

# **DPAS Directive Experience in the Commercial Environment**

**Dean Johnson  
Honeywell Sensor and Guidance Products**

**“ timely availability of materials, facilities, and  
services ... by requiring preferential contract  
performance”**

# Agenda

- Background**
- Product**
- DPAS in the commercial environment**
- Kosovo directive**
- Lessons learned**

# JDAM Team and Honeywell

- ❑ **Provided enabling JDAM guidance technology**
  - Autonomous inertial guidance accuracy
  - Low price
- ❑ **Used on revolutionary precision-guided munitions**
  - JDAM (Boeing), WCMD, AGM130, GBU15
- ❑ **Commercial product**
  - Honeywell design control
  - Industrial parts qualified to military environment
  - Delivered to Honeywell spec with warranty
  - Honeywell factory and capital equipment
  - Lean manufacturing environment

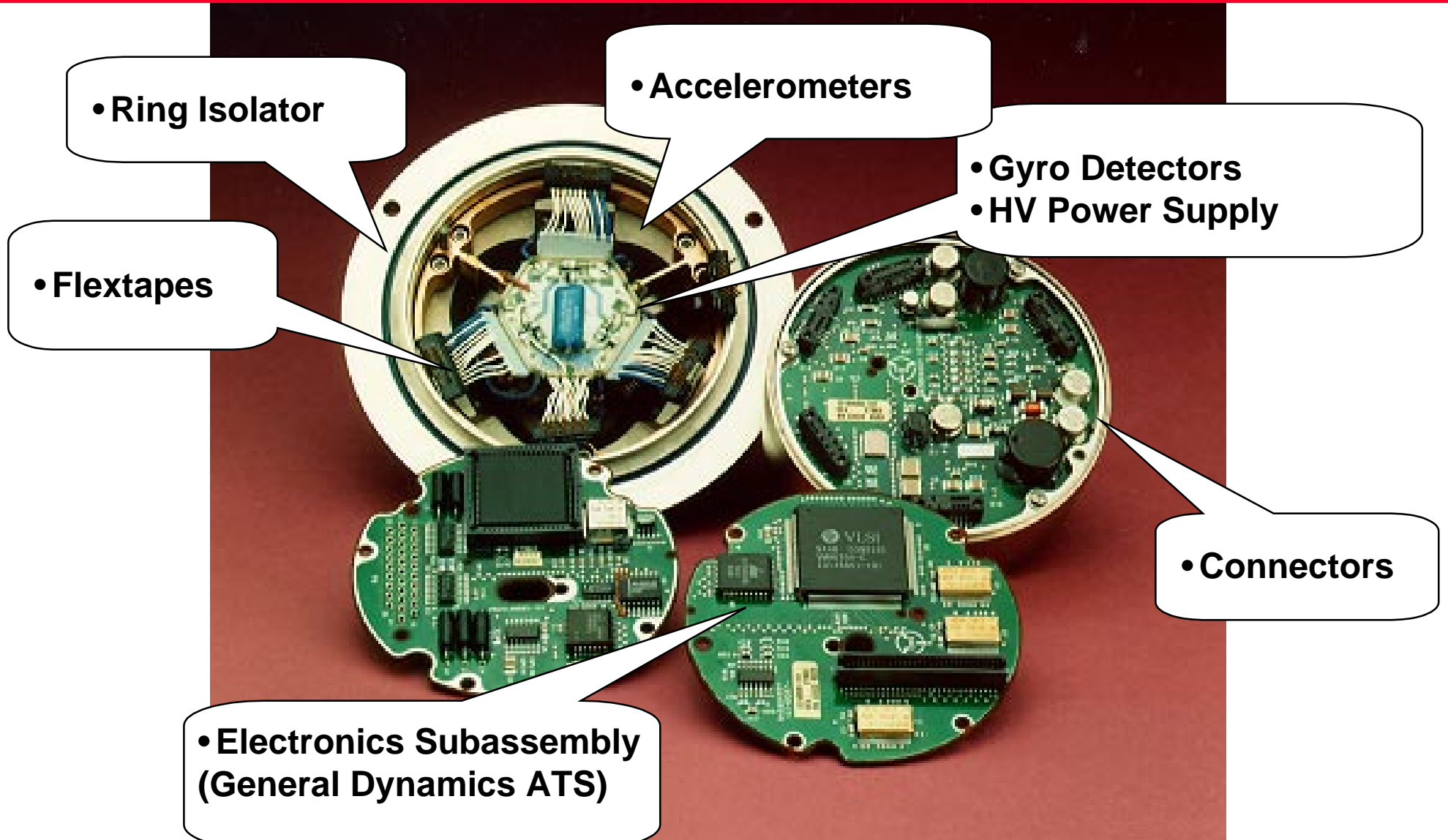
# HG1700 Inertial Measurement Unit (IMU)



