Standardized Space Trainer (SST)

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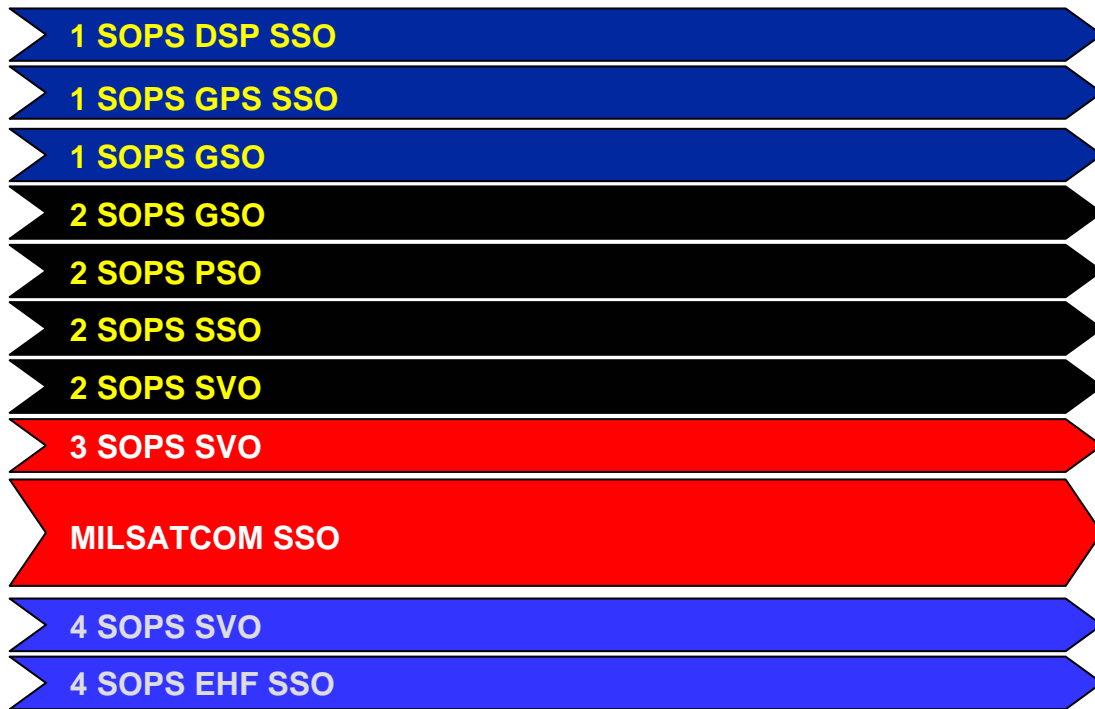
I n t e g r i t y - S e r v i c e - E x c e l l e n c e

- **Training Challenges**
- **New Method**
- **Need for Standardized Space Trainer for 50 & 460 OSS IQT and Unit Training**
- **Current Status of Standardized Space Trainer (SST)**
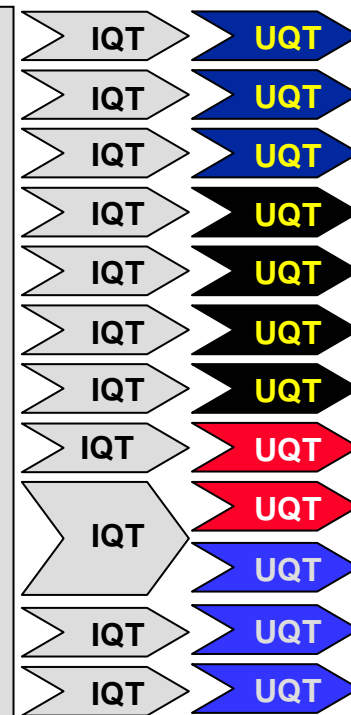
Training Challenges

