

Proposal by Roberto Macchi

Dear Jose and Giulio,

I had a chat with Marianna on the BRAN contribution (BRAN39d058r1) to 802.16 for further contributing to WP9B for the finalisation of PDNRF.BWA. I understood that the document has been already submitted to 802.16 and you should discuss it at next meeting.

Unfortunately when BRAN finalised the document, I was engaged in TM4 meeting and I could not point out few improvement for clarification (in particular on the pictures 1 and 2 showing correspondences between IEEE and ETSI standards).

Attached is a file where I suggest:

1) Figures 1 and 2 are a bit confusing showing both HA and HM, while they are specifically intended for "interoperability below 11 GHz" and "common elements above 11 GHz"; then I propose to edit them as in the attached document where I removed all HA in figure 1 and all HM in figure 2.

2) In Figure 2, I was also puzzled about the contradictory arrows showing FEC (is it common or not and to which extent??). In the attached document, besides removing the part relevant to HM, I have deleted the HA link with IEEE OFDM FEC because, even if true (and I think not), it is unessential and can cause only confusion unless a better clarification is done.

3) I have proposed few (highlighted) editorial changes in the text mainly in the introduction of Figures, for the same purpose of clarifying them.

I am not expert of 802.16 contributions and technical discussions; therefore be free to consider this comment as you wish, my intention is improving clarity only for simplifying the discussions in WP9B, but I don't have very strong feeling.

Kind regards

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The following text is proposed to be inserted in Preliminary Draft New Recommendation ITU-R F.[9B/BWA], “Radio interface standards for broadband wireless access systems in the fixed service operating below 66 GHz” (Annex 6 to ITU-R Document 9B/83):

