Air Armament Center

War-Winning Capabilities…On Time, On Cost

U.S. AIR FORCE

"Entering SDD with an Executable and Affordable Program"

PEO SYSCOM

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Small Diameter Bomb (SDB I)

War-winning Capabilities…On Time, On Cost

SDD Program Performance

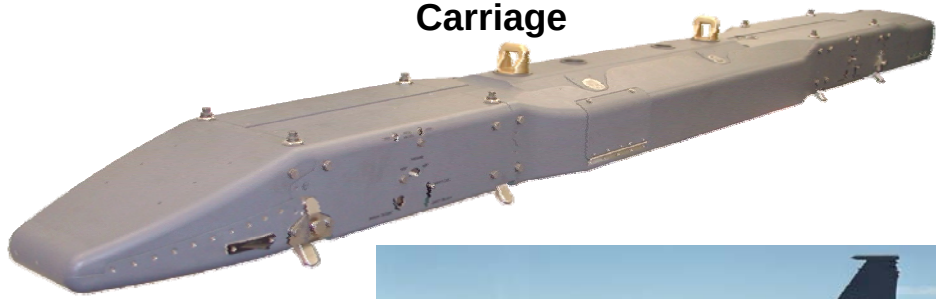
- **Program Execution – Green**
- **Program Cost – Green**
- **Program Schedule – Green**
  - **Required Assets Available (RAA) one month early**

SDB I Elements

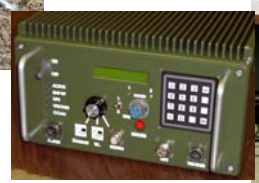
War-winning Capabilities…On Time, On Cost

Weapon

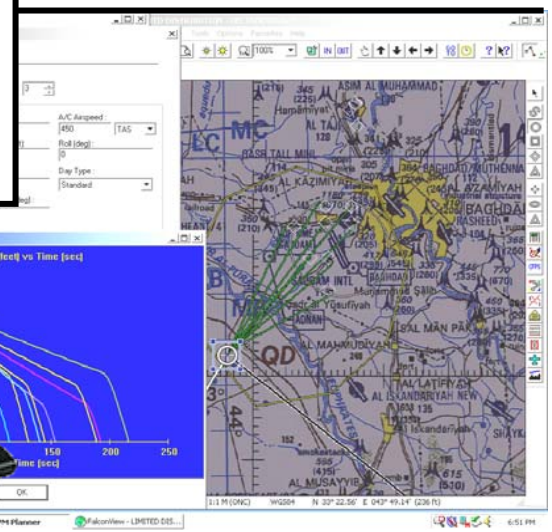
Carriage



Accuracy Support Infrastructure



Logistics



Mission Planning

How did we do it?

War-winning Capabilities…On Time, On Cost

- **Started with <u>WE</u> vs. we – Strong Team Envmnt**
- **Requirements Control**
- **Mature Technology**
- **High Confidence Cost Estimate**
- **High Confidence Source Selection**
- **Leadership**

Strong Team Environment

War-winning Capabilities…On Time, On Cost

- **All parties committed to program**
  - **Focus on program and issues**
  - **No Gov't vs. Contractor approach**
- **Personal and frequent communication with stakeholders**
  - **Videos**
  - **Working Integrated Product Teams (WIPTs)**
  - **E-mails**
  - **Pentagon hall walks**
- **Openness**
  - **Failures and successes**
- **Seamless verification**
  - **Early OT and Live Fire involvement**
  - **Open books**

Requirements Control

War-winning Capabilities…On Time, On Cost

- **Achievable**
  - **Coordinated and understood prior to SDD**
- **Stable**
  - **Hold strong against “requirements creep”**
  - **Defer to next spiral as needed**

Mature Technology

War-winning Capabilities…On Time, On Cost

- **Lab Tech Maturation**
  - **Miniature Munition Technology Demonstration (MMTD)**
  - **Small Smart Bomb/Small Smart Bomb Range Extension (SSB/SSB-REX)**
  - **GPS Anti-Jam**
- **Joint Direct Attack Munition (JDAM) - related technology**
  - **Four Variants**
  - **INS/GPS, SAASM A-J, Tail Actuation Systems, A/C Integration**
- **Component Advanced Development (CAD)**
  - **Started with mature technology**
  - **Integrated components**
  - **Conducted system-level, in-environment demonstrations**
  - **Reduces risk**

