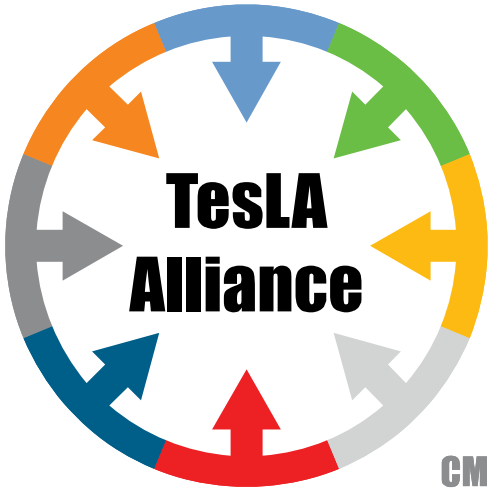
TesLA Quarterly Meeting
June 2009

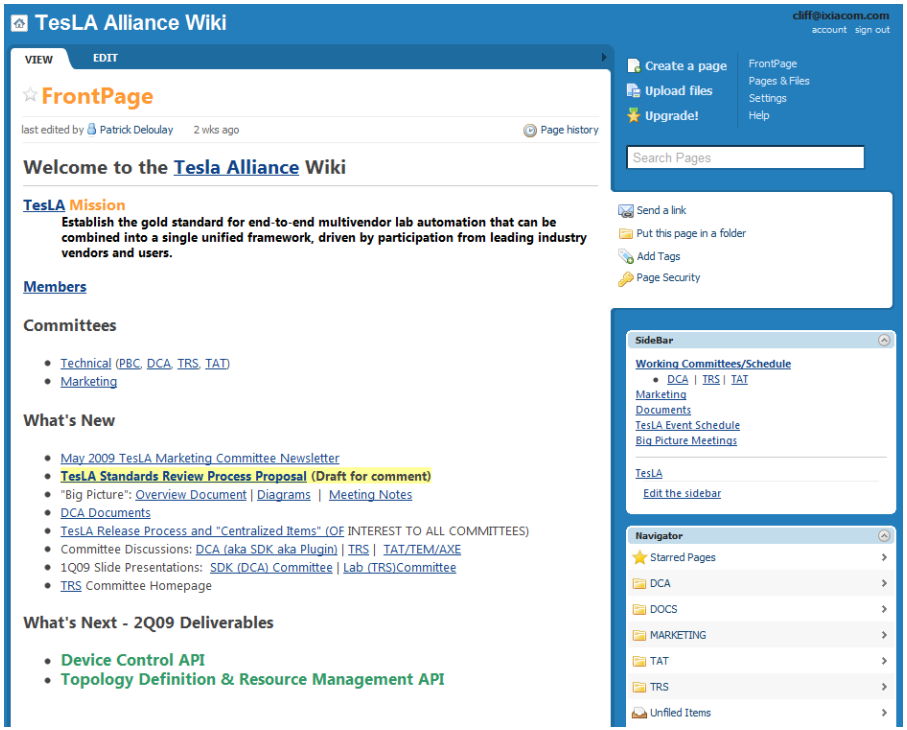


TesLA Big Picture & DCA Committee Report

Progress Since Last Meeting

http://teslaalliance.pbworks.com/f/TesLACommonArchitectureRoadmap.pdf

- **Developed Master Architecture ("Big Picture")**
  - Broad member participation
- **Established Consistent Nomenclature**
- **Defined Module Types**
- **Set Standards Priorities**
- **Created a rich multi-user Wiki**
- **Established Regularly Scheduled Committee Meetings**
- **Drafted TRS and DCA Specifications**
- **Drafted Ratification Process**
- **Demonstrated XML-based Pre-standards Integration at Interop**



