necessary to support the **NPOESS**, the SPD will decide how to carry them out, using the acquisition authority of the **appropriate** agency and will **seek** the approval of the EXCOM, if necessary. **DoD** will nominate the Deputy System Program Director and the Associate Director for Acquisition who will be approved by the SPD. **DoD will also** provide the Deputy Associate Director for Operations, Deputy Associate Director for Technology Transition and sufficient personnel (**as** defined in the NPOESS staffing plan) to support each of the **IPO's** directorates and functions. **DoD** will provide the majority of the acquisition personnel and acquisition infrastructure **IPO** to include **legal**, contracting, administration, financial management, and logistics.

C. NASA Responsibilities:

NASA will have lead agency responsibility to support the **IPO** in facilitating the development and insertion of new cost-effective and enabling technologies **that** enhance the ability of **the converged** system to meet its operational requirements. In conjunction with the **IPO**, NASA will conduct periodic reviews of Mission-To-Planet Earth (MTPE) Projects to determine areas of **common** interest **with** the operational requirements and evaluate if and when these areas could be applied to the **NPOESS**. Also, in accordance with the **conditions/principles** specified in Appendix 1, NASA will supply additional copies of those NASA **research** instruments for flight on **NPOESS**. NASA will provide the **Associate** Director for Technology Transition who will be approved by the SPD. NASA will **also** provide sufficient personnel (as defined in the NPOESS staffing plan) **to** support each of the **IPO's** directorates and functions.

VI. REQUIREMENTS

An Integrated Operational Requirements Document (IORD) will be the sole operational requirements source from which **triagency** cost and technology assessments, specification development, and related acquisition activities will be **conducted**. The IORD shall be updated before **each** major milestone (see Figure 1). The **assembling**, evaluating and prioritizing of agency requirements to produce the IORD will **be** based on the **DoD** processes described in the 5000 series instructions, as tailored. The requirements process will be independent **of** the **IPO** and is designed to ensure each agency's **requirements** are accountable and traceable to **each** agency. **To** this end, **each** agency **will** designate a senior official **to** be its **representative** to the Joint Agency Requirements Council (JARC) and be accountable for its agency's requirements. Chairmanship of the JARC will rotate **between** DOC and **DoD** on a biannual **basis**. The JARC will resolve any interagency requirements **issues**. Appendix 2 provides further **detail** on the requirements process.

The agencies will establish a Senior User's Advisory Group (**SUAG**), independent of the **IPO**, representing the primary USG **users** of NPOESS data. This group will advise the **SPD** on the **needs of** the user community and on program decisions related to satisfaction of **IORD** requirements. This **group** will be **small** in number, and consist of at least the NOAA Assistant **Administrator** for Weather **Services**, NOAA Assistant Administrator for **Satellite** and Information Services, the Air Force Director of Weather, the Oceanographer of the Navy, Air Force Space Command Director of Operations, and the NASA Office for Mission to Planet Earth Science Division Director (if any NASA **research instruments** are used to meet operational requirements). Chairmanship of the SUAG will rotate **between** DOC and **DoD** on a **bi-annual basis**. A single agency **will** not chair **both** the SUAG and JARC simultaneously.

VII. NPOESS MANAGEMENT AND PROCESSES

NPOESS management and processes will be further **defined** and conducted in accordance **with the** Convergence Master **Plan (CMP)**, which is to be developed by the SPD **within 6 months of appointment**. The **CMP** will be submitted to the **EXCOM** for unanimous approval. The **CMP will** contain: an Acquisition Management Plan; a Technology Transition

Management Plan; an Operations Plan; a Funding Management Plan; and an integrated Organizational Management Plan. Sections VII. A. through E., below will be fully defined in the CMP. The SPD, in defining the processes, roles and responsibilities **will** ensure the key tenets derived from NSTC-2 and the Office of Science and Technology Policy Convergence Implementation Plan are adhered to.

