F-15 Licensed Production in Japan
F-15 Licensed Production in Japan

- First U.S. ally to be approved for in-country production
- Program defined in USG-GOJ agreements/ MOU
- Executed as MHI and McDonnell Douglas business collaboration
- 187 aircraft produced in Japan
- *Limited to Japanese market*

**USAF roles:**
- Manage the technology transfer and control process
- Absorb and utilize the “flowback” of technical data from Japan

**JDA/JASDF roles:**
- Program funding and contracting
- Ensuring configuration standards in compliance with the MOU

**Industry:**
- MHI prime contractor in Japan
- Execute the program through MLA/TAA – as licensed by DOS
- Negotiated Royalties and License fees
F-15 Licensed Production in Japan
Goals and Objectives

- **Japan objectives:**
  - Acquire first rate air superiority capability to defend Japan (Cold War)
  - Boost Japanese defense industry (jobs and autonomy)
  - Gain advanced technology

- **U.S. objectives:**
  - Strengthen important ally’s air superiority
    - Prevent air defense vacuum - deter the USSR
    - Safeguard allied operations at Japanese bases and ports
  - Protect the most sensitive/vulnerable technology
F-15 Licensed Production in Japan
Lessons

Benefits to the U.S. included:
- Enhanced alliance capability in air superiority. (Cold War strategy)
- Larger total F15 user base (for logistics efficiency)
- Revenue to U.S. industry

Although license fees and royalty payments added to production costs, benefits to Japan included:
- Years of USAF combat experience inherent in the F15 design
- Common training and tactics with USAF
- >10$B US RDT&E investment and extensive national test infrastructure
- Revenue, jobs and advanced technology for Japanese industry prime contractor (MHI)
**F-15 Licensed Production in Japan Lessons**

- Ultimately, Japanese industry absorbed some advanced technologies.
- Because of U.S. export stipulations, Japan could not apply beyond the F15 program without U.S. approval.
- More “black box” rulings as newer fighters increase use of sensitive electronic subsystems.
- MHI-Boeing relationship expanded with F-15 software source code and engineering design responsibilities into the commercial market, with MHI becoming a 787 investing partner.
Conclusions

▪ The Japan F-15 program has been very successful.
  – Current force of 200 F15s remains the core of Japan’s air defense
  – 21st century capability upgrades are available and affordable (USAF F15C through 2040)
  – MHI expanded its engineering and production capacity

▪ Expectations of industrial benefits may have been unrealistic in the 1980s
  – Market was restricted to Japan
  – IP rights and ownership of data
  – High costs of maintaining a competitive indigenous defense industry base.
  – Lack of true “defense companies” and the limited interest of commercial enterprises

▪ True cooperative production before the 3P revision was more difficult

▪ Missed opportunities to provide depot maintenance to the USAF because of defense export restrictions.

▪ Moving from licensed production to international collaboration and revision of 3Ps will change dynamics
  – Presents new opportunities . . . and challenges
  – F-15 mods, upgrades, sustainment
  – Follow on fighter development
  – Broader market
F-15J/DJ Collaboration
Looking ahead

Ensuring the sovereignty of Japanese territory well into the 21st Century