



USAF Operational Training

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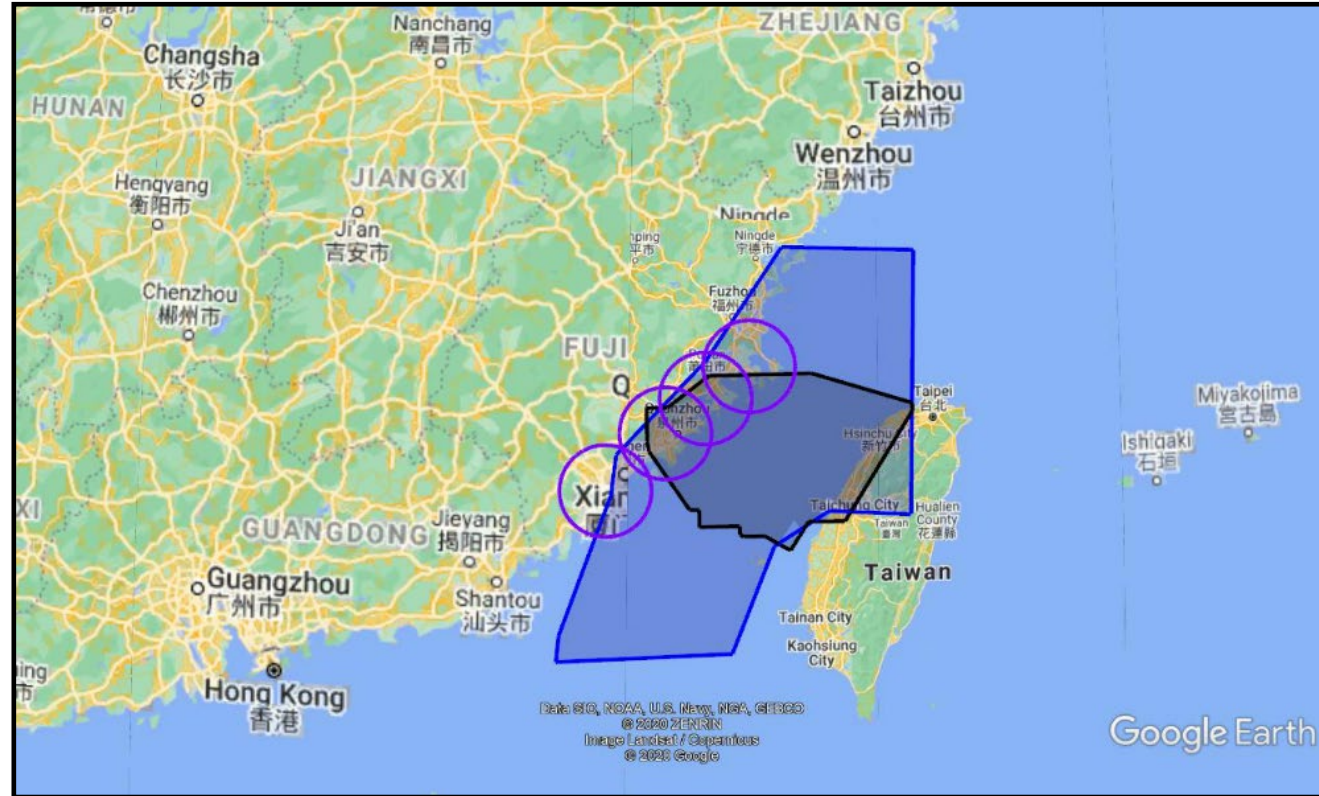
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Overall Operational Training and Test Infrastructure

- Current State:
 - Air Force capabilities and the capabilities of our potential adversaries have advanced at a rate that has outpaced our ability to provide relevant and realistic training
- Desired State:
 - Threat Matrix Framework (TMF) Level 4 synthetic capability for all operational units
 - Nellis Virtual Test and Training Center (VTTC) for TMF Level 4 high-end advanced training and tactics development; follow with Joint Base Elmendorf Richardson (JBER) JITC
 - Nevada Test and Training Range (NTTR) & Joint Pacific-Alaska Range Complex (JPARC) to a TMF Level 4
 - Six enhanced Primary Training Ranges to provide an arena for multi-unit training
 - Adversary air (ADAIR) tailored to unit requirements
 - Airspace optimized to support TMF Level 3+ training
 - Reasonable R&D for a TMF Level 4 blended capability (blending live & synthetic)