The SPD will also develop an annual business plan and a long-range **staffing** plan. The business plan **will** address the primary goals and objectives for the year and lay out the principle milestones and the **financial** plan. It **will** also address issues to be resolved and the strategy for resolution. Other items will be included in the annual business plan as necessary (e.g., **international** cooperative efforts and **NPOESS** status). Building upon the FY 95 Triagency **Staffing** Plan, the **SPD** will develop, within 6 months of appointment, a long-range staffing plan for FY 96 and beyond. This long-range **staffing** plan **will** address the required number of personnel, appropriate personnel skill **sets**, grades and unique agency personnel certifications necessary to acquire, operate, or sustain the NPOESS throughout the system's **life-cycle**.

A. Acquisition Management Plan

OMB Circular A-109, DoDD 5000.1 and 5000.2 (as tailored) will form the basis of the NPOESS major system acquisition (see Figure 1), which will be carried out using DoD acquisition and contracting authority. The DoD component acquisition executive **will** be the NPOESS Source Selection Authority for NPOESS major component acquisitions. The agencies agree that the NPOESS acquisition is presently in Phase 0 with a Milestone I decision scheduled for approximately the fourth quarter FY **95/first** quarter FY 96. An Acquisition Management Plan will be developed to explain the entire acquisition process from beginning to **end** and will:

- **Address** threat projections, **life-cycle** costs, integrated logistics support, **cost-performance-schedule** trade-offs, affordability constraints, and risk management at each milestone.
- Ensure acquisition strategies and program plans are appropriately tailored to accomplish program objectives and control risk.
- Ensure the acquisition process accommodates the **triagency** nature of the NPOESS.
- Ensure independent cost analyses are conducted using the structure of the **Office** of the **Secretary** of Defense Cost Analysis Improvement Group with NOAA and NASA membership.

B. Technology Transition Management Plan

The NPOESS technology transition management plan will identify and promote processes to foster development of promising new technologies which will enable new operational capabilities as **defined** in the **IODR** or enhance existing operational capabilities **as** delineated in the **IODR**. **The** technology transition management plan will be defined in detail in the CMP and developed in accordance with the following guidelines:

- The office will promote relationships among industry, academia and Government organizations to ensure the IPO reaps maximum benefit from ongoing developments and will promote new developments where it is deemed beneficial or necessary to satisfy objective IORD requirements.
- The office will promote the infusion of new technology into **NPOESS** to advance its capability to meet user **requirements**. The office will monitor research activities of various organizations (NASA, DoD, universities, etc.) for applicability and, where warranted, will recommend and conduct further study **and/or** demonstrations with **SPD** approval and funding by the IPO.

C. Operations Plan

The **NPOESS** will be operated to ensure data are supplied to the NPOESS users for **further** specialized **data** processing **as** stated in the IORD. The SPD will develop an operations concept. The operations concept and any required implementing documentation will be submitted to the EXCOM for approval as part of the CMP. **NPOESS** matters not under their authority (e.g., military operations) will be forwarded to the proper authorities for **action/approval** as **agreed** upon by the EXCOM. The operations concept will address day-to-day operations of the NPOESS, including the development of user interfaces and analysis of data to ensure the converged system is capable of meeting its **performance** requirements. The operations concept will specifically address Command, Control, and Communications (C3) operations (to include any agreements needed to implement changes in C3 **authorities** and responsibilities **as necessary** during times of crisis or war). The operations concept will also reflect the NPOESS launch-on-failure, or anticipated failure, policy needed to **maintain** uninterrupted availability of critical **data**. The operations concept will address data retrieval, ground pre-processing, distribution, launch call **procedures**, transition from early on-orbit checkout to operational status, and any modification to standard operating procedures which may be needed. The operations concept will ensure:

- The NPOESS will establish a civilian interface to national and international civil users to promote its open character.
- The NPOESS will be able to implement data denial should the Secretary of Defense (SECDEF) direct, after consulting with the **Secretaries** of Commerce (SECCOM) and **State** (SECSTATE). In that regard, the operations concept will **specifically** address the process for consultation between SECDEF, SECCOM, and SECSTATE and the implementing process at the ground **site(s)** and the **timelines**. In the event that a foreign satellite is **part** of NPOESS, the operations concept will also include the details of data denial implementation of any U.S. instruments on a foreign satellite (e.g., series) in accordance with applicable agreements.
- NOAA, through **NESDIS**, will provide the primary Satellite Operations Center (**SOC**) infrastructure.
- **DoD** will provide a mission capable backup SOC at Falcon AFB, Colorado.
- NOAA **Command** and Data Acquisition stations and elements of the USAF Satellite

Control Network (AFSCN), as appropriate, will be utilized to provide C3 and mission data **recovery** support for **NPOESS** and the **primary** and backup **SOCs**.