Trained Personnel Requirements (TPR) **AETC Courses** **Squadron Training**

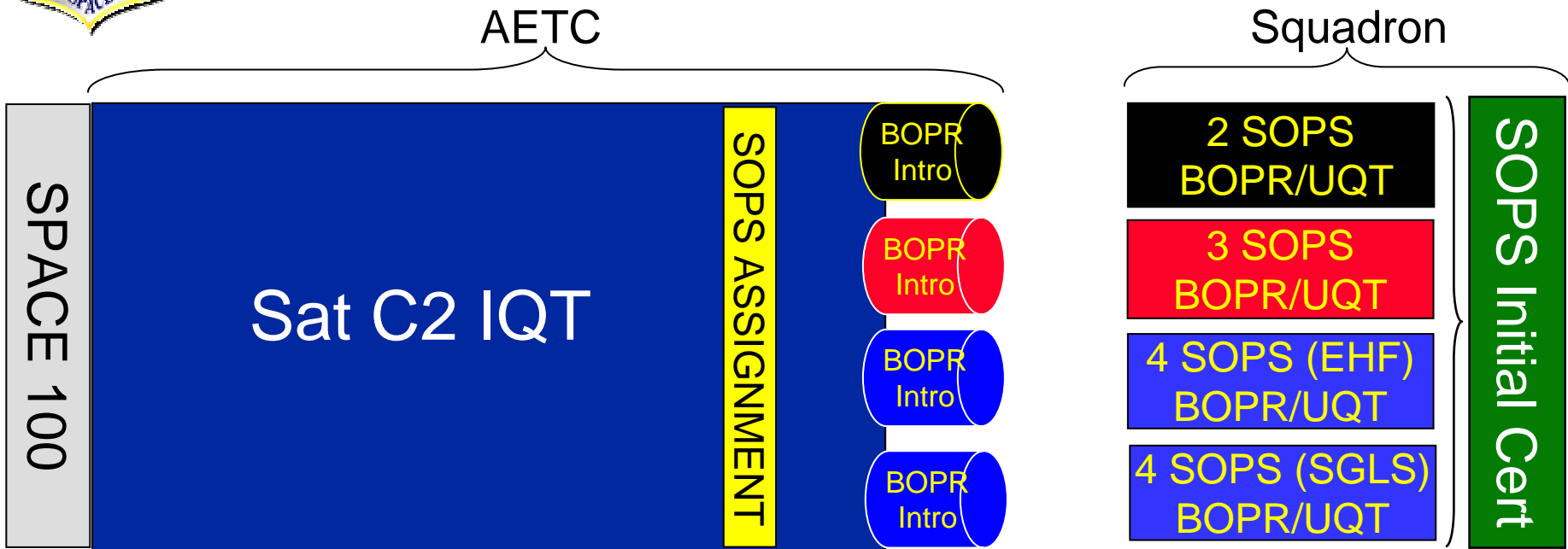|	SPACE 100		
1 SOPS DSP SSO	IQT	UQT	1 SOPS
1 SOPS GPS SSO	IQT	UQT	
1 SOPS GSO	IQT	UQT	
2 SOPS GSO	IQT	UQT	2 SOPS
2 SOPS PSO	IQT	UQT	
2 SOPS SSO	IQT	UQT	
2 SOPS SVO	IQT	UQT	
3 SOPS SVO	IQT	UQT	3 SOPS
MILSATCOM SSO	IQT	UQT	
		UQT	4 SOPS
4 SOPS SVO	IQT	UQT	
4 SOPS EHF SSO	IQT	UQT	

- Stove-piped courses specialized knowledge for a single position, in one SOPS
- TPR projections done 2-3 yrs previously are never accurate due to changes
- Limits manning flexibility to put new operators where they are needed
    - Vacant positions, positions that lack experience

New Training Model

AETC

Squadron

SPACE 100

Sat C2 IQT

SOPS ASSIGNMENT

BOPR Intro

BOPR Intro

BOPR Intro

BOPR Intro

2 SOPS BOPR/UQT

3 SOPS BOPR/UQT

4 SOPS (EHF) BOPR/UQT

4 SOPS (SGLS) BOPR/UQT

SOPS Initial Cert

New Space Operations Initial Qualification Training (IQT) course developed and planned for Oct 06 (CY) at VAFB

- SOPS Assignment executed 3/4 into training
  - Ensures manning balance throughout SOPS and mission readiness
- Intro to IQT BOPR course provided at the end of IQT training
  - Mission specific introduction with basic performance requirements

New Sat C2 IQT Course ("White Sat")

- Develops new operators with in-depth, fundamental knowledge of overall satellite system vs. stove-piped, performance-centric, system-specific focus

