GPS Modernization

42th CGSIC (19 Mar 2003) での米空軍の資料

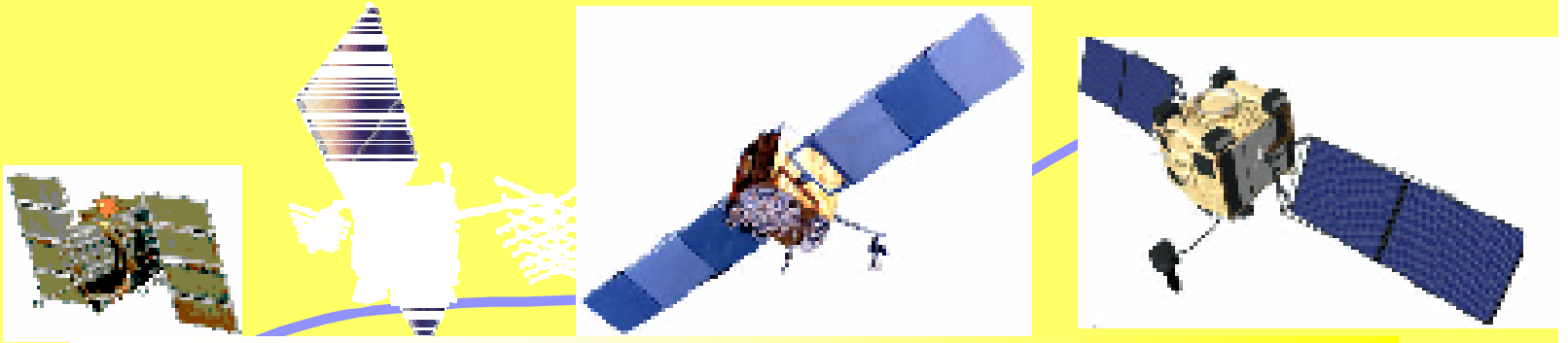
GPS is Critical to Nation's Economic, Transportation and Safety Programs

GPS as an Enabler

- Aviation Direct Routing
- Financial Transactions
- Rail Capacity and Safety
- Hazmat Tracking
- Harbor Approaches
- E911 Technology
- Agricultural Productivity
- Homeland Security
- Emergency Response
- Communication Capacity
- Timing Standard
- Space Operations

"GPS is rapidly becoming an integral component of the emerging Global Information Infrastructure, with applications ranging from mapping and surveying to international air traffic management and global change research." – Presidential Decision Directive (NSTC)-6, March 1996

GPS Modernization Plan



Increasing System Capabilities w ***Increasing Defense/ Civil Benefit***

Block IIA/IIR

- **Basic GPS**
- **Std Service (16-24m SEP)**
  - **Single frequency (L1)**
  - **C/A code navigation**
- **Precise Service (16m SEP)**
  - **Two frequencies (L1&L2)**
  - **P-code navigation**

Block IIR -M, IIF

IIR-M: IIA/IIR capabilities plus
- **2nd Civil Signal on L2 (L2C)**
- **Earth coverage M-Code on L1 & L2**

IIF: IIR-M capability plus
- **3rd Civil Signal on L5**

Flex Power upgrade adds ability to increase power on both P and M-Code signals to defeat low level enemy jamming

Block III

GPS III
- **Navigation Surety**
- **Increased Accuracy**
- **Assured Availability**
- **Controlled Integrity**
- **System Survivability**
- **Continuation of Legacy Signals**