FCC-FDA Wireless Test Beds Workshop

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1. Overview
2. Specifications
3. Anatomy of a Interoperability

Overview

- Currently wireless interference and co-existence testing
  - Prescribed programs such as WFA/CTIA Converged Wireless Group
  - Independent studies have been conducted such as
    - Bluetooth and Wi-Fi in the 2.4MHz band for interference
    - Ofcom Award of the 2.3 and 3.4 GHz spectrum bands: Update on the coexistence of 2.3 GHz LTE with Wi-Fi in the 2400 to 2483.5 MHz range and other coexistence issues – Dec. 3, 2014
    - LTE band 40 desensitization of Wi-Fi® devices - Technical note, Steve Shearer, Wi-Fi Alliance, October 2014
- Formal interoperability and certification programs should be sponsored by leading authorities such as FDA
  - Continua has a good model but this should be expanded to be scalable

Specifications

- Not as much co-existence testing as in the Other segment
  - ISO/IEEE 11703 Personal Health Data (PHD)
  - 802.15.6 Wireless Body Area Network
  - C63.27
- More co-existence testing in the Other segments
  - Multiple Wi-Fi 802.11 standards
  - 802.15.a Bluetooth vs. Wi-Fi
  - 802.15.4 referred to as Zigbee

Anatomy of Interoperability (1 of 4)

- **FCC mHealth Task Force Guidelines note interoperability needed**

- **The benefits of interoperability**
  - Interoperability means that:
    - Users have a much greater choice of products
    - Users trust their device will operate with another if each has been certified
- Interoperability is important in the success of new technologies,
- Market demand has ensured that interoperability holds a prominent position in standardization.

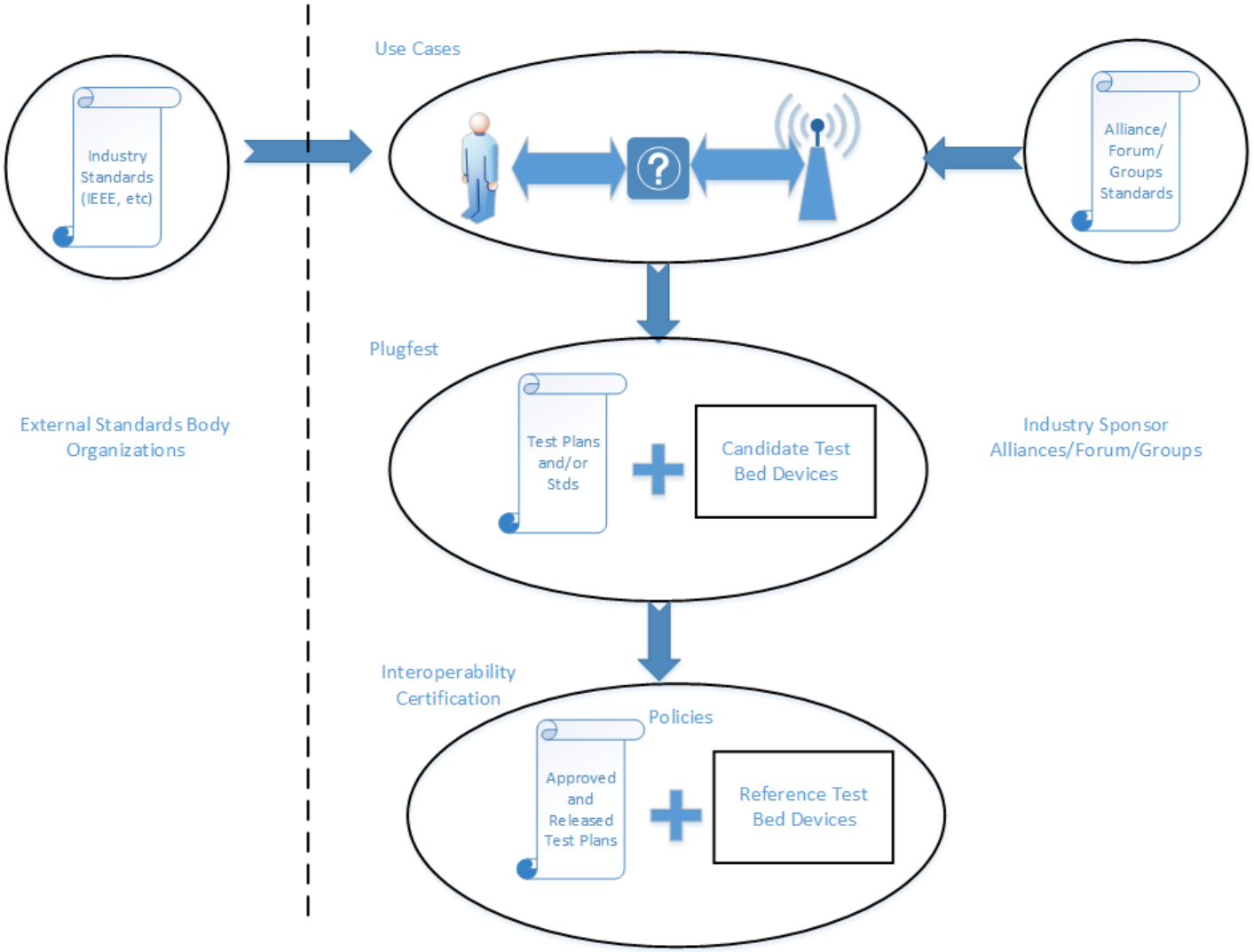
Anatomy of Interoperability (2 of 4)

- **The role of standards in achieving interoperability**
- One of the key motives for the development of standards is to facilitate interoperability between products in a multi-vendor, multi-network and multi-service environment.
  - Complex products and systems are often based on multiple standards from several standards-making organizations,
- In addition, standards themselves need to be designed and tested to ensure that products and services complying with them do indeed achieve interoperability.
- Standards do not guarantee interoperability
  - Vendor specific implementations can differ but still be in spec
  - Optional features may be excluded
  - OS platforms may influence interoperability beyond ODM levels

Anatomy of Interoperability (3 of 4)

- **The role of testing in interoperability**
- Testing of products and systems to verify their interoperability is critical to their
- A **standardized approach to testing** is essential if the results are to be trusted.
  - Plugfest is an example of this
- This requires a prescribed industry **support Interoperability and Certification Program**

Anatomy of Interoperability (4 of 4)



THANK YOU

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