http://teslaalliance.pbworks.com/

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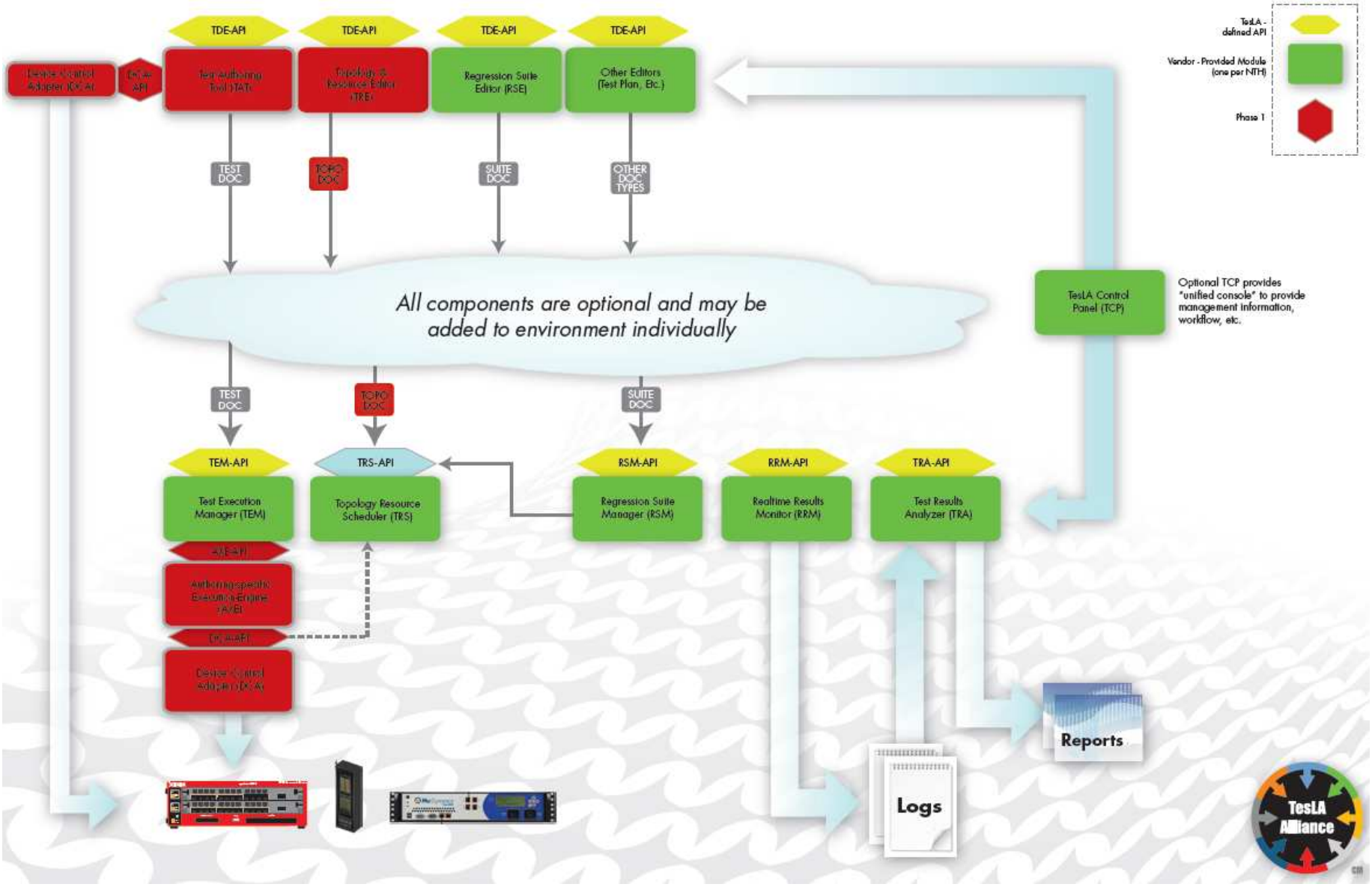
TesLA Architecture

