3GPP TSG-SA#3
Yokohama, JAPAN, 26-27 April 1999

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TSG-T2
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Liaison Statement to TSG-SA and TSG-S1

Source: TSG-T2 (Services & Capabilities)

Liaison To: TSG-S1

CC: TSG-SA

Title: Identification of services capabilities

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1. Introduction

TSG-T2 sent a Liaison Statement T2(99)282 to TSG-S1, in which we requested TSG-S1 to identify the service capabilities for terminals as baseline and whether they are mandatory or optional. Additionally, T(99)057 and 058 are also relevant documents which were sent to S1. However, T2 are still awaiting the LS answer from S1. During this meeting, T2 recognised that service capabilities could be proposed from a terminal perspective based on the answer from the chairman of S1(Tdoc T2-99398) and have put together this LS on this subject. Annex A contains this suggested list of service capabilities.

It is clear that S1 is responsible for this work. Therefore, **S1 is requested