  - Attitude Control Methods
  - Electrical Power Subsystems
  - Satellite Contact Procedures
  - Thermal Control Systems
  - Ground System Basics
  - TT&C

- Uses examples from operational satellites and their control systems to reinforce understanding

- Includes basic hands-on simulator training to prepare students for UQT at Schriever (using "in-place" resources)

- Initial Qualification Training (IQT) will be modeled similar to Undergraduate Pilot Training

End Goal: Education Focus Leading to Flexibility and Adaptability in Follow-on Operational Training

What is a Standardized Space Trainer (SST)

COTS Hardware, Common Operating System and Network Capability

- Standardized Space Trainer provides the HW/SW platform from which Initial Qualification Training and System Specific Training can be launched – not a generic training system

- Software applications would be developed by SPOs to execute <u>system specific</u> space training missions -- GPS OCX, SBIRS, TSAT, etc, would   have their own applications and operate on SST just like opening Word, Excel, Photoshop, etc on a desktop PC

- Capable of both Crew and Positional Training

- Reduces Operations & Maintenance (O&M) costs associated with having multiple stovepipe space system simulators at VAFB, SAFB and Buckley

- Standardized Space trainer used for training - not testing and development

- Distributed Mission Operations – Space (DMO-S) compatible

Standardized Space Trainer (SST)

- VISION: No need for individual, stovepipe and expensive training space systems -- Standardized Space Trainer (SST) could be used for;

  - AETC (533TRS) Initial Qualification Training (IQT)
    - The new Sat C2 Course: software developed to serve as "White Sat" (i.e. T-38 "white jet" trainer at UPT) to teach fundamentals of: behavior of common military satellites, sub-systems (common to all satellites--non-payload-specific), space flight, orbital mechanics, etc and satellite ops (contact procedures; ground system basics; TT&C)
    - Basic Operator Course (BOPR): Introduction to assigned Satellite System

  - 50 OSS Unit Training (Qualification and Proficiency Training)
    - Software developed to support 2, 3 and 4 SOPS training requirements

  - 460 OSS IQT and Unit Training (Qualification and Proficiency Training)
    - Software developed to support SBIRS C2 and Missile Warning training

Between the 533TRS, 50 OSS and 460 OSS eight different training systems are currently used for IQT and Unit Training - New Systems like OCX, TSAT and SBSS could add more

Current Status Standardized Space Trainer

- STAO, HQ AFSPC/A3 & A5, 50 OSS, 381TRG and HQ AETC have been working closely to make a standardize training system a reality for space

- Lt Gen Hamel (SMC/CC) fully supports standardized space ops trainer and has assigned SMC/SN to lead acquisition effort for Standardized Space Trainer

  - Request for Information (RFI) released to industry 12 Apr 06
    - Industry responses originally due back 24 May 06 - extended one week

  - Education and Training Technology Applications Program (ETTAP)
    - Submitting SST concept for ETTAP funds – expect $500K (FY06)

  - Early acquisition efforts being worked in parallel with AFSPC requirements process – requirements definition & CONOPS

- Space TAG has assigned action to HQ AFSPC/A3T to establish Standardized Space Trainer (SST) TPT

  - SST TPT will be responsible for STP and accomplishment of TSRA

- **Utilization Strategy**
    - Acquisitions <u>currently</u> at draft RFP stage could include flexibility to include SST
    - Currently fielded programs could benefit from SST
        - Training systems considering mod/upgrade would cost compare SST option

- **Summary**
    - Paradigm changing to standardized space training system away from expensive, unique, stove-piped systems
    - RFI inputs now due 31 May 2006

For more information see:
http://ax.losangeles.af.mil/axl/stao/standardized_trainer.html

Backup

How it all fits together at 50 OSS

Upgrade Modules

50 OSS

AETC

- SE
- MC
  - Eng   OA
- OSS – I or E
- Payload Expert | Vehicle Expert
- Line Instructor
- Operator w/ Upgrade Tasks
- SOPS Specific Operator
- Ops Group Training/Basic Operator (BOPR) Certification/UQT
- Satellite C2 Ops Course
- Space 100
- 1 Set of Ops Group Requirements

← Sat C2 Sim

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