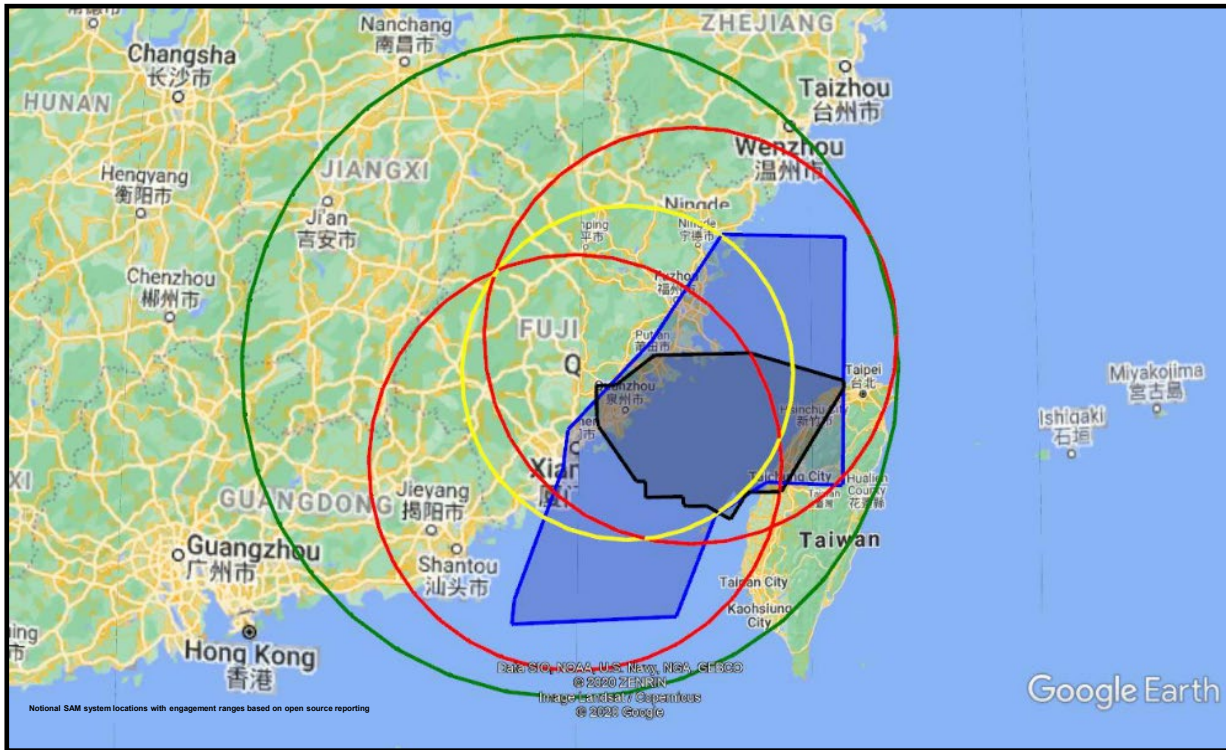
The Operational Environment – Then and Now

- **Then:** 1980s through Early 2000s
- **Biggest challenge:** Soviet / FSU capabilities
- **Range / Airspace:**
 - Size Required: Nevada Test and Training Range + MOAs
 - “Marshall in the East, Push to the West” ...relatively short vuls
- **Threat Characteristics**
 - Well-Understood, Definable Designs
 - Distinct EW/GCI/TAR/TER
 - Single-digit and first gen double digit SAMS
 - Air: GCI-controlled fourth gen fighters
 - Rudimentary EW environments
- **Our Force**
 - Undeniably superior designs...at scale
 - World-leading Tactics, Techniques & Procedures
 - Strategic Depth (Geography and Force Structure)



The USAF and Allies Trained and Dominated in This Environment

The Operational Environment – Then and Now




- **Now:** 2020s into the future
- **Biggest challenge:** China's capabilities
- **Range / Airspace:**
 - Size required: greater than any existing range
 - Need for a multi-access, campaign-level scenario over vast distances with high threat density
- **Threat Characteristics**
 - Advanced digital arrays
 - Multi-mode detection, very long-range SAMS
 - Air: fifth-gen fighters with very long range missiles
 - Advanced EW environments
- **Our Force**
 - Superior Designs...but lead is slipping
 - Other nations openly copying our TTP playbook
 - No sanctuary / Outnumbered at the Tactical Edge

What We Did Then Isn't Good Enough Now

Future of Training and Test






T&T Capability:  Partial  Full

 LIVE

 SYNTHETIC

Multi-Domain Integrated


Six Fights

- Compete With & Deter Adversary
- Get Into Theater 
- Get Airborne 
- Air and Space Superiority 
- Deny Adversary Objectives 
- Sustain the Fight 

Other Considerations

Campaign Level
Combat Support Exercise at Scale
Warfighting Aspects Unable to Sim
Validates Synthetic Models

Mission Thread (1st FYDP)
Campaign Level (2nd FYDP - Training)
Informs Limited Live Fly

Leveraging *Data* for *AI Insights* Across DAF Functions (Operations, Planning, Force Design, Support)



Airmen are our
competitive
advantage.