FIGURE 1

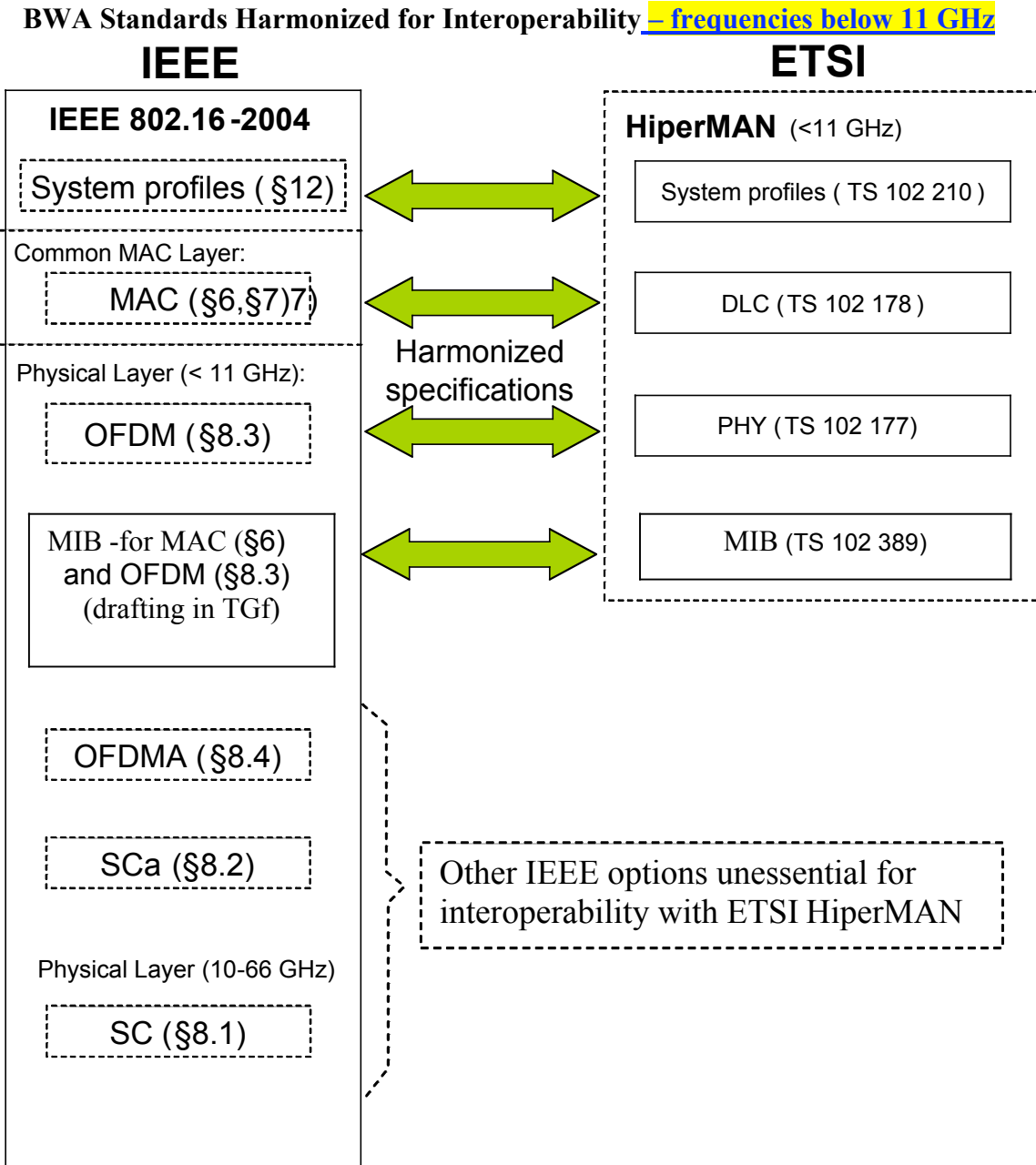
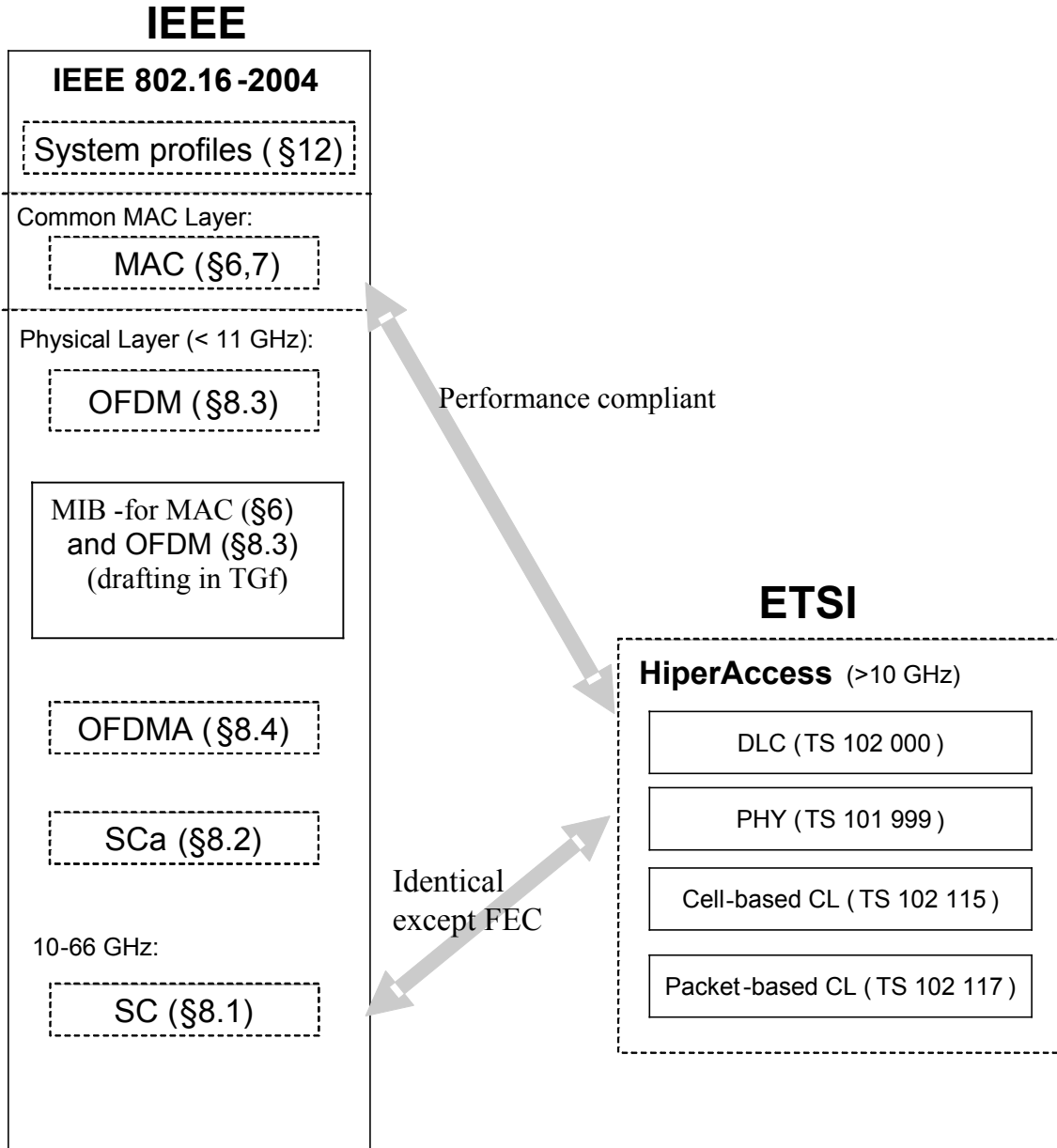


Figure 1 shows the equivalency of the IEEE 802.16-2004 and ETSI HiperMAN and HiperAccess standards for bands below 11 GHz, while Figure 2 shows similarities between the IEEE 802.16-2004 and ETSI HiperACCESS.

Since the standards contain options to fulfill the needs in multiple environments, the first step towards interoperability is the definition of common system profiles. An exception is HiperAccess where system profiles are not needed since the Base Station has full control about the use of optional features on a per terminal basis.

FIGURE 2

BWA Standards common elements – frequencies above 11 GHz



System profiles are sets of features to be used in typical implementation cases. Each profile is assigned an identifier for use in such documents as PICS (???) proforma statements. Features specified in the standard as optional may be listed in a profile as “required” or “conditionally required”. Profiles do not change “mandatory” status if specified in the standard itself. Any feature that is specified in the standard as optional and does not appear in certain profile is optional for the profile, thus the presence or absence of this feature in specific implementation does not affect conformance to the profile and consequent interoperability of terminals. Optional features shall be implemented as specified in the standard.

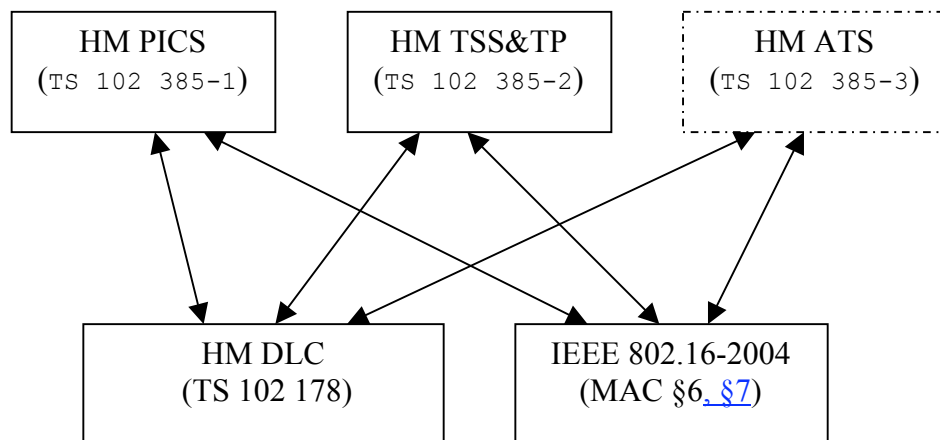
The next steps towards ensuring interoperability are conformance testing and interoperability testing.

