Advances in Wireless Technologies

Interop Las Vegas

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President, octoScope

Fanny Mlinarsky

- President of octoScope, consulting company focusing on
  - RF and wireless design
  - Network or device architecture
  - Performance verification
  - Product or architecture advocacy

- Founder and Chief Technology Officer, Azimuth Systems, leading wireless test platform for Wi-Fi and WiMAX test (10/01 – 10/06)

- R&D Manager, General Manager, Agilent Technologies for the WireScope handheld network certification and monitoring products (10/98 – 10/01)

- Founder of TGT, 802.11 committee defining test methods and metrics

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Azimuth Test Platform

Agilent WireScope

ITU-T Framework

Pervasive connectivity
WLAN - WMAN - WWAN

ITU-T – United Nations telecommunications standards organization

Accepts detailed standards contributions from 3GPP, IEEE and other groups

IEEE 802.11 – WLAN (wireless local area network)

IEEE 802.16 – WMAN (wireless metropolitan area network)

3GPP – WWAN (wireless wide area network, cellular)

ITU International Mobile Telecommunications

- ❑ **IMT-2000**
  - ➢ Global standard for third generation (3G) wireless communications
  - ➢ Provides a framework for worldwide wireless access by linking the diverse systems of terrestrial and satellite based networks.
  - ➢ Data rate limit is approximately 30 Mbps
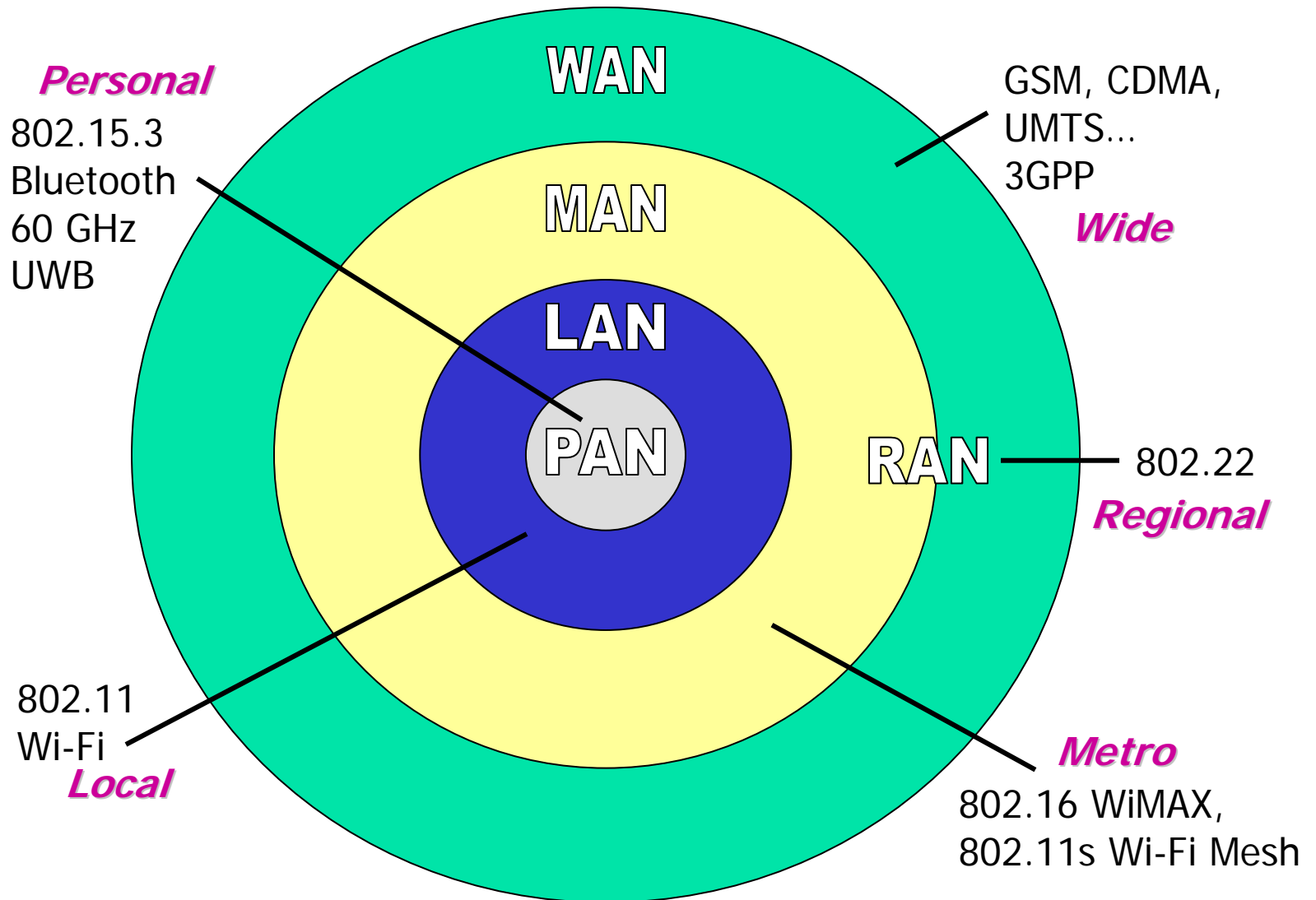 - ➢ Detailed specifications contributed by 3GPP, 3GPP2, ETSI and others

- ❑ **IMT-Advanced**
  - ➢ New generation framework for mobile communication systems beyond IMT-2000 with deployment around 2010 to 2015
  - ➢ Data rates to reach around 100 Mbps for high mobility and 1 Gbps for nomadic networks (i.e. WLANs)
  - ➢ IEEE 802.16m working to define the high mobility interface
  - ➢ IEEE 802.11 VHT SG (very high throughput study group) working to define the nomadic interface

Wireless Communications

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WAN

MAN

LAN

PAN

RAN

Personal

802.15.3
Bluetooth
60 GHz
UWB

GSM, CDMA,
UMTS...
3GPP

Wide

802.22

Regional

802.11
Wi-Fi
Local

Metro

802.16 WiMAX,
802.11s Wi-Fi Mesh

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Panelists

- **John Santhoff**, Founder and CTO, Pulse~LINK
  - Ultra wideband (UWB)

- **Abbie Mathew**, VP BD, NewLANs
  - 60 GHz video transmission

- **Stephen Rayment**, CTO, BelAir Networks
  - Wireless mesh – metro applications

- **Mathilde Benveniste**, Research Scientist, Avaya Labs
  - QoS in wireless mesh networks