Further, the **IPO** will develop and present a plan to the **EXCOM** for the **early** transition to a joint agency C3 architecture. This will enable **transition** of the operation of the current POES and DMSP satellites to the IPO as soon as practical. This transition is envisioned to occur in the 1998 time frame to coincide with the DoD's original plans to close dedicated DMSP command and control sites at Fairchild and Offutt **AFBs**. The **USG** role in the C3 of the METOP system (space and ground segment) **will** be included. Furthermore, operation of the current POES and DMSP satellites will be **transitioned** to the **IPO** as soon as practical. The NOAA SOC **will** be used for C3.

D. Funding Management Plan

The **process** used to fund NPOESS (to include the process for ensuring appropriated funding flows to the **IPO**) will be defined in detail in the CMP and will contain the following key tenets:

- Each agency's funding will be based on total program cost and common and unique requirements. **Since** NASA is not an operational agency, the NASA contribution will be limited to funding **as** specified in Appendix 1.
- A 50150 cost sharing approach is used for all near-term common activities—the agreed upon **DoD** and **DOC** FY 96-01 funding profiles are contained in Figure 2.
- **The IPO** will budget funds to be applied to technology efforts in **support** of the technology transition strategic plan.
- Unique agency requirements specified in the IORD will be funded by the appropriate agency.
- For common data products, if an agency's more stringent requirements are determined to **be** a significant cost driver, then the additional funds **be** provided by this agency.
- **All** impacts to NPOESS to accommodate payloads which do not satisfy IORD requirements will **be** funded by the requesting agency.
- Cost sharing will be reassessed, at a minimum, prior to each acquisition milestone review.

E. Organizational Management Plan

Organizational management for the **NPOESS** will be addressed in the CMP and **will** include:

- The relationship between the **IPO** and the requirements **process** and requirements organizations.

- The **relationship** between the IPO and any external organization which provides primary **support** to the NESDIS, Air Force, Navy). The SPD will decide to what extent **specific** functions will be performed by the IPO or will be **matrixed** from agency offices external to the IPO, taking into account existing agency capabilities and the **triagency** nature of the NPOESS.
- The processes for personnel management to include performance reporting and succession planning.
- Security classification guidance for the NPOESS program, to include which classification authorities and procedures will be used.

VIII. EFFECTIVE DATE/AMENDMENT/TERMINATION

This agreement **shall** become effective when it has been signed on behalf of the three signatory agencies.

A review of this Memorandum of Agreement will occur within 3 years and on a 4-year cycle thereafter by an EXCOM approved **committee**. A specific topic to be addressed during the initial review will be the relationship of the IPO and the SPD to the NOAA **organizational** structure with particular attention to NESDIS and the relationship of the SPD to the NESDIS AA.

This MOA may be **amended/terminated** at any time by the mutual written consent of the **parties** hereto. Any party may **terminate** this agreement by giving **at** least 6 months prior notification to the other **parties**. Should it be necessary to terminate the agreement, appropriate notification will be made to the White House and the relevant Congressional **committees**.

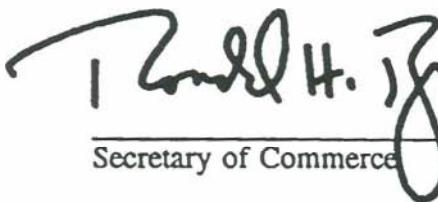
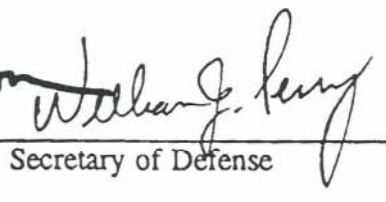