- ❑ **Three axis inertial system**
  - Changes in orientation
  - Changes in velocity
- ❑ **Honeywell sensors**
  - 3 ring laser gyroscopes (RLG)
  - 3 quartz accelerometers
- ❑ **Shock isolator**
- ❑ **3 electronics boards**
- ❑ **Software**



# HG1700 IMU Key Suppliers



# DPAS in Commercial Business Processes

## □ RFP or change order response

### – Master production scheduler

- Order rating data
- Rated order schedules
- Schedule authority

### – Schedule request must convey rating

### – Schedule response

- Review rated orders and schedules
- Displace lower priority rated/unrated orders if necessary
- Propose schedule IAW DPAS requirements

# DPAS in Commercial Business Processes

## □ Order acceptance

- Master scheduler verifies schedule still valid
- Rating and delivery schedule entered into production system
  - Rated supplier orders placed
  - Prioritized order scheduled for production
- Other impacted order schedules revised as required
- Other customers notified of rated order driven changes

# DPAS in Commercial Business Processes

## Schedule delinquencies

- Master scheduler revises schedules
- Contract management sends DPAS compliant notices
- Root cause/corrective action

## Compliance is a management function

## Training

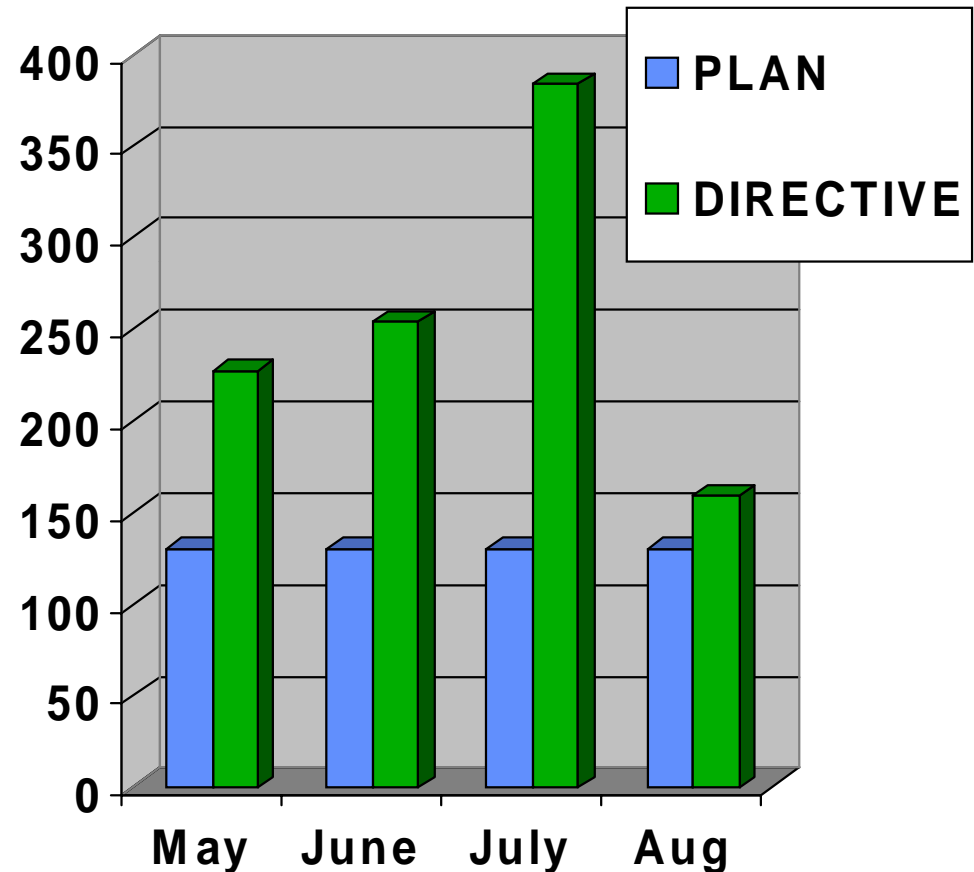
## Customer and supplier relations

- Education for industrial customers and suppliers
- Progress reports to customers with displaced orders



# The Kosovo Directive Need

- ❑ Boeing ordered to deliver 1320 JDAMS NLT 8/14/99
- ❑ Boeing requested DPAS assistance for Honeywell
- ❑ Significant ramp-up
  - 130/month to 350/month
  - Record-setting rate
  - Completed on time
- ❑ Honeywell designated focal point contact
- ❑ Briefed request to IMU team and management



