



Standard development for System Test Access Management

2018 Nordic Test Forum

Outline

- System definition
- STAM: Need, Purpose, and Scope
- Standard Development Timeline

STAM: System Test Access Management

System = an organized collection
of components or assemblies that are
designed to operate together
to perform one or more tasks or functions.

STAM standard project

Prime Directive:

Don't impose (many) new requirements on sub-system designs.

Instead, leverage existing interfaces and protocols.

Standards and Interfaces

- IEEE 1149.1 (JTAG), 1149.7, 1687 (iJTAG)
- SPI, I²C, USB, ...
- IEEE P1838, P1687.1, P1687.2
- IEEE 1856 (prognostics)
- 6LowPAN, ZigBee, Z-Wave, Bluetooth/BLE, ...

STAM standard project

System Test Access Management

- **NEED:** Standards exist to manage access at device level, but access from board or system level is currently *ad hoc*.

STAM standard project

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STAM standard project

System Test Access Management

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- **PURPOSE:** Leverage existing standards for seamless integration of component access topologies, interface constraints, and other dependencies.
- **SCOPE:** Behavioral (not structural) descriptions and methods

Timeline for SJTAG: STAM, ...

*Regular meetings
to identify
problems, needs,
requirements,
analyze existing
standards, etc.*

2005: SJTAG created, release of initial SJTAG White Paper

2006: Survey SJTAG members

2009: Survey user & industry experts

2017-Q3: STAM Study Group created

2018-Q3: STAM PAR submitted

2018-Q4 [planned]: Form IEEE TTSC sponsored Standard Working Group

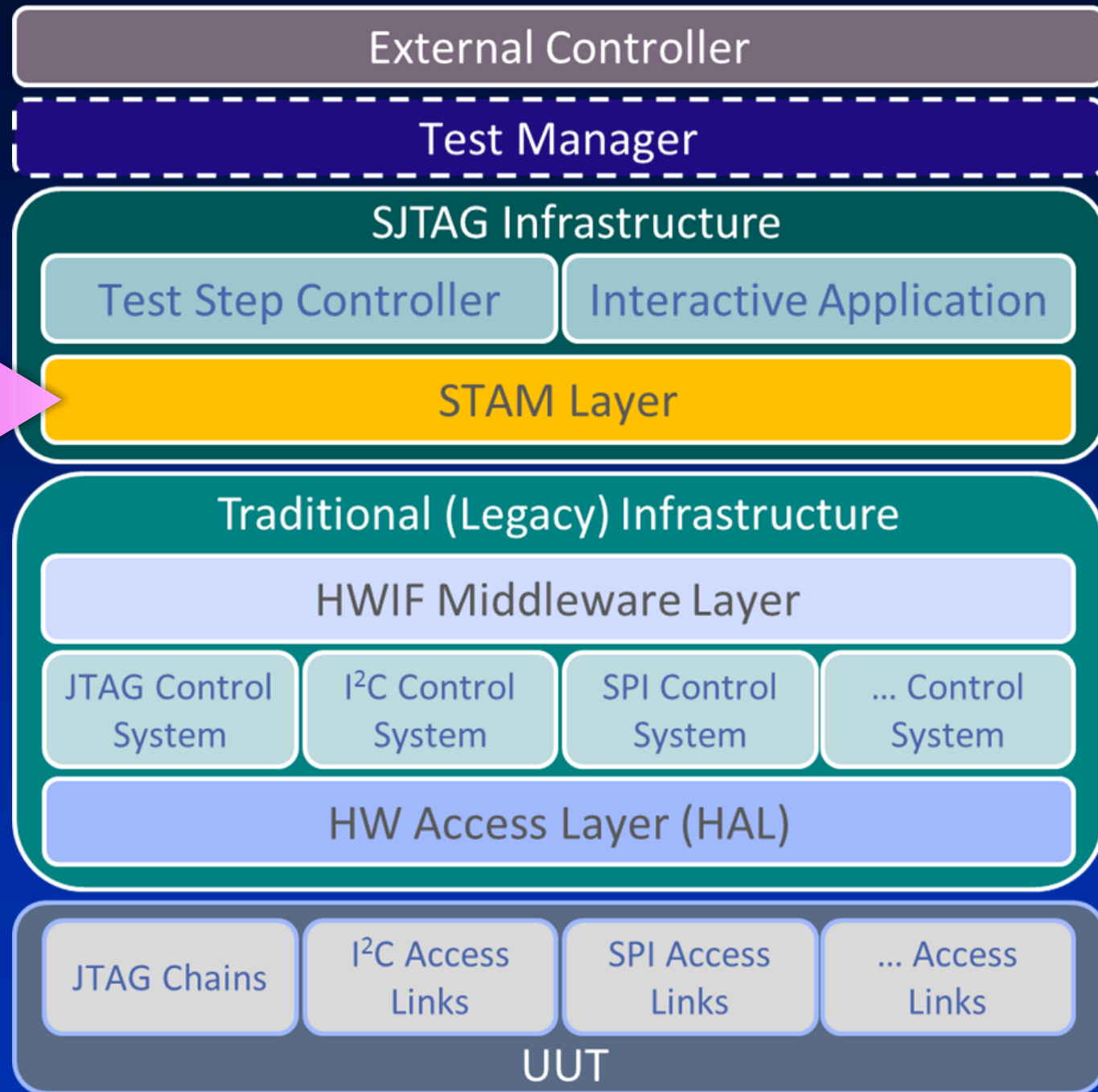
*develop one
or more
standards
documents*

