



DoD ATS Technical Framework Relationships

Level Definitions

- **UUT Test level**
 - Test and UUT Diagnostics in terms of high level entities, test outcomes and model based descriptions
- **Signal or Independent level**
 - Test Requirements, signal sequence, timing
- **Resource or generic level**
 - General resource features or UUT types
- **Instrument or device level**
 - Specific instrument, driver, and control; independent of an instrument or device function
- **Interface or hardware level**
 - Pin maps (e.g. CTI, VXI)
- *The **dotted line(s)** represent internal boundaries within the ATS Framework areas (UUT, TPS, ATE) which are used to help identify the typical or expected usecase for the key elements.*



Standards and Specification Status Definitions (in order of precedence)

Recommended – Published Standard(s) and/or Specification(s) identified and approved by the AMB for recommended usage.

In Process - Published Standard(s) or Specification(s) identified for recommendation. Framework Working Group must complete the procedures identified in the Framework Definitions Procedure Guide (this includes a demonstration scenario), then obtain approval from the AMB to become recommended.

Emerging – Standard(s) and/or Specification(s) identified for recommendation, but is waiting on standards body publication process. Or, a preliminary standard(s) and/or specification(s) identified as a potential solution for a Framework element. Effort required by an industry standards body to complete draft Standard(s) and/or Specification(s).

To be Addressed – Preliminary definition exists. Studies needed to complete definition and identify possible Standard(s) and/or Specification(s).



DRV Standards and Status

- **IVI Standards**

- IVI-3.1 Driver Architecture Specification
- IVI-3.2 Inherent Capabilities Specification
- IVI-3.3 Standard Cross-Class Capabilities Specification
- IVI-3.4 API Style Guide
- IVI-3.14 Primary Interop Assembly Specification

- **Status**

- Recommended
- Recommended
- Recommended
- Recommended
- Recommended

*DRV element is completely satisfied with the standards listed above and on the following page



DRV Standards and Status

- **VPP Standards**

- VPP-3.1 Instrument Driver Architecture and Design Specification
- VPP-3.2 Instrument Driver Functional Body Specification
- VPP-3.3 Instrument Driver Interactive Developer Interface Specification
- VPP-3.4 Instrument Driver Programmatic Developer Interface Specification

- **Status**

- Recommended
- Recommended
- Recommended
- Recommended

* DRV element is completely satisfied with the standards listed above and on the previous page



AFP, IFP, TSFP Standards & Status

- **AFP Standards**

- IEEE 1671.5 ATML Test Adapter
- IEEE 1871.2 Recommended Practice for Intrinsic Signal Path Information

- **IFP Standards**

- IEEE 1671.2 ATML Instrument Description
- IEEE 1871.1 Recommended Practice for Describing Synthetic Instrumentation

- **TSFP Standards**

- IEEE 1671.6 ATML Test Station
- IEEE 1871.2 Recommended Practice for Intrinsic Signal Path Information (optional)

- **Status**

- Recommended
- Use of this standard is optional

- Recommended
- Use of this standard is optional

- Recommended
- Use of this standard is optional



ICM Standards and Status

- **ICM Standards**
 - VPP 4.3 Virtual Instrument Software Architecture
- **Status**
 - Recommended

* ICM element is completely satisfied with the standard listed above



DIAD/DIAS Standards and Status

- **DIAD/DIAS Standards**
 - IEEE 1232 Artificial Intelligence Exchange and Service Tie to All Test Environments (AI-ESTATE)
- **Status**
 - Recommended



DTF Standards and Status

- **DTF Standard**
 - IEEE 1445 Digital Test Interchange Format (DTIF)
- **Status**
 - Recommended

* DTF element is completely satisfied with the standard listed above



MCI Standards and Status

- **MCI Standard**
 - IEEE 1671.4 ATML Test Configuration
- **Status**
 - Recommended

* MCI element is completely satisfied with the standard listed above



MTDS Standards and Status

- **MTDS Standards**

- IEEE 1636
Standard for Software
Interface for Maintenance
Information Collection and
Analysis (SIMICA)
- IEEE 1636.1
SIMICA: Exchanging Test
Results and Session
Information via the eXtensible
Markup Language (XML)
- IEEE 1636.2
SIMICA: Exchanging
Maintenance Action
Information via the eXtensible
Markup Language (XML)

- **Status**

- Recommended
- Recommended
- Recommended

* MTDS element is
completely satisfied with the
standards listed above



DFT Standards and Status

- **DFT Standards**

- IEEE 1149.1 Test Access Port and Boundary-Scan Architecture
- IEEE 1149.4 Mixed Signal Test Bus
- IEEE 1149.6 Boundary-Scan Testing of Advanced Digital Networks

- **Status**

- Recommended
- Recommended
- Recommended

*See the DoD Handbook "DFT for Boundary Scan Diagnostics" which provides guidance on the acquisition of boundary scan technology



PROD/PROS Standards and Status

- **PROD/PROS Standards**
 - IEEE 1232 Artificial Intelligence Exchange and Service Tie to All Test Environments (AI-ESTATE)
- **Status**
 - To be addressed



UDI Standards and Status

- **UDI Standard**
 - IEEE 1641 Signal and Test Definition
- **Status**
 - To be addressed



TPD Standards and Status

- **TPD Standards**

- IEEE P1671.1 ATML Test Description
- IEEE 1671 Annex C.2 ATML Wirelist Schema

- **Status**

- Recommended
- Use of this standard is optional



RAI Standards and Status

- **RAI Standards**
 - IEEE1641 Annex K
- **Status**
 - Recommended



RTS Standards and Status

- **RTS Standards**
 - IEEE 1671 Annex D
- **Status**
 - Recommended



UTR Standards and Status

- **UTR Standards**
 - IEEE 1671.1 ATML Test Description
- **Status**
 - In Process



FRM Standards and Status

- **FRM Standards**

- VPP-2 System Frameworks Specification
- IEEE 1671 ATML
- IVI-3.5 Configuration Server Specification
- IVI-3.6 COM Session Factory Specification
- IVI-3.9 C Shared Components Specification
- IVI-3.10 Measurement and Stimulus Subsystems (MSS) Specification
- IVI-3.12 Floating Point Services
- IVI-3.15 IviLxiSync Specification

- **Status**

- Recommended
- Recommended
- In Process
- In Process
- In Process
- In Process
- In Process
- In Process



PDD Standards and Status

- **PDD Standards**

- ANSI/EIA 682
- Electronic Design Interchange Format(EDIF)
- IEEE 1671.3 ATML UUT Description

- **Status**

- In Process
- In Process
- Recommended



RMS Standards and Status

- **RMS Standards**
 - IEEE 1641 Standard for Signal and Test Definition
- **Status**
 - In Process



RFI Standards and Status

- **RFI Standards**
 - IEEE 1693 Standard for Modular Interconnect Packaging for Scalable Systems
- **Status**
 - To be addressed



NET Standards and Status

- **NET Standards**
 - RFC0791 & 0793
- **Status**
 - Recommended

* NET element is completely satisfied with the standard listed above



DNE Standards and Status

- **DNE Standards**
- **Status**



Cyber Security Element

- **Standards**
- **Status**

