“Wearables” Standards

Presentation to IEEE 802
Standards Executive Committee
March 9, 1998

Dick Braley, Acting Chairman
“Wearables” Standards Ad Hoc Committee

• Purpose of Presentation/Definition of “Wearables”
• History of “Wearables” Standards
• Potential Areas for Standardization
• Status and Directions
• Questions
“Wearables” Standards

• Purpose of Presentation: To encourage development of standards for “Wearables”, and solicit IEEE 802 support to develop the standards. (Form SG).

• “Wearables”: Computing devices, networking devices, software and peripherals - worn or carried by individuals - that will enhance their ability to perform productive work. (Unobtrusive).

War of the Cyborgs?
**History of “Wearables” Standards**

- June, 1997: Request to IEEE for consideration of Wearables Standards development. Permission to proceed as Ad Hoc Committee within PASC.
- Three meetings held since then: July, December and January. About 35 companies and academic institutions participated.
- Defined potential areas for standardization
- IEEE 802 most appropriate for PAN

**“Wearables” Standards: Potential Areas for Standardization**

- Personal Area Networks (PAN’s)
- “Wearable Computing” and Interfaces
- “Wearables” System Architectures
- Nomadicity
- Humionics
“Wearables” Standards:
Status and Directions

- **Ad Hoc Committee Recommendations:**
  - Select most critical standards area to focus on
  - PAN should be first area to consider
  - IEEE 802.11 most appropriate home for PAN

- **Ad Hoc Committee Request:**
  - Form PAN Study Group under 802.11

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**LAN Standards, 802**

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OSI RM Model
We want to form a Study Group in IEEE to review your PHYs & MAC against PAN requirements

Functional Requirements

- Mobility: 0-10mph
- Power Management: Very Low current consumption
- Range: 0-10 meters
- Speed: 19.2 - 100Kbps (actual)
- Small Size e.g., ~.5 cubic inches no antenna
- Low Cost: i.e., relative to target device
- Should allow overlap of multiple networks in the same area
- Networking support for a minimum of sixteen devices