http://teslaalliance.pbworks.com/Big-Picture-Meeting-Notes



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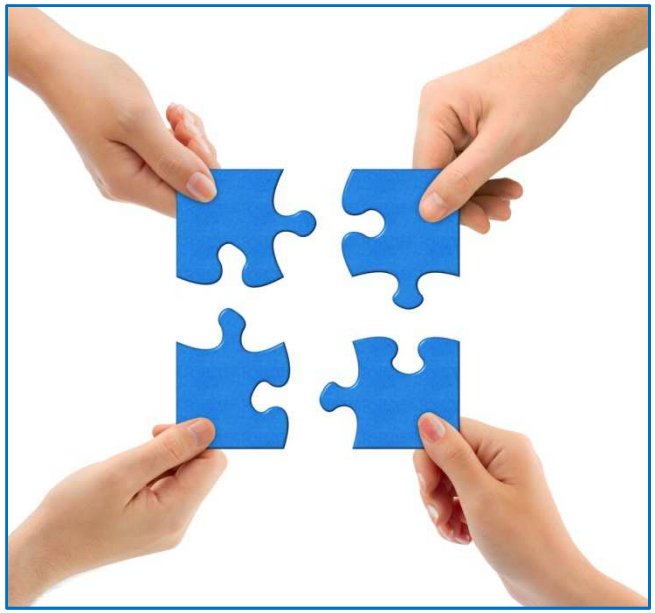
Architecture: Key Features

- Platform and Language Independent
- No Dependencies on Common Code, Application or Gateway
- Maintains differentiation
- XML-based Interface Specifications
- Any-to-Any Connectivity
  - Any module may be a Consumer or Provider
- Extensible by Customers and Third Parties in the Without Upgrade Interference



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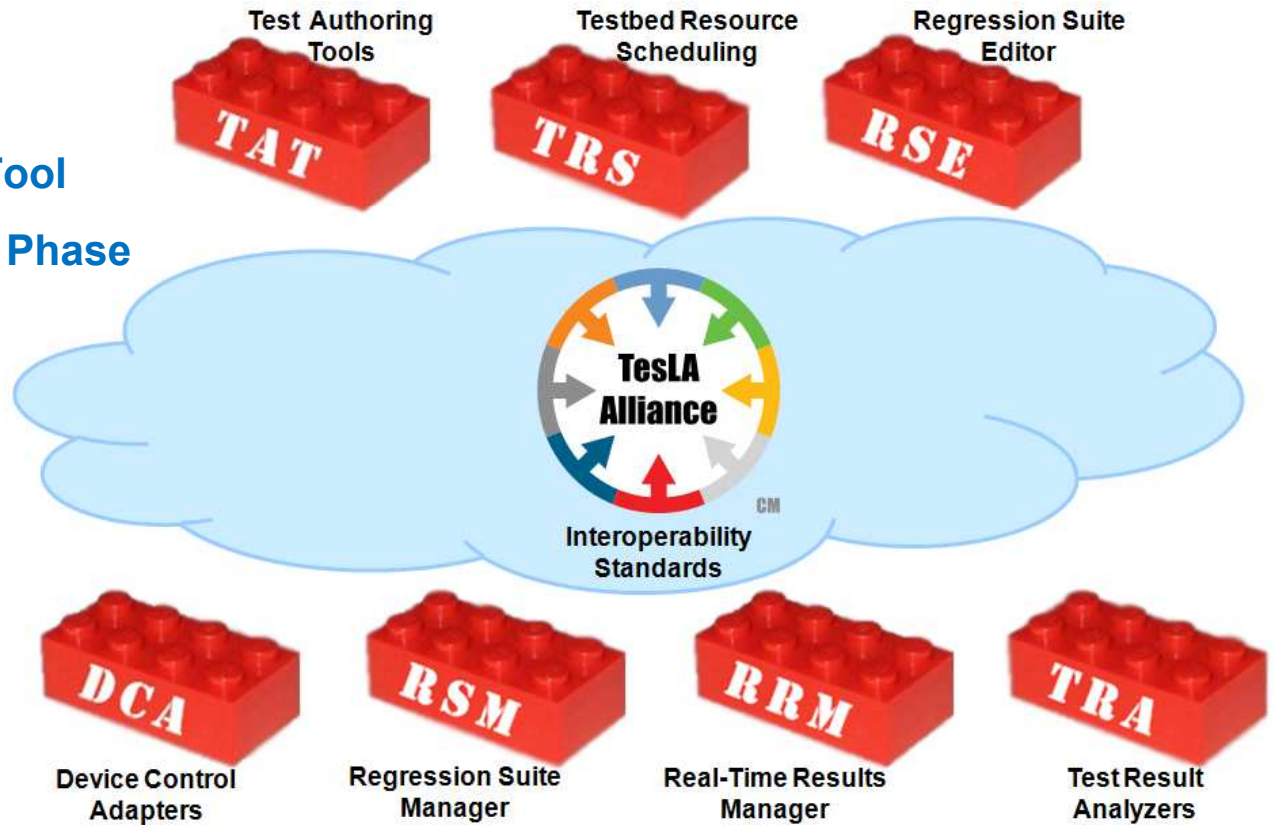
Architecture: Key Phase I Standards

