

M&S Strategic Initiatives to Support Test & Evaluation



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DoD Test & Evaluation



- **Determine what needs to be tested**

- Developmental Testing
- Operational Testing
- Live-Fire Testing
- Suitability Testing
- Lethality Testing
- Interoperability Testing

- **Determine what resources are available to support the tests**

- Models and Simulations
- Measurement Facilities
- System Integration Laboratories
- Hardware-in-the-loop Laboratories
- Installed Test Facilities
- Open-Air Ranges

OSD Tri-Chairs

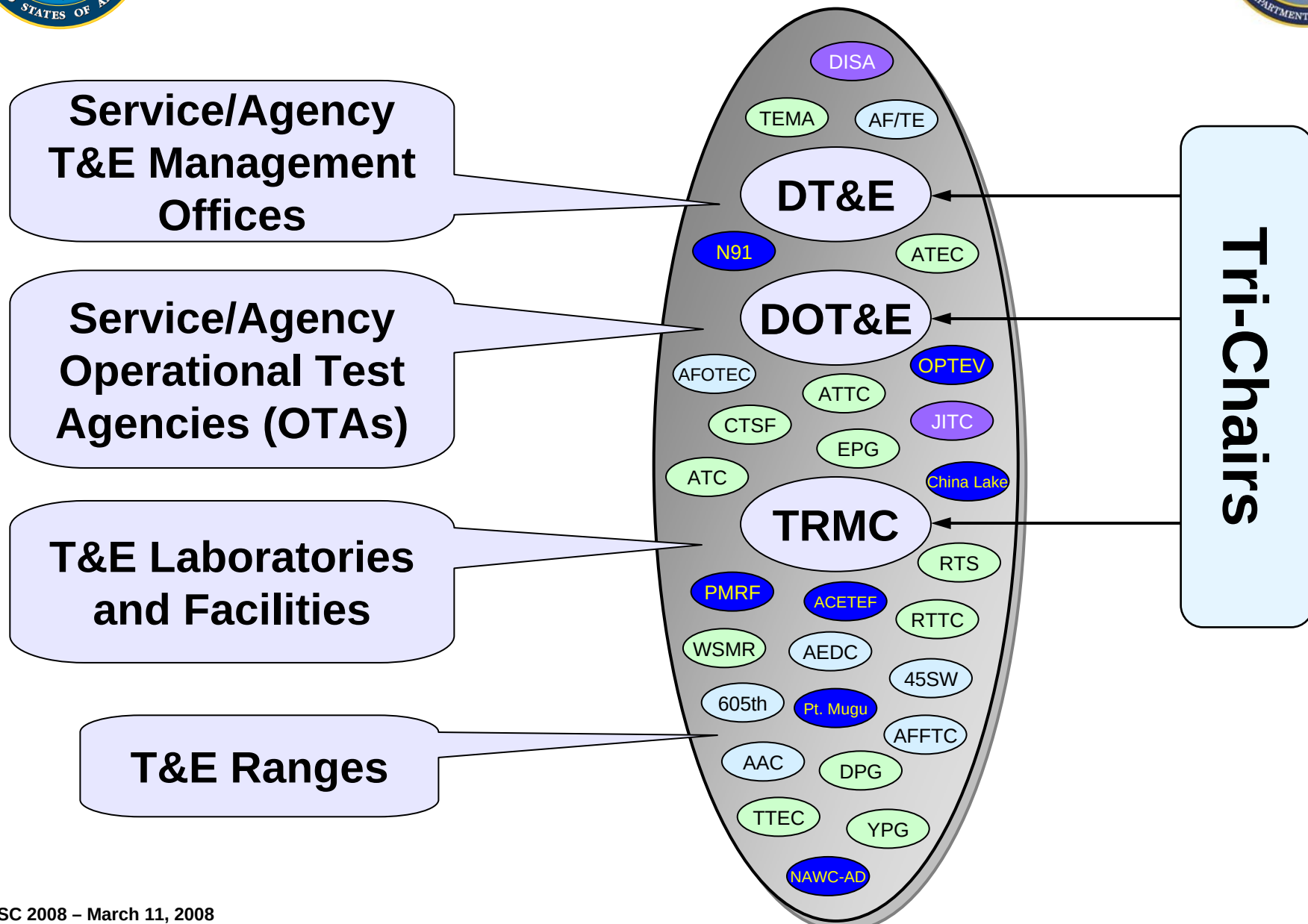
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DoD Test & Evaluation M&S Surfboard





Why M&S is Important to T&E

- **M&S can optimize all phases of testing**

- Developmental Testing
- Operational Testing
- Interoperability Certification

- **M&S can support test planning**

- Focus live testing on critical areas – investigate the “edges of the envelope”
- Extrapolate system performance in conditions limited by safety, environmental, or treaty constraints
- Improve locating instrumentation to maximize data collection during live tests

- **M&S can augment live testing**

- Serve as a surrogate for other systems needed for interaction
- Represent additional threats or other stimuli

M&S supports T&E



What the T&E Community Needs

- **Validated Models**

- Validated system models need to be developed during Acquisition
- Policy must be strengthen and better enforced
- Beneficial to other communities beyond T&E
- In addition, validated models of threat systems and of all aspects of the environment must also be available

- **Standards**

- More than what the T&E community can fix alone
- Policy must be strengthen and better enforced
- Beneficial to other communities beyond T&E

Maximize effectiveness of M&S for T&E



What the T&E Community Needs (continued)



- **Capability to Link Simulations at Different Locations**
 - Required to support acquisition of Joint system of systems
 - Required to conducting distributed LVC testing
 - Corporate approach needed to mitigate duplicative solutions

To address this need, OSD established the Joint Mission Environment Test Capability (JMETC) program in FY07 under the TRMC

