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ETSI BRAN HIPERMAN Liaison Report

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Base Document:

Purpose:

Inform IEEE 802.16 about the HIPERMAN progress

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# ETSI BRAN HIPERMAN

## Report

Marianna Goldhammer  
IEEE 802.16 Liaison Officer  
to ETSI BRAN HIPERMAN

# HIPERMAN Meeting, October 24-26, 2001

- Main issues:
  - IEEE 802.16 (Sept. 2001) Liaison Letter presentation
  - PHY base line selection
    - Candidates: 802.16a, BWIF, DVB-RCT
  - MAC base line selection
    - Candidates: 802.16 & 802.16a, BWIF
  - New Work Item, FWA Spectrum in 5GHz

# PHY base-line selection - 1

- I had:
  - written the document BRAN25d040 - HIPERMAN PHY – Base line proposal: 802.16aPHY
    - Both OFDM and Single Carrier modes were proposed
    - The document contains the PHY conformity assessment
      - **The main problem was the lack of inter-operability between the two PHY incompatible modes and the existence of too many OFDM modes**
  - presented the document, with a focus on the few non-conformant points
- BWIF – Jamal Hamdani, Moseley – has presented the non-conformance points
- DVB-RCT – Zion Hadad, Runcom – has shortly presented the DVB-RCT

## PHY base-line selection - 2

- A table with relevant PHY technical characteristics was agreed, having as first point the multi-carrier vs. single carrier issue
- A technical discussion followed
- The participating companies indicated their support for different base-lines, for each technical issue in the table
- The multi-carrier has been supported by 90% of the participating companies.

## PHY base-line selection - 3

- The HIPERMAN majority has opted for the selection of:
  - OFDM PHY from IEEE 802.16a document IEEE P802.16ab-01/01r2
  - BWIF chapter referring to diversity, from Radio Frequency Interface Specification, SP-WRFI-000829, Version 1.0, as was submitted to ETSI-HIPERMAN
- Due to lack of consensus, a formal weighted voting will take place in the next BRAN plenary
- 802.16 OFDM mode is the HIPERMAN PHY working assumption

# MAC base-line selection

- I had:
  - written the document BRAN25d041 - HIPERMAN DLC – Base line proposal: 802.16 MAC
- The BWIF agreed that 802.16 has an enhanced MAC, its complexity coming to support the PHY demands
- Consensus has been quickly reached to adopt the IEEE 802.16MAC as HIPERMAN DLC base line, based on:
  - MAC relevant chapters from the documents IEEE P802.16/D5-2001 and P802.16ab-01/01r2.

# New Work Item

- ¥ Title: Licence-exempt HIPERMAN on Band C (5,725-5,875 GHz), feasibility and initial sharing study
- ¥ Scope: Create Functional Requirements for licence-exempt FWA based on existing HIPERMAN documents. Include a basic sharing and interference study to investigate feasibility of licence exempt FWA in Band C (5,725-5,875 GHz). Propose terms for this sharing and deliver a generalised System Reference Document for further sharing and co-existence studies. Liaison with TM4 on co-existence studies. Liaison with ERM-RM on spectrum issues.
- ¥ Rapporteur: Asimakis Kokkos, Nokia
- ¥ Due date: 6/02



# Common drafting of a single worldwide interoperable 2-11GHz standard?

- Pros:
  - Two standards will confuse the market
- Contras:
  - delays are expected
  - HIPERMAN just started the process
- Problems:
  - ETSI-IEEE-SA “terms of reference” up-date
  - Provide the IEEE 802.16 source documents in order to edit the actual base-lines (the existing document organization is not suitable for HIPERMAN)

## Next Meeting

- The BRAN#26 will be held on December 04-07, 2001 in Sophia Antipolis - France
- A final decision on the PHY modulation scheme for HiperMAN is scheduled
- PHY and MAC contributions are expected, relative to the PHY and DLC base-lines
- A synchronization process shall function between 802.16 and HIPERMAN, the Liaison Officer (same person for both directions) being responsible to transmit the meeting-to-meeting modifications.