TC 124 Workshop

Data Security in Wearable Devices

PWI 124-12

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Background and Rationale

- Device Diversity: Smartwatches, fitness bracelets, data glasses, connected shoes, smart clothes, gloves and many more…..the list is growing rapidly

- Wearables are booming.

- The demand is huge and so is the selection.

- These devices promise more motivation,

- A better overview of performance.

- Large amount of Data such as:

    - heart rate, daily steps, calories burned, location, route data are recorded…..

That's a lot of sensitive information. This is precisely why this proposal for data security for wearables is being discussed here

Why do we need this standard?

Wearable devices, including smartwatches, fitness trackers, Shoes, sensors, and may more have become ubiquitous in modern life. These devices collect a vast array of personal and sensitive data, necessitating robust security measures to protect user privacy and ensure data integrity.
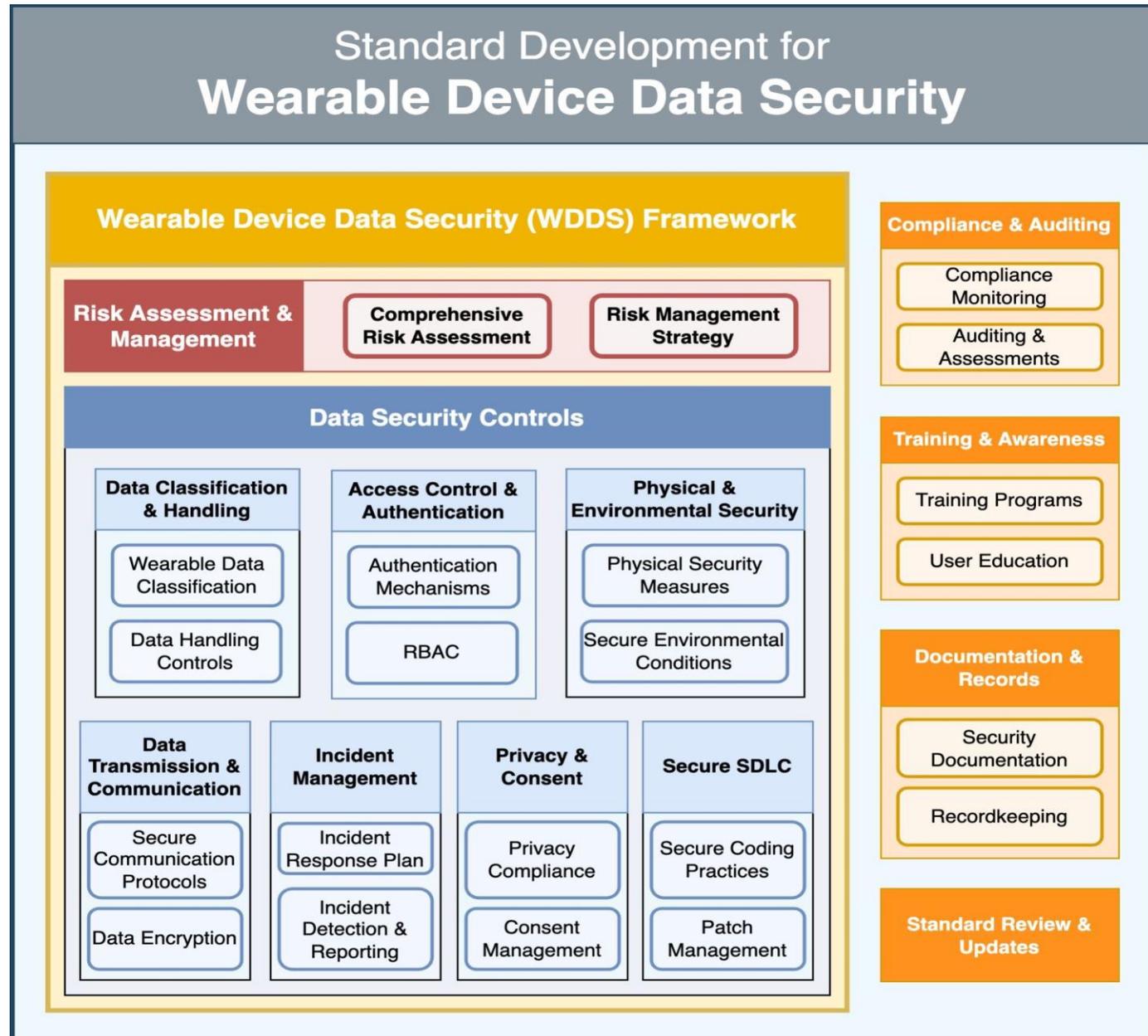
PWI 124-12 : Data Security in Wearables Devices