- DCA: Device Control Adapter
- TRS: Topology & Resource Scheduler
- Primary Consumer Application
  - TAT: Test Authoring Tool
  - Full TAT Standards in Phase II



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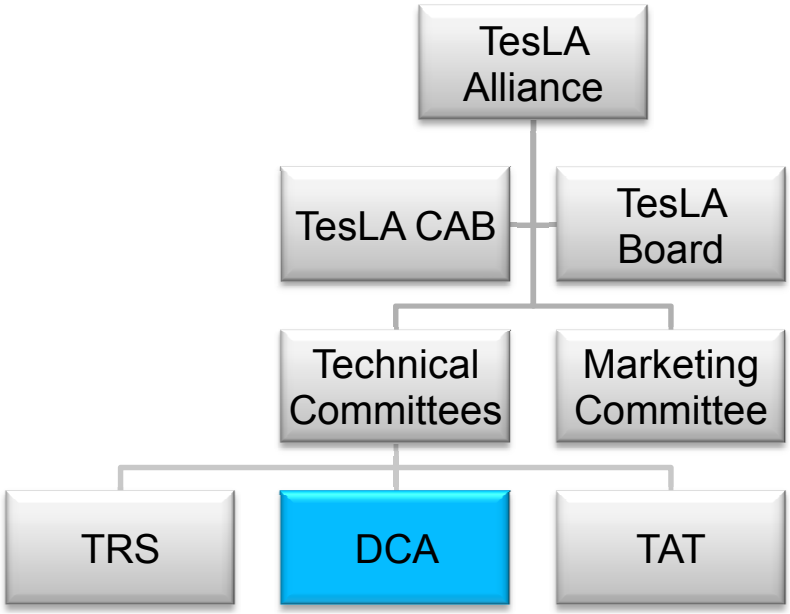
DCA Committee

- **Members**
  - Ixia (Chair)
  - Fanfare
  - OnPath
  - Apcon
  - PacketStorm
  - Jsystems/Ignissoft
- **Logistics**
  - Content - http://teslaalliance.pbworks.com/DCA
  - Distribution - sdk_plugin_committee@teslaalliance.org
  - Meetings Thursdays 9:00am Pacific Time



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Device Control Adapters

http://teslaalliance.pbworks.com/DCA

What is a "Device"?

Any Module that exposes Testing capabilities

Traffic Generators, Network Emulators, Physical Layer Switches, *Routers…but also Resource Schedulers and TATs*

DCA Objectives

Run-time integration with TATs, TRSs and other Testbed Modules

Standardized interface…while preserving vendor differentiation

TesLA Member Vendors

APCON

PacketStorm™ Communications, Inc.

SHUNRA

SHENICK

IXIA

ONPATH TECHNOLOGIES

CODENOMICON

Mu Dynamics™

How It Works

Each TesLA-compliant Device provides an XML based Module Definition and Command descriptions. These XML files are used at run-time by Consumers such as Authoring Tools to create and execute Tests. A single Test can use Devices from any number of vendors.

