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| **itu-old** | INTERNATIONAL TELECOMMUNICATION UNION | | | | | | | COM 15 – LS 332 – E |
| **TELECOMMUNICATION STANDARDIZATION SECTOR**  STUDY PERIOD 2013-2016 | | | | |  | | |
| **English only**  **Original: English** | | |
| **Question(s):** | | 13/15 | | |  | | | |
| **Ref.: TD497/PLEN Annex K** | | | | | | | | |
| **Source:** | | ITU-T Study Group 15 | | | | | | |
| **Title:** | | LS on updates on synchronization solutions applicable to fronthaul | | | | | | |
| **LIAISON STATEMENT** | | | | | | | | |
| **For action to:** | | | | IEEE 802.1 (P802.1CM) | | | | |
| **For comment to:** | | | | - | | | | |
| **For information to:** | | | | - | | | | |
| **Approval:** | | | | ITU-T SG15 meeting (Geneva, 15-26 February 2016) | | | | |
| **Deadline:** | | | | 27 May 2016 | | | | |
| **Contact:** | | | Stefano Ruffini  Rapporteur Q13/15 | | | | Email: [stefano.ruffini@ericsson.com](mailto:stefano.ruffini@ericsson.com) | |
| **Contact:** | | | Silvana Rodrigues  Associate Rapporteur Q13/15 | | | | Email: [silvana.rodrigues@idt.com](mailto:silvana.rodrigues@idt.com) | |
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ITU-T Q13/15 discussed some aspects related to synchronization in fronthaul networks at last SG15 meeting (Geneva, 15-26 February 2016), and would like to share some updates as well as asking for some information on this topic to your group.

Q13/15, after having completed the work on solutions able to meet +/-1.5 us at the output of the End Application (based on specific IEEE 1588 profiles and synchronous Ethernet), is now progressing the work on defining solutions to carry more accurate time synchronization, including cases when meeting a maximum relative phase deviation might be sufficient (the target requirement is still under discussion, values as low as +/- 100 ns have been suggested). This work also includes the definition of an enhanced version of Synchronous Ethernet.

The intention is to complete the work on an enhanced version of Primary Reference Time Clock (ITU-T G.8272.1/Y.1367.1) and an enhanced version of synchronous Ethernet clock (ITU-T G.8262.1/Y.1362.1) by September 2016.

The related network limits will be defined in an updated version of the Recommendation ITU-T G.8271.1/Y.1366.1.

Considering the industry interest in 5G, the group recently agreed to study requirements and applicable solutions to also meet the synchronization requirements in future fronthaul scenarios, including Ethernet-based architectures.

Q13/15 is aware of the current studies carried in the scope of P802.1CM project (relevant information was received by the IEEE 802.1 Liaison Rapporteur at this meeting) and would like to get some updates on the status of your studies, in particular in terms of expected timing requirements and architectures that need to be addressed (e.g. number of hops between the Radio Equipment Controller site and the Remote Radio Units).

Other synchronization-related updates from your group are welcome.

We look forward to continuing our good working relationship with the IEEE 802.1.

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