International Telecommunication Union

Session 2: Latest developments in Home Network Transport Technologies

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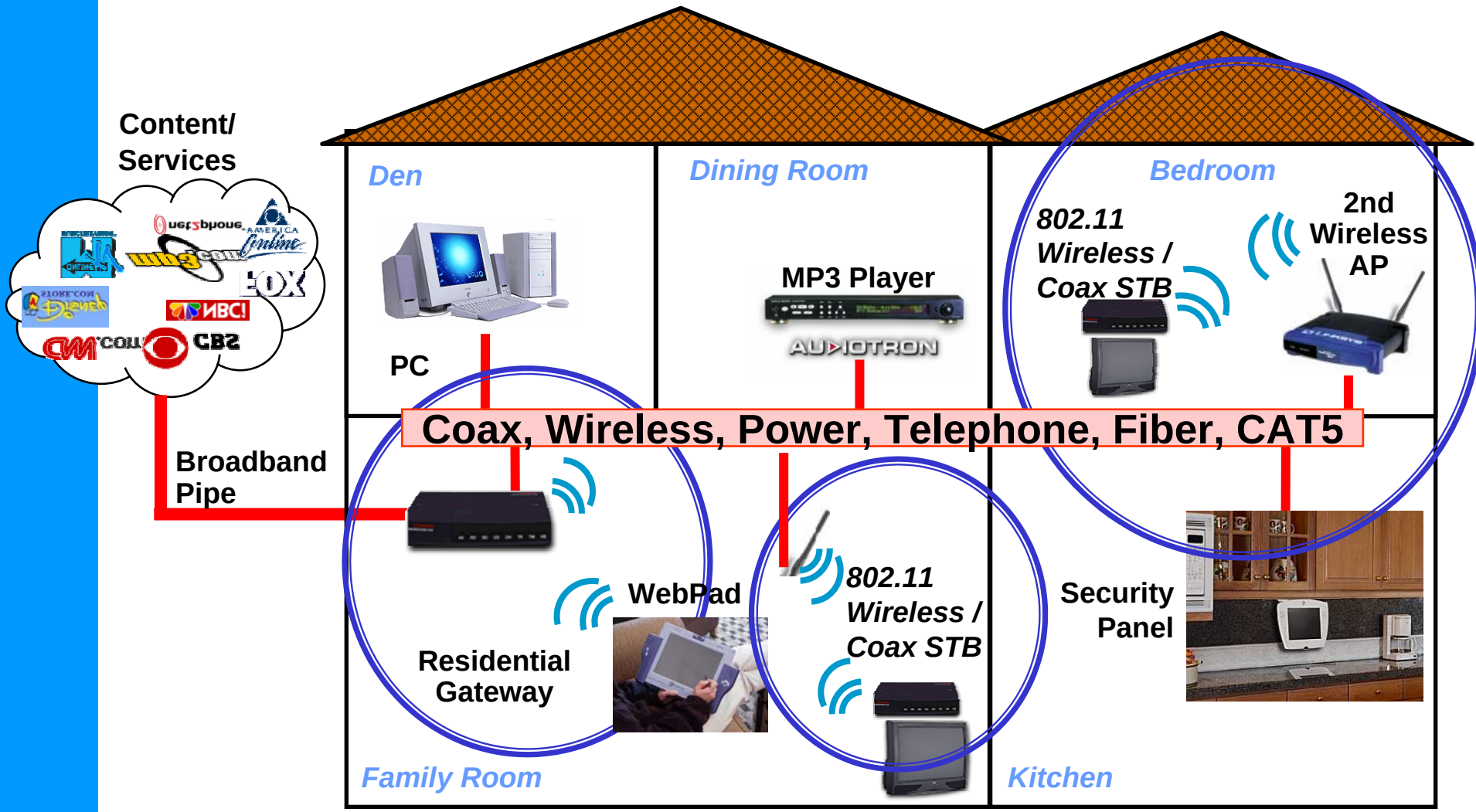

Home Networking Issues & Goals

- What do users want? Good Quality Applications
  - Look and sound good.
  - They don't care about the specific home networking technology
  - They don't want to be an IT network manager

- What must engineers do? Solve the two applications that need special treatment
  - Video – large throughput
  - Voice (Telephony) – low latency and jitter

Many Home Network Technologies

- IP-based
  - 802.11 wireless
  - 802.11 over Coax
  - HPNA over Coax
  - MoCA e.g. Entropic, Tiarus
  - Ethernet (1000BaseT)
  - HomePlug
  - Sync-E (Synchronous Ethernet) (proposed)
- Non-IP-based
  - Channel 3/4 Analog RF Modulation
  - Digital Video Over QAM
  - 1394b (4.5 meter dedicated cables)
  - 1394c (proposed 1394 over 100m CAT5 cabling using 1000BaseT)

Session 2 Speakers

- Wireless and Coax Transport
  Mr S. Palm, Broadcom, USA
- Home Phoneline Transport
  Mr K. Minami, E-Connections Ltd., Japan
- Optical and other Transport
  Mr M. Shikada, NEC, Japan
- Activities of ALICE forum and HII Wiring Standard
  Mr K. Yamamoto, Matsushita Electric, Japan

Home Networking Characteristics

	PHY/MAC Standard	Speed	New Wiring?	QoS
Ethernet	IEEE 802.3	10 Mb/s 100 MB/s	Yes	No
WiFi / 802.11 over Coax	IEEE 802.11b IEEE 802.11g	3-5 Mb/s 10-20 Mb/s	No	Yes - WME
Phoneline / Coax Networking	HomePNA 2.0 HomePNA 3.0	10-20 Mb/s 20-40-60 Mb/s	No	Yes - 1999
Packet over Coax	None (Proprietary)	100 Mb/s	No	?