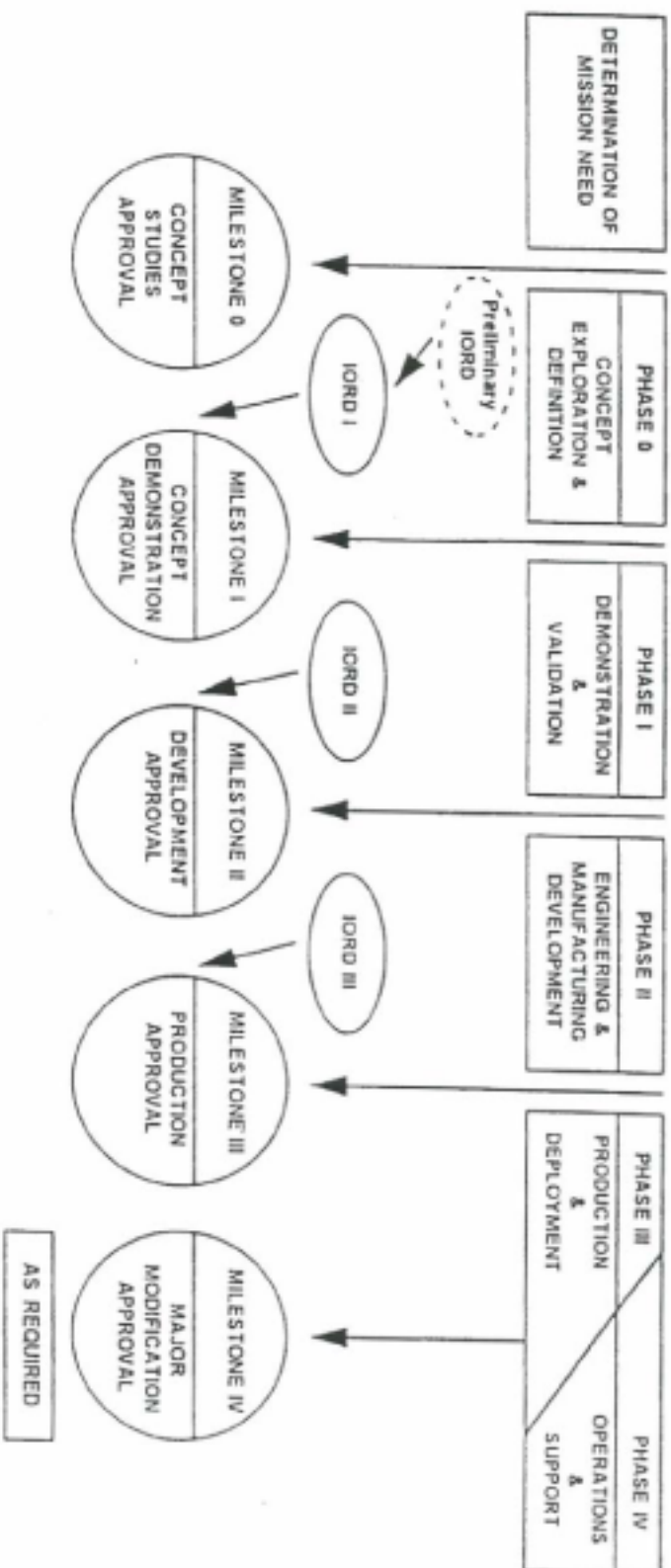
 <hr/> Secretary of Commerce	 <hr/> Secretary of Defense	 <hr/> NASA Administrator
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Figure 1

Acquisition Milestones & Phases



APPENDIX 1

TO

NPOESS MOA

CONDITIONS FOR SUPPLYING NASA RESEARCH INSTRUMENTS TO ~~THE~~
CONVERGENCE OPERATIONAL (NPOESS) PLATFORM

If the decision is made to fly a NASA instrument on the (NPOESS) platform instead of continuing to fly it on a NASA research spacecraft, because the research instrument will meet the convergence operational requirements in a **cost-effective** manner and continues to provide **data** so as to fulfill primary NASA research mission requirements, NASA will provide additional **copy(s)** of the instrument for flight on the NPOESS platform at no unit cost to the NPOESS program. This policy of supplying instruments at no cost **will** apply as long **as** NASA continues to need the **data** supplied by the instrument to fulfill its primary research mission objectives. As part of the transfer of the NASA instrument to the NPOESS platform, the NASA scientific research requirements associated with that instrument will likewise be **included** in their entirety in the formal set of operational program requirements listed in the Integrated Operational Requirements Document (**IOR**D; possibly **as** an **annex**) and removed **from** the IORD when the NASA instrument no longer **flies** on the NPOESS. Modifications to an instrument **will** only be considered if there is no loss of NASA **science**. **The** cost sharing by the three agencies for modification **and/or** accommodation of the **NASA research** instrument will be agreed upon by the agencies as part of the decision to fly the instrument on the NPOESS **platform(s)**.