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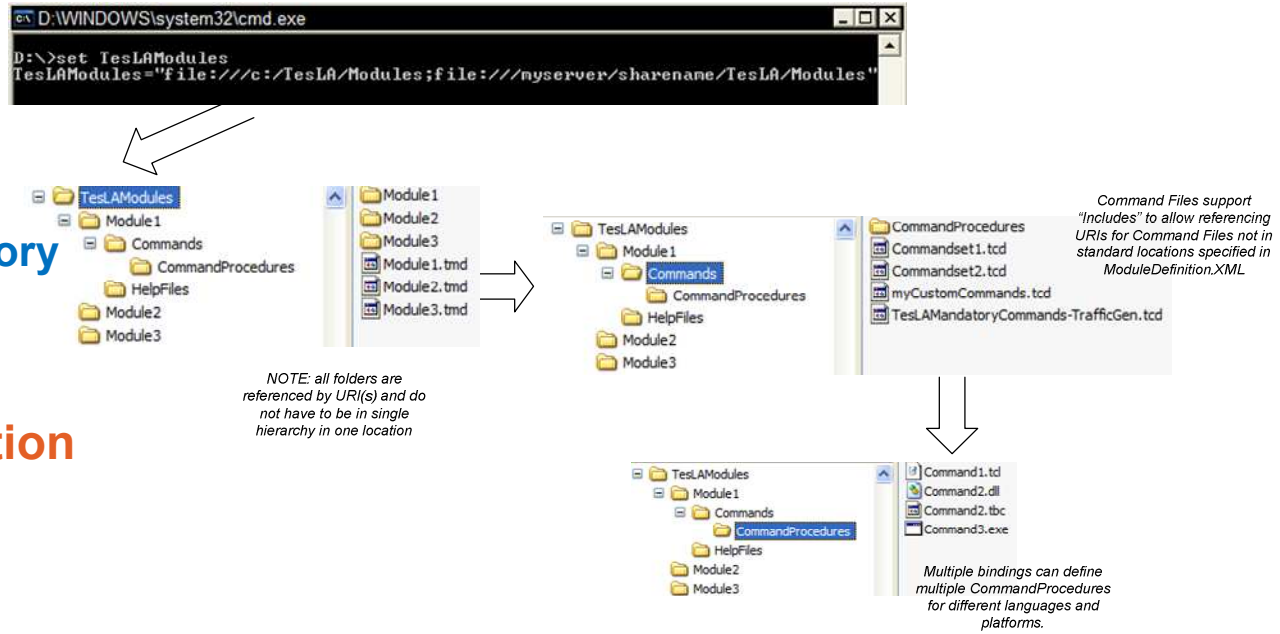
DCA: Key Features

http://teslaalliance.pbworks.com/f/DCASDK.docx

- Allows dynamic discovery of TesLA Modules
- Provides location and content extensibility with upgrade protection
- Supports multiple language bindings
  - TCL is initial mandatory binding
- Enables proprietary extensions for migration and custom features