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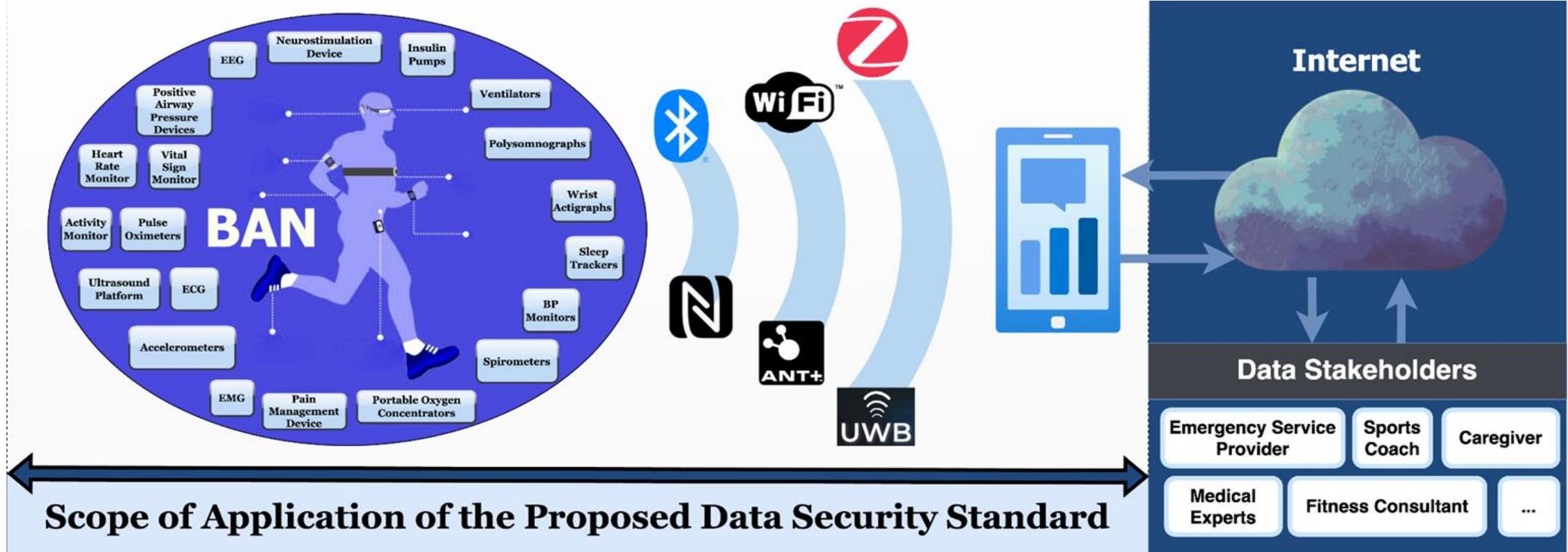
Scope

Key Areas to be Covered

Need of Data Security in Wearables

Applicability

- Types of Wearable Devices
- Types of Networks for these devices
  - Risk Assessment and Management
  - Classification and Handling
  - Access Control
  - Data Encryption
  - Data Transmission and Communication
  - Incident Management
  - Privacy and Consent
  - Interoperability
  - Secure Development Life Cycle
  - Monitoring and Auditing

PWI 124-12: Data Security in Wearable Devices – Test Methods

To ensure the effectiveness of the data security standard for wearable devices, a comprehensive set of test methods is necessary. These methods will validate the security measures implemented across various aspects of wearable devices, from data encryption to incident management.

General Testing Guidelines: Set up a controlled environment that simulates real-world usage scenarios for the wearable devices.

Testing Tools: Utilize industry-standard tools and software for security testing.

Documentation: Maintain detailed documentation of test procedures, results, and any issues identified. Data Encryption Testing

Data at Rest

Data in Transit

PWI 124-12: Data Security in Wearable Devices – Test Methods

- **Access Control Testing**

- **Authorization Procedures**

- **User Access Management**

- **Device Access Control**

- **Data Handling and Minimization Testing**

- **Data Minimization**

- **Secure Data Handling**

- **Incident Management Testing**

- **Incident Response Plan**

- **Reporting and Notification Procedures**

- **Recovery and Remediation**

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- **Privacy and Consent Testing**

- **Data Consent Mechanisms**

- **Anonymization and Pseudonymization**

- **User Control over Data**

- **Interoperability Testing**

- **Compatibility Testing**

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