2022 [planned]: Initial version of a

Standard for System Test Access Management

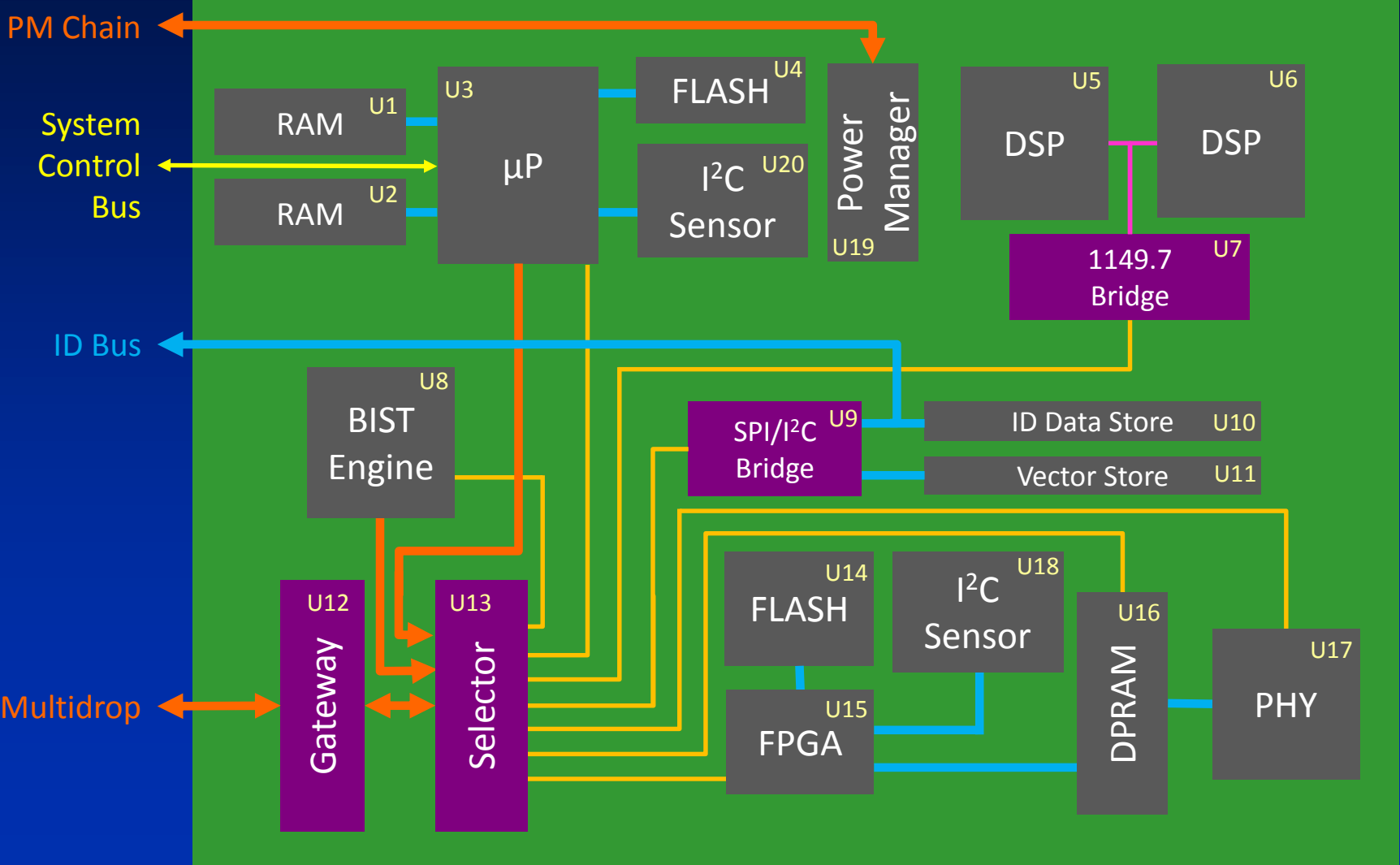
202x: Develop follow-on standard(s)