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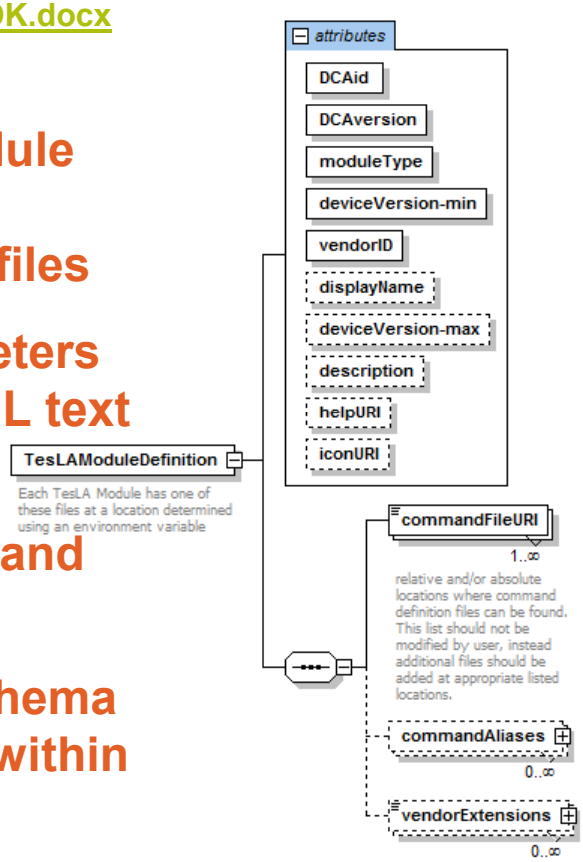
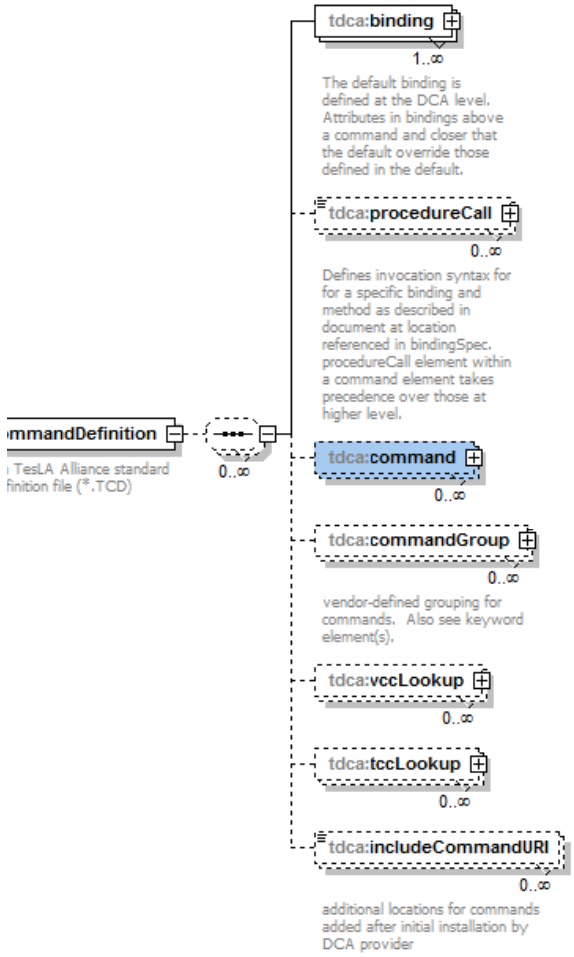
DCA: Design

http://teslaalliance.pbworks.com/f/DCASDK.docx

- **Specification at** http://teslaalliance.pbworks.com/f/DCASDK.docx
- **Uses XML Schema (XSD) to define syntax of TesLA Module Definition (TMD) and TesLA Command Definition (TCD) files**
- **TCL Binding passes parameters in and responses out as XML text per XSD schema in TCD**
- **Mandatory backward command compatibility**
- **Supports full set of XML Schema data types and constraints within Parameters & Responses**



http://teslaalliance.pbworks.com/f/TesLAModuleDefinition.xsd



http://teslaalliance.pbworks.com/f/TesLACommandDefinition.xsd

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TesLA Alliance™

Test Authoring Tools

http://teslaalliance.pbworks.com/TAT

What Test Authoring Tools Do

Present a consistent IDE for creating multi-vendor Tests

Create automated Tests without programming

Provide tools for dynamic resource management

Provide test debugging tools

TesLA Member Vendors

IXIA

QualiSystems

Fanfare

How It Works

Each TesLA-compliant Authoring Tool recognizes other TesLA Modules at run-time, exposing Device commands, Resource Management and other capabilities to the Test developer. Along with its corresponding Execution Engine, TesLA-compliant systems can run any combination of Tests created by different TATs.

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TAT: Key Features

http://teslaalliance.pbworks.com/TAT

- Full TAT standard deferred until phase II
- TATs will be DCA and TRS Consumers
- TAT Execution Engines will allow Customers to run Tests from multiple TATs within a single regression
- No initial provisions for multi-TAT integration into a “Shell”
  - But a TAT may publish a DCA interface
- TAT-generated Test format will not be standardized
  - Standardized “test language” would limit richness and differentiation
  - Command standardization can be accomplished by customers and third parties with custom DCAs
- Discussions centered around standardized Test Metadata (i.e. XML header or companion file)
  - Topology used by Test
  - DCAs and versions

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Testbed Resource Scheduling

http://teslaalliance.pbworks.com/TRS

What Resource Managers Do

Provide tools for defining Testbed Topologies & Resources

Schedule testbed resources for use by Tests at run-time

TesLA Member Vendors

How It Works

Patrick Deloulay of Gale Technologies has headed the TRS committee and will provide details…

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