Technical Specification Group Services and System Aspects Meeting #23, Phoenix, USA, 15 - 18 March 2004

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3GPP TSG-SA WG2 meeting #38
Atlanta, USA, 16th – 20th February 2004

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Title: ~~[Draft]~~Reply LS on Mapping between ITU-T and 3GPP QoS Classes and Traffic Descriptors

Response to: LS S2-040545 from T1A1 (T1A1/2003-070r1)

Source: 3GPP SA2

To: T1A1, ITU-T SG13

Cc: 3GPP SA, ITU-T SG12

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1. Overall Description:

SA2 thanks T1A1 for their LS T1A1/2003-070r1 on "Mapping between ITU-T and 3GPP QoS Classes and Traffic Descriptors~~.~~". SA2 shares the view of T1A1 that for the provision of end to end wireless / wireline QoS interworking, an ~~standardized~~ interworking function ~~is~~ may be needed, and in principle the suggested mapping between 3GPP and ITU-T QoS Classes is ~~the best~~ a good base for further investigation~~way forward~~.

Further consideration is needed regarding the details of the way forward~~, and identification of potentially impacted specifications~~. However SA2's general views ~~and initial consideration of the issues raised in the liaison statement~~ are provided below.

- An Interworking Function may be needed to support interfacing with external networks that are based on the ITU-T QoS specifications (e.g. ITU-T Y.1541), sufficient to enable service providers to comply with end to end performance objectives for the QoS classes and to take into consideration the network performance parameters across network sections.

~~The specification of such an interworking function should be considered in the 3GPP Release 7 timeframe.~~

- The Interworking Function should be specified by a single organization and this work may be more appropriate for organizations that deal with operational aspects. ~~ITU-T than~~ 3GPP has currently no plans to perform work in this area.
- The existing 3GPP QoS mechanisms should not be destabilized by the mentioned interworking function. Please note that the 3GPP QoS classes and the other 3GPP QoS parameters should be considered relevant only in the scope of a 3GPP network and should not be modified due to the introduction of the interworking.

SA2 will take further consideration of the issues that are described in the Liaison Statement and answer the questions in detail.

~~SA2 General Comments~~
~~A standardized interworking function is needed to support interfacing with external networks that are based on the ITU-T QoS specifications (e.g. ITU-T Y.1541), sufficient to enable service providers to comply with end to end performance objectives for the QoS classes and to take into consideration apportionment of network performance parameters across network sections.~~

- ~~The specification of such an interworking function should be targeted for completion as part of the 3GPP Release 7 set of specifications. Impacted specifications are for further study.~~
- ~~The existing 3GPP QoS mechanisms should not be destabilized by the need to interface with external networks.~~

~~Consideration of Issues Raised in the LS~~

~~1.The 3GPP requirements for SDU transfer delay should be expressed as means rather than as maxima. This will facilitate performance apportionment or concatenation, since means can generally be added while maxima cannot. If specifications for maxima must be retained, the means should be specified as well.~~

~~SA2 Response:~~
~~<< to be provided >>~~

~~2.The 3GPP specifications should define and establish at least one numerical objective for SDU transfer delay variation. Delay variation must be limited to support interworking and the operation of jitter buffers in customer equipment, and it cannot be limited adequately by specifying only a transfer delay maximum. The delay variation should be expressed using the same statistic defined in Y.1541, i.e., upper 10^{-3} quantile minus minimum.~~

~~SA2 Response:~~
~~<< to be provided >>~~

~~3.The 3GPP specifications should define numerical target values for the various "priority levels" in the interactive QoS class, to enable quantitative support for Y.1541 classes 2-4. As TS 23-107 notes, there is a definite need to differentiate between quality levels for bearers within the interactive class. Users envision substantially different applications for services in this category and will expect them to be supported with numerical objectives.~~

~~SA2 Response:~~
~~<< to be provided >>~~

~~4.ITU-T Recommendation Y.1541 should be reviewed in light of emerging applications to determine whether it is necessary and practical to specify more stringent objectives for IPLR and IPER, consistent with the relatively stringent UMTS SDU error ratio requirements specified in TS 23-107.~~[1]

~~SA2 Response:~~
~~<< to be provided >>~~

~~5.For comparability, the SDU should be defined to correspond to an IP packet in 3GPP specifications of QoS requirements for IP-based services. An evaluation interval of 1 minute should be used in assessing both mean delay and delay variation. Payload sizes of 160 and 1500 octets should be used in specifying and evaluating performance values.~~

~~SA2 Response:~~
~~<< to be provided >>~~

2. Actions:

~~**To T1A1:**~~

~~<< to be provided >>~~SA2 kindly requests ITU-T to take into account SA2's ~~would appreciate ITU-T's~~ views regarding the development of this Interworking Function specification~~ within ITU-T with close working cooperation between groups~~.

3. Date of Next TSG-SA2 Meetings:

TSG-SA2 Meeting #39	19th – 23rd~~th~~ April 2004	Shenzhen, China~~.~~
TSG-SA2 Meeting #40	17th – 21st ~~th~~ May 2004	Sophia Antipolis, France~~<< to be provided >>~~