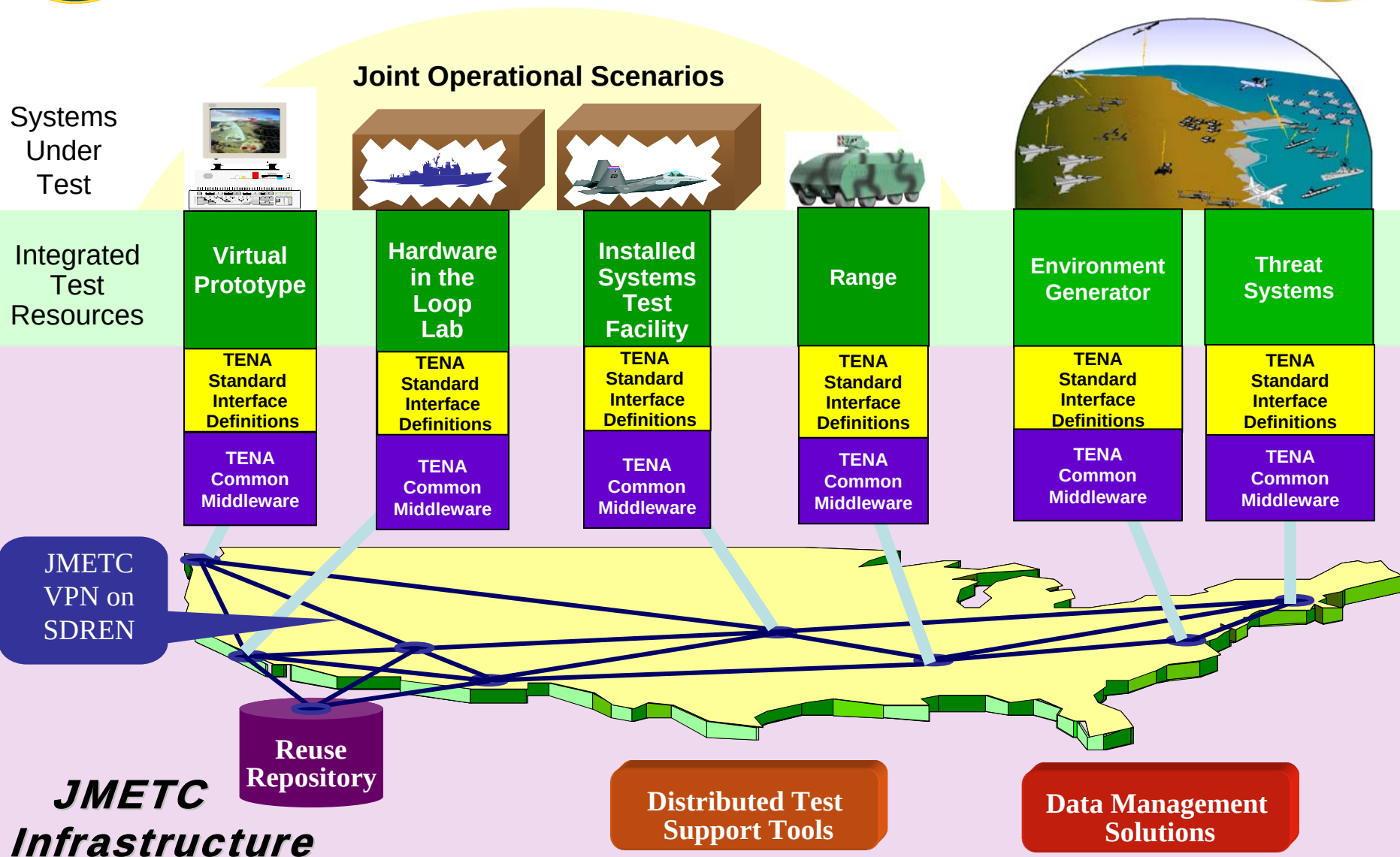


What is JMETC?

- **A corporate approach for linking distributed facilities**
 - Enables customers to efficiently evaluate their warfighting capabilities in a joint context
 - Provides compatibility between test and training
- **A core, reusable, and easily reconfigurable infrastructure**
 - Consists of the following products:
 - Persistent connectivity
 - Middleware
 - Standard interface definitions and software algorithms
 - Distributed test support tools
 - Data management solutions
 - Reuse repository
- **Provides customer support team for JMETC products and distributed testing**



JMETC Infrastructure





JMETC Status

- **Program Office:** Established (Oct 2006) and in operation
- **Connectivity:** JMETC VPN stood up based upon user needs
 - 8 current sites – expanding to 26 sites to address needs for upcoming test events
 - Site connections persistent to foster reuse in future test events
- **Test Events Supported**
 - JFCOM Joint Close-Air Support (JCAS) assessment (Aug 07)
 - JTEM (NLOS NEW) evaluation of new Joint test methodologies (Aug 07)
 - Warplan-Warfighter Forwarder (WWF) test of new C2 capability (Aug 07)
 - InterTEC Spiral 2, Build 1 (Sep 07)
- **Upcoming Tests**
 - Single Integrated Air Picture (SIAP) events
 - Joint Battlespace Dynamic Deconfliction (JBD2) – FCS CTO & JTEM events
 - InterTEC and CVN-21 events
 - Planning for future events for: SIAP, JSF, MMA, NECC, DD1000
- **Stakeholder Support Groups**
 - JMETC Advisory Group
 - JMETC Users Group



Benefits of M&S in T&E Summary



- M&S is important to DoD Test and Evaluation
- Challenges exist to maximize the effectiveness of M&S for T&E
 - Continue working across the T&E community and with other communities to address these challenges
- JMETC is up and running