

Proposed OSA Run-Time

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Agenda

- Proposed OSA
- Features of the Proposed OSA
 - ATML Importer
 - 1641 TPL RTS
- Hosting a New or Existing TPS
- Pros/Cons of Proposed OSA

ATML Importer

- Imports ATML Test Description (TD) document
- Creates TestStand Sequence files and code module VIs
- Using a custom code generator, the importer, completes the following tasks:
 - Process the TD file and add calls to TPL interface SubVIs to generated VIs
 - Validates that the Test Station can be used to execute the imported TD file
 - Process the ATML Test Station instance document and the TD file to create a Resource Allocation file for the TPS
 - Might require manual interaction of TPS developer
- Supports creating a Resource Allocation file without recreating TestStand Sequence file and code modules
- The custom code generator can be a Open Source component

1641 TPL RTS

- Custom component for a type of Test Station
- Transfer calls to TPL Interface to Device I/O calls
 - Uses to Resource Allocation file to allocate the appropriate resources
- Only supports signals used by hosted TPSs
 - Will require additional work to support new TPSs
- Designed as a HAL layer to support adding new instruments
- A template can be provided as an Open Source component
- Supports TPL connect statements

Hosting a New or Existing TPS

- Identify BSCs and TSFs involved for each test in the TD file
- Update 1641 TPL RTS to support any new signals identified
- New TPS
 - Translate the TD file to generate TestStand Sequence files and LabVIEW code modules
 - Generate the Resource Allocation file
- Existing TPS
 - Generate the Resource Allocation file

Pros/Cons of Proposed OSA

- Pros

- Cheaper to create and maintain Test Stations
 - Only support signals used by TPSs
 - Reuse Open Source components
- Easier to integrate new instruments in existing Test Stations
 - Do not have to recreate the type library for the station

- Cons

- 1641 TPL RTS will have to be modified when hosting new TPSs

Discussion