

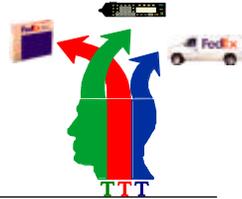
March 1998

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“Wearables” Standards

*Presentation to IEEE 802
Standards Executive Committee
March 9, 1998*

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



Submission

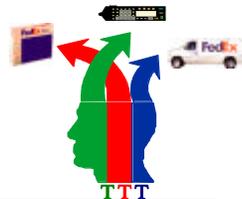
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“Wearables” Standards

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



Submission

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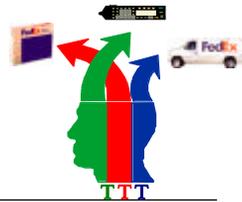
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“Wearables” Standards

- **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).

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War of the Cyborgs?



Submission

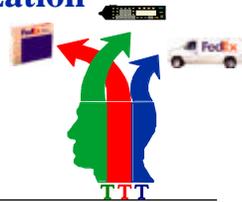
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History of “Wearables” Standards

- **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**



Submission

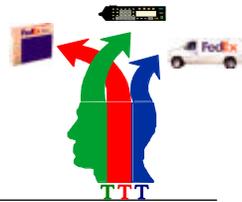
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“Wearables” Standards : Potential Areas for Standardization

- **Personal Area Networks (PAN’s)**
- **“Wearable Computing” and Interfaces**
- **“Wearables” System Architectures**
- **Nomadcity**
- **Humionics**



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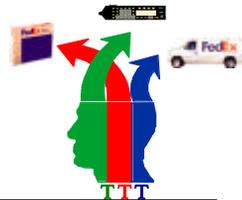
“Wearables” Standards : Status and Directions

• 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



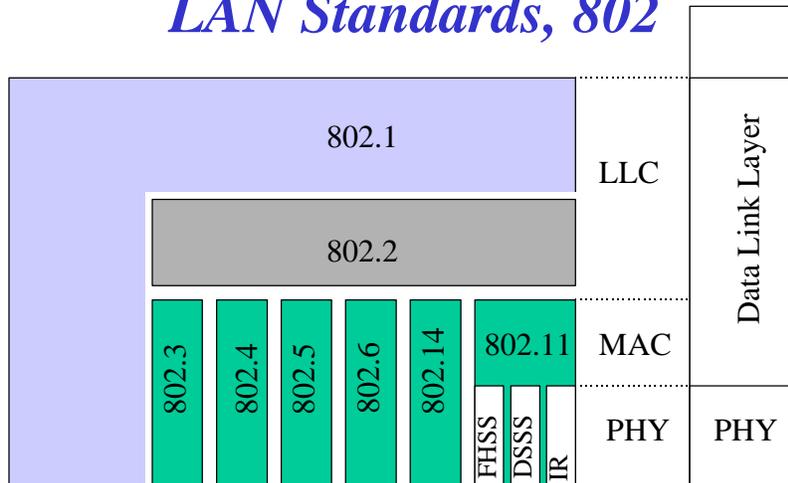
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LAN Standards, 802



OSI RM Model

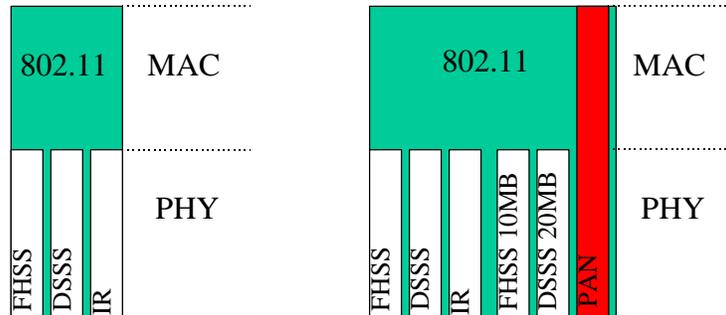
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We want to form a Study Group in IEEE to review your PHYs & MAC against PAN requirements



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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**

Submission

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