

Agenda Item: 6.5
Source: Nokia
Title: Transport Network delay issues, request for change
Document for: Decision

1 Discussion

The current version of [1] gives the value of 14 ms for the Transport network delay component TN2-I_{ub} (Media delay). For the component TN3-I_{ub} (Switch delay) the figure is 0 ms. Nokia contribution [2] has been given as the reference for the value of TN2-I_{ub}.

The definitions of both TN2 and TN3 in [1] are currently obscure. It is unclear which of the two components include the delays that have been described in the used reference [2]. These are e.g., PDH and SDH cross-connecting delays, conversions between the technologies, etc. Currently only the propagation delay has been mentioned in [1] in the definition of TN2 Media delay. In the definition of TN3 both cross-connects and switches have been mentioned. Moreover, in general it is unclear in [1] whether the given delay figures in the template are for one-way or for two-way delays.

In [2, Annex 1] an example was given that showed a meshed SDH/PDH transmission network on I_{ub}. This example network would have caused about 11 ms two-way transmission layer delay on I_{ub} interface. A figure of 14 ms was not given anywhere in [2]. It was explicitly stated that the proposed 11 ms did not contain any ATM or AAL layer delays (buffering, ATM and AAL multiplexing, switching, etc.) but only the transmission layer (i.e., "terrestrial Layer 1") delays, involving PDH/SDH cross-connecting. Considering the potential asymmetry of the transmission delay [2, bullet 6], the corresponding one-way delay would have been 11/2 ms + α ms, where $\alpha > 0$ is counting for asymmetry.

2 Proposal

The following proposals are made:

- 1) The transport network delay components and their definitions in [1] are revisited in order to make them clear.
- 2) It is explicitly stated whether the specified delay components in [1] are for one-way or for two-way delay.
- 3) The reference to TSGR3#3(99)313 (TN2-I_{ub}) in the delay budget template of [1] is removed as the contents of the template does not reflect the contents of the reference itself.

3 References

- [1] Italtel: Delay budget template for TSG RAN WG3
[2] TSGR3#3(99)313: Transmission delay considerations, Nokia