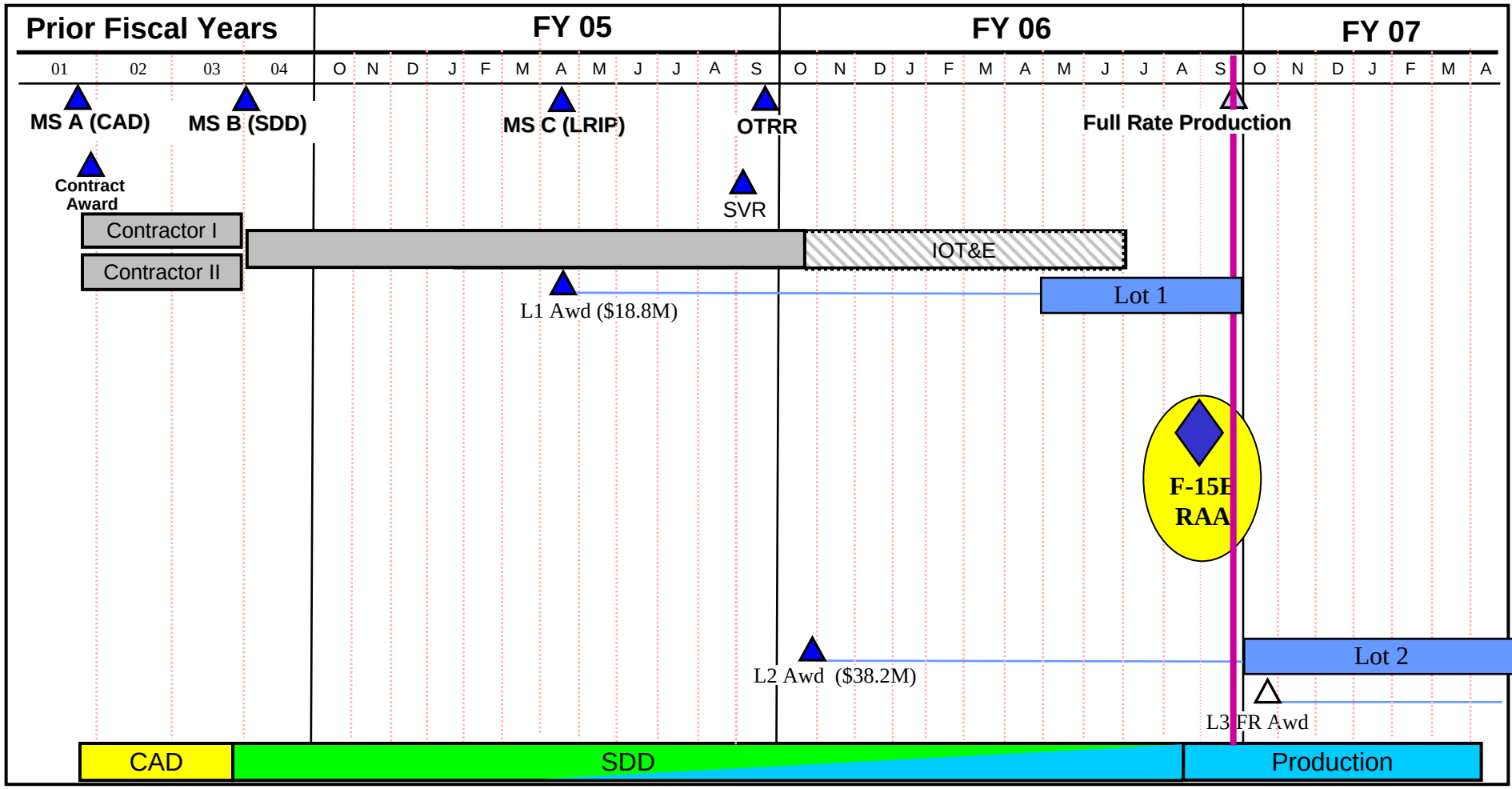
High Confidence Cost Estimate

War-winning Capabilities…On Time, On Cost

- **Well defined program**
- **Risk identified early and addressed (CAD phase)**
- **Enabled by mature technology**
  - **Do not enter SDD too early**
  - **Design stability**
- **Leads to achievable execution**
- **AAC established sufficiency review process**

SDB I Schedule

War-winning Capabilities…On Time, On Cost



	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total
C-Sys	27	128	300	335	377	454	379	0	2,000
SDB I	199	567	1,343	1,395	3,212	3,558	3,560	10,166	24,000

High Confidence Source Selection

War-winning Capabilities…On Time, On Cost

- **Legitimate Competition Leading to Source Selection**
  - **Trade Space**
  - **Production Savings**
  - **Demonstrated prototypes in relevant environment**
- **Selection Criteria**
  - **Risk to meeting schedule**
  - **Affordability (Cost estimate restrictions)**
  - **Contractor Performance**
  - **Mission Capability**

Leadership

War-winning Capabilities…On Time, On Cost

- **Experienced leadership selected to establish & manage program**
  - **Long history of technology development, test, transition**
  - **Know when/how to say "No"**
    - **Programmatically and administratively**

- **Aggressive, Proactive leadership essential**
  - **Maintaining stable schedule, funding, requirements -- job #1**
  - **Early planning critical**
    - **Built teaming relationship with contractors**
  - **Built advocacy via success and communication**
    - **ie, Systems Engineering, Test, Budget Execution**

Summary

War-winning Capabilities…On Time, On Cost

- **Many key considerations to successful SDD**
  - **Team**
  - **Requirements**
  - **Technology maturity**
  - **High confidence cost estimate**
  - **High confident source selection**
  - **Leadership**
- **Don’t enter SDD too early**
- **Communicate, communicate, communicate**