The term "NASA research instrument" refers to those NASA instruments which have **been** developed and flown in space to provide **data** that are necessary to fulfill NASA scientific **research** objectives (**e.g.**, provide data to answer questions regarding global change as **defined** by the Intergovernmental Panel on Climate Change (**IPCC**) and incorporated in NASA's research program objectives).

Figure 2

Budget & Agency Contributions

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>TOTAL</u>
BUDGET	78.0	120.0	187.0	340.2	372.7	328.1	1426.0
DOC	54.0	78.2	131.4	146.5	162.5	140.4	713.0
DOD	24.0	41.8	55.6	193.7	210.2	187.7	713.0

FY95 IPO BUDGET IS 23.6 M (DOC 16.0M / DoD 7.6 M)
 AGENCIES AGREED TO 50/50 SPLIT OVER FYDP
 BUDGET FIGURES WILL BE REFINED AFTER PHASE 0 STUDIES

APPENDIX 2

TO

NPOESS MOA

REQUIREMENTS PROCESS

An Integrated Operational Requirements Document (IORD) will be the sole operational requirements source from which **triagency** cost and technology assessments, specification development, and related acquisition activities will be conducted. The requirements process will be independent of the IPO and is designed to ensure each agency's requirements are accountable and traceable to each agency. Two distinct bodies have **direct** responsibility for the development and approval of the NPOESS IORD. These bodies are the Joint Agency Requirements Group (JARG) and the Joint Agency Requirements Council (JARC).

The JARG is the interagency group responsible for developing the NPOESS IORD and **administering** the IORD approval process. JARG members representing triagency requirements will **come** from HQ Air Force Space Command, Office of the Oceanographer of the Navy, Air Force Directorate of Weather, **NOAA/National** Environmental Satellite, Data, and Information Service (**NESDIS**), NASA Goddard Space **Flight** Center (GSFC), National Weather Service (NWS), the Office of Oceanic and Atmospheric Research (OAR), National **Ocean** Service (NOS), National Marine Fisheries Service (**NMFS**) and the NASA Office for Mission to Planet Earth (MTPE). Additional JARG membership will come from Air Force, Navy, **Army**, NOAA and NASA, as required. The HQ Air Force Space and **NASA/GSFC** will be the JARG

for **administrative** support **associated** with the IORD. Through **Tri-Agency** IORD development, the JARG **will: harmonize** and document similar interagency operational requirements; identify and document agency-unique operational requirements; document requirements issues (**if any**); prepare the IORD for JARC approval and document for JARC decisions any requirements issues. The JARG will then release the draft NPOESS IORD for appropriate agency **review/comment**. The JARG will resolve draft comments and develop the final IORD for release to **all** agencies for **review/approval**. The final IORD will be staffed through each agency's IORD approval authority. The JARG will also develop a requirements master plan for JARC approval which details the process necessary to execute this **appendix**. DoD policies and **procedures** are the basis for this requirements process. NASA science requirements **will** be included in the IORD **as** stated in Appendix 1 to this MOA. The JARG will be chaired on a rotating (biennial) basis between DOC and **DoD**. The chair is responsible for all JARG administration.

The JARC is the senior interagency body responsible to approve the NPOESS IORD. **The** JARC will resolve **all** JARG documented interagency requirements issues not solvable at a lower level. JARC membership will consist of the Vice Chairman of the Joint Chiefs of

Staff for **DoD**, ~~the~~ Deputy Under ~~Secretary~~ of Commerce for **Oceans** and Atmosphere, and ~~the~~ Associate Administrator for Mission to Planet Earth for NASA. In addition, other agency representatives may attend the JARC meeting **as** required. After JARC approval, the IORD will be **forwarded** to the EXCOM for endorsement.