

OVERVIEW OF THE BRAN PROJECT

Jan Boer, Lucent Technologies, July 1997

ETSI BRAN Initiative

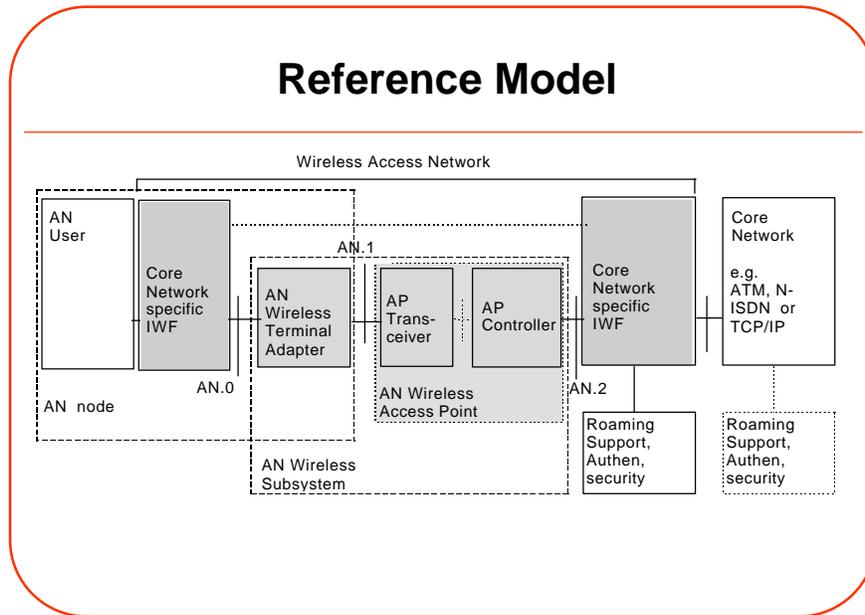
- ***Project created in March 1997***
- ***Merges ETSI's HIPERLAN expertise (RES 10) and Fixed Access expertise (TM4)***
- ***Leverages ACTS R&D programmes (e.g. Magic WAND, MEDIAN, SAMBA)***
- ***Future oriented***
 - conventional RLL and Narrowband Fixed Access are excluded
- ***Broad support of the ETSI membership***

The BRAN Project

- **Specifications for Broadband Radio Fixed Access and Cordless Premises Access systems**
- **From 25 Mb/s to 155 Mb/s**
- **From “50 m to 15 km” range**
- **User data rates from “16K to 16M”**
- **Core Network Independent**
 - POTS, (B)-ISDDN, ATM, Frame Relay, TCP/IP supported via interworking specifications

The HIPERLAN Family

HIPERLAN Type 1 5 GHz	HIPERLAN Type 2 5 GHz	HIPERLAN Type 3 5 GHz	HIPERLAN Type 4 17 GHz
Wireless LAN MAC	Wireless ATM DLC	Wireless RA DLC	Wireless ICN DLC
Wireless LAN PHY 20 + Mb/sec	Wireless ATM PHY 20 + Mb/sec	Wireless RA PHY 20 + Mb/sec	Wireless ICN PHY 150 + Mb/sec



- ### BRAN Organization
- **Working Group 1**
 - *Requirements & Architectures*
 - **Working Group 2**
 - *Spectrum and Regulatory Matters*
 - **Working Group 3**
 - *Access Network Specifications*
 - **Working Group 4**
 - *Interworking Specifications*
 - **Liaisons with ATMForum, IEEE, ITU-R**

Work Programme

- **Technical Reports**
 - *Requirements and Architectures - WG 1*
 - *Broadband Technology Inventory - WG 3*
 - *October 1997*
- **Radio Access Network Specifications**
 - *based on TRs*
 - *limited set of functional elements*
 - *service profiles*
 - *certification requirements*
 - *June 1999*

Work Programme - 2

- **Interworking Specifications - WG4**
 - *one per Core Network*
 - *priority for ATM - in cooperation with ATMForum*
 - *June 1999*
- **Spectrum and Regulatory Matters - WG2**
 - *target is world-wide allocations for licensed and unlicensed systems*
 - *in cooperation with CEPT, WRC etc.*

BRAN meeting #3

- ***In WG3 working on technology inventory***
 - +/- 30 paper were presented
 - PHY
 - OFDM (o.a. Magic Wand)
 - single carrier (NEC)
 - ramp (Thompson)
 - MAC/DLC

BRAN - 802.11 convergence

- ***Both ETSI-BRAN and IEEE develop standards for wireless access***
 - datarates 20-40 Mbit/s
 - 5 GHz band
- ***Investigate possibilities for convergence***

BRAN - 802.11 convergence cont'

- ***Why is convergence important***
 - ETSI is standard development for Europe
 - All 5GHz equipment in Europe must conform to ETSI standards
 - 802(.11) is intended to be world wide
 - Standards not (mutually) accepted by ETSI and IEEE will be exluded from certain areas
 - Worldwide standards will catalyze the market

Possible convergence scenario

- **define common Radio PHY, based on same physical characteristics, suitable for adoption by standardization bodies**
 - could eliminate differences in certification requirements
 - provide benefits such as scale and product costs
 - could provide a common basis for world-wide standard
 - cooperation could extent to include MAC/DLC

BRAN / IEEE802.11 liaison

- ***Certain 802.11 members attend BRAN***
 - helps to put cooperation into effect
- ***Jan Boer attends both BRAN and IEEE802.11 meetings***
 - appointed by BRAN > IEEE liaison
 - available as IEEE > BRAN liaison