Draft Need

STAM Need:

- A standardized method is needed to coordinate component access topologies, interface constraints, and other dependencies at the board and system level in order to be able to effectively leverage the existing and future component level standards. Thus, a new supervisory standard is required to define the coordination and dependencies of instruments as well as configuration, management, and application of vector based testing at the board and system levels. For example, IEEE 1687 and IEEE 1149.1-2013 provide methods for describing each of the instrument interfaces on a per component basis, but do not provide the contextual prerequisites for the dependence on each instrument configuration and/or aggregation of multiple instruments for the overall board and/or system maintenance operations. Further, many components only support non-JTAG interfaces (e.g., I2C or SPI) to their instrumentation registers. This standard will provide a means to utilize the pin level access provided by other standards.

- Already know this doesn't read well; probably too wordy.

Draft Need

STAM Need:

- o No real standard that captures aggregation of standards and management/coordination of such standards from a board or system test perspective
- o C/ATLAS provides common instrument interfaces, but no coordination
- o The standards at the device level are many and diverse regarding feature sets
- o STAM provides how to coordinate instruments and access them for the tooling. User needs to be able to tell the tool what they want to do with these instruments (the application use case)
- o Common denominator of device standards is test coverage (DC vs. AC vs. HS vs. RF)
- o Raise awareness of feature sets that we need to use for better resolution of diagnostics
- o Need to be able to resolve which subsystem is the location of root cause of failure as diagnostics (Single Field Replaceable Unit – FRU). Need to eliminate ambiguity of more than one subsystem identified. However, that is the purpose of the test application of which STAM provides access to sub-system to obtain better resolution of information to make a better decision. NEED TO HELP IMPROVE DIAGNOSTICS!
- o We have access to interface to device on the board, but not able to go down to the level we need to access in the device from the board to get the coverage we want.

Draft Need

STAM Need:
- IEEE1687 does not provide management between chip to chip at board level; only inside the chip (making standards more accessible to the board level)
- Need to know dependencies required to provide the access
- Need to know the constraints required on device pin interfaces for board/system applications
- STAM becomes the glue bridging the individual standards so they become more than the sum of their parts
- STAM enables an application to take place, whereas the leveraged standards are more about how you bring the data backwards and forwards

Initial collation of Need comments

- We should be looking to utilise any test features that exist within COTS items

- We need better tools, but that requires that the tools can "see" the features that are available

- Leveraging the interface standards is not the only way to do this

- (I'm just copying the following directly from Brad's post as I couldn't see a better way of incorporating it here)
  - *SJTAG is intended to improve the ability to test, diagnose and provide prognostic health information about systems.*
    - *(Analyze from top down in decomposition is necessary to be able to know what has to be exposed. How someone implements it is less important if it is clearly documented and usable. Testablilty "flow down" may be outside of SJTAG scope : Testability Framework Requirements. Available Testability "flow up" is what is advertised from the bottom up: Availability of Testability Features.)*
  - A standardized method is needed to coordinate
    - *(coordinate - exposure of underlying test capabilities that might exist?) (everyone puts testability at their level and don't usually plan for use at a higher level) (Documentation of what is available at each level is key.)*
  - ~~component~~
    - *(component could relate to discretes and not what we want)*
  - access topologies,
    - *(Board level BIST is more than a component access topology.)*
  - interface constraints, and other dependencies at the board and system level
    - *(Should really focus on system and sub-systems, which includes boards.)*
  - in order to be able to effectively leverage the existing and future component level standards. Thus, a new supervisory standard is required to define the coordination and dependencies of instruments as well as configuration, management, and application of vector based testing at the board and system levels.
    - *(The higher up you go in the hierarchy, the more you morph into functional testing.) (Downloading code into modules and executing them is also part of this infrastructure that is needed.)*

- Specific interfaces are not really broad enough for the Needs statement

- This standard recognizes the need for some form of standardized measurement of test coverage and quality of test, but this standardization effort does not attempt to address that need (Additional comment: As this, or words to this effect, describe an *exclusion* from the standard, it *could* become part of the stated Scope instead of the Need)

- Should be inclusive of diverse Use Cases (and not preclude any), but should they be detailed in the PAR?