# Kosovo Directive - Path to Commitment

- ❑ **Honeywell surveyed suppliers**
  - Requested DPAS assistance for General Dynamics PWBs
- ❑ **DPAS manager surveyed all major IMU suppliers**
  - GD requested DPAS assistance with 14 vendors
- ❑ **All 14 GD vendors surveyed by DPAS manager**
  - Main issues were technical problems ( 2 designs)
  - Distributors had not passed priority rating to producers
- ❑ **GD vendor commitment and capability established**
  - Directive issued to GD with schedule for PWBs
- ❑ **Honeywell committed to Boeing requirements**
  - DPAS manager issued directive and schedule to Honeywell

# Kosovo Directive - Execution

- Focused all resources on directive delivery**
  - Material, manpower, facility, management
- Notified displaced customers**
- Daily progress reviews and corrective actions**
- Factory schedule: 7days X 8 hours X 3 shifts**
- Displaced all but vital maintenance shutdowns**
- Daily status rundown with DPAS**
- Priority coordination with DPAS and OSD**
- Diligent DPAS follow-up and troubleshooting**

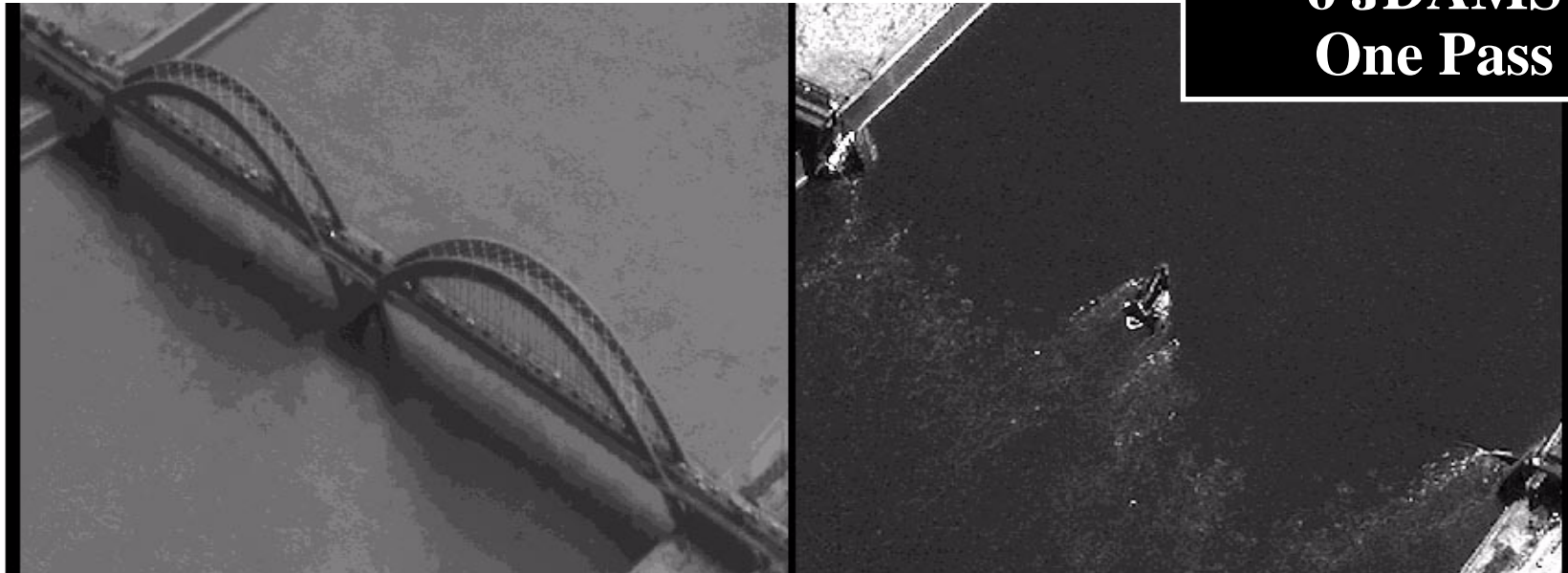
# Lessons Learned

- ❑ **Contingency plan for extraordinary priority need**
  - Management and process
  - Short term “burst of output” capacity
- ❑ **Suppliers**
  - Understand their capability
  - Backup off-shore suppliers with on-shore suppliers
- ❑ **Lean manufacturing limits sustained response**
- ❑ **Commercial factory capacity set by economics**
- ❑ **Realistic recovery plan**
  - Suppliers have displaced customers too!
- ❑ **Communicate early and often**

# JDAM Team and Honeywell Delivered!

- ❑ **98% Reliability**
- ❑ **89% Targets within CEP Destroyed**
- ❑ **0% Collateral Damage**

**One B2  
6 JDAMS  
One Pass**



**Our customers say it best: “When it absolutely, positively, has to be destroyed overnight...”**

**JDAM Teamwork Success:  
DPAS and industry working together  
in the commercial environment!**

**“ timely availability of materials, facilities, services  
to support the armed services  
during both peacetime and contingencies  
by requiring preferential contract performance”**