SJTAG / STAM stack

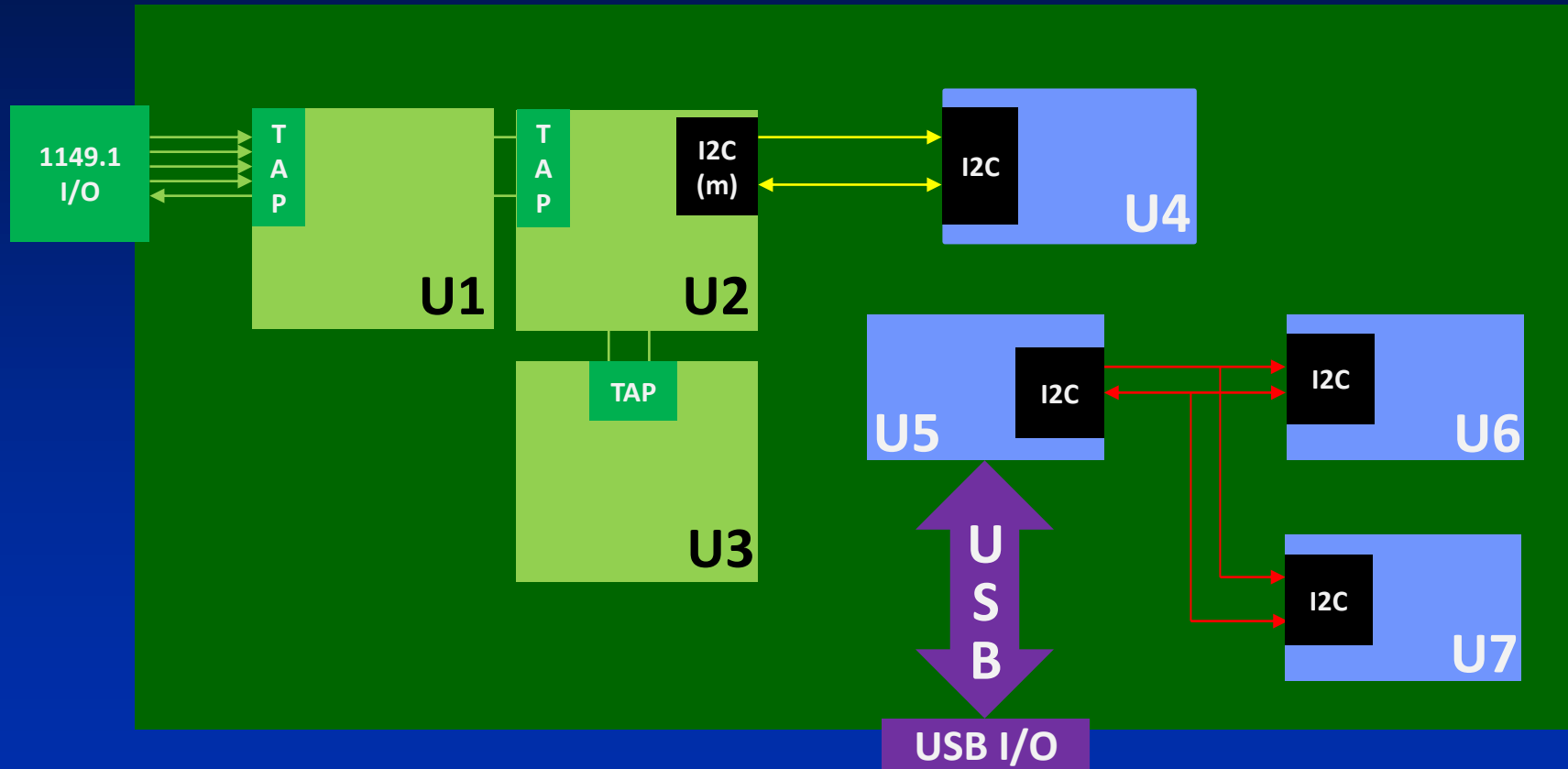


Illustrative SJTAG Infrastructure

- JTAG "Master"
- "Local" chain
- 1149.7 network
- Misc. buses



Board test use model: JTAG + I2C



Conclusion

- SJTAG is a huge problem space
- STAM will be addressing issues related to managing test access at the board and system level
- Join the STAM Working Group,
or follow progress on www.sjtag.org