

TTA EG Liaison Statement to other Evaluation Groups and Proponent

TTA IP-OFDMA Evaluation Group

Background

Under the guideline of Circular Letter LCCE/153, TTA has formed evaluation group (TTA EG) to test, said, IP-OFDMA for the 6th radio interface of IMT-2000. TTA would like to share the progress of evaluation to other groups and proponents and to clarify the questions in the relevant ITU-R Documents and comments provided by the Proponents in the contributions, 8F/1065 and 1079r1. We have some of basic questions to progress IP-OFDMA evaluation and also specific questions related to the proponent's comments in the contributions.

Status

TTA EG had three meetings to discuss the performance of the proposed RTT called IP-OFDMA. It was agreed that TTA EG is to focus on drafting the answers to the questions in the Annex 3 of the Recommendation ITU-R M.1225 with regard to the answers proposed by the ITU-R contributions.

In developing TTA EG's answers, TTA EG has encouraged member's companies to contribute on volunteer basis. The preliminary draft of the Annex 3 of the Recommendation M.1225 has been developed such as attachment. The final target for completion of document is scheduled at 26th April.

Questions to other evaluators and proponent

TTA EG is of thought that the more communications to other evaluators and proponent/submitter of proposed contributions such as 8F/1065 and /1079r1 must facilitate understanding questions

1. Basic Questions

- VoIP evaluation methodology and assumptions

Since the methodology and assumption in the M.1225 has been come up with suitable to IMT-2000 which mainly focused on circuit-switched service, a few things are not perfectly coincident with circuit emulated services over IP. For example, one thing is

that the BER assumption in evaluation is defined but not quite effective to indicate link performance in packet transmission system. Furthermore, this BER requirement could not reflect H-ARQ operation effectively. Thus, TTA would like to ask other evaluation group and proponents how mismatching assumptions can be handled in their evaluations. In addition, there is another type of users producing outage who has realized delay larger than delay bound for VoIP.

To reflect properly, there are appropriate definition for terms to indicate link performance e.g., PER, and need to define outage to reflect delay bound for the VoIP users.

- **Operating frequency**

Many performance numbers are expected to depend on system operating frequency. Since IMT-2000 frequency bands are spread over wide ranges of frequency band, a typical operating frequency band need to be assumed. We would like to ask other evaluators to use the same frequency band as proposed by the proponent.

- **Question in handover analysis**

TTA EG would make sure the validity of HO scenarios applied by the specification IEEE 802.16e 2005. It was pointed out that the further clarification of HO scenarios in the discussion for Corrigendum 2 indicated that the Optimized HO procedure with TEKs update is not valid even though it has been described in the specification of IEEE 802.16e 2006. Therefore, TTA EG are going to exclude this scenario in our analysis. TTA EG would like to know opinions of other EGs and the proponent.

- **Question in Simulation of information capacity**

What target PER is assumed in the proponent's SLS simulation assuming H-ARQ?

2. Detailed Questions on the responses to the Annex 3 of M.1225 from the Proponent

- **Question 1: Question 1:** In the A3.2.2.3.2, the typical value of PAPR has been described. However, it was raised in a TTA EG meeting to indicate that the PAPR should be suggested along with the probability to get the PAPR value. Therefore, TTA EG would like to ask the proponent the expected probability corresponding to the proposed PAPR. e.g.) PAPR value of 12dB with the probability of 1% (or 99%).

- **Question 2:** In the A3.2.4 and 3.6.5, it was described that DL power control as well as UL power control has been provided. However, in the specification IEEE 802.16e 2005 and IEEE 802.16d 2004 and profile document, WiMAX Forum Profile (2006-11 version), any DL power control has not been described. Therefore, TTA EG would like to ask the proponent whether or not DL power control is implementation problem.

- **Question 3:** In the A3.3.1, TTA EG is of different view from the proponent on understanding problem. Even though the proponent focused on the reliability and service recovery ability of voice services, TTA EG understood that the question is asking how the proposed RTT can support the recovery of connection when the connection is corrupted by any reasons such as dropping during HO or an error in encoding MAP information. In this context, the sentence of “Transparent reconnects are provided by the application layer for the voice traffic” in the response of the proponent is not easily understandable. TTA EG would like to ask explaining more details on background behind such answers.

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Attachment

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the Anex 3v01(