- Conformance testing is the act of determining to what extent a single implementation conforms to the individual requirements of its base standard.
- Interoperability testing is the act of determining if end-to-end functionality between (at least) two communicating systems is as required by those base systems' standards.

The next figures 3 and 4 shows the relation between base and test specifications for HiperMAN/IEEE 802.16 and HiperAccess.

FIGURE 23

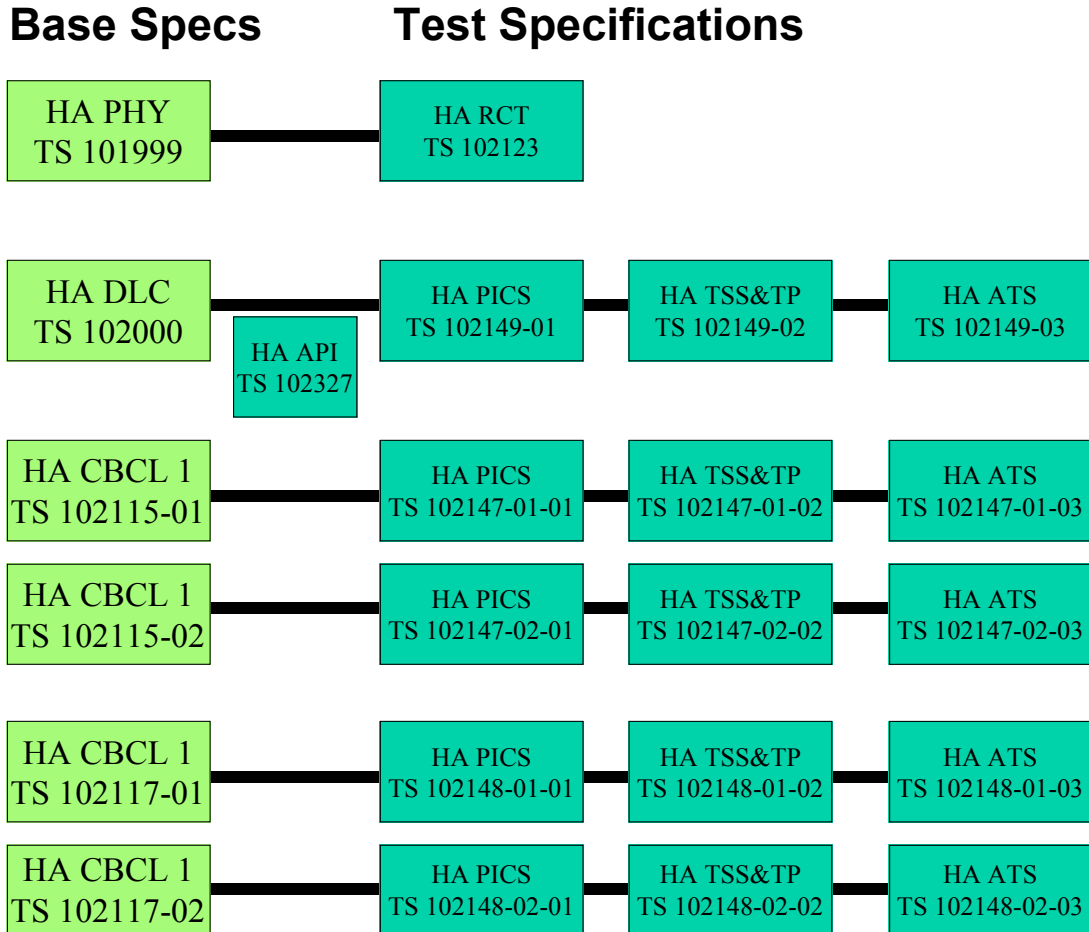
Harmonization of IEEE 802.16/ETSI HiperMAN Standards and Test Specifications



The HiperMAN test specifications refer to both HiperMAN DLC and 802.16 MAC documents.

FIGURE 34

BRAN HiperAccess Standards and Test Specifications



References:

<http://www.wimaxforum.org/tech>

<http://portal.etsi.org/mbs/Testing/testing.asp>

<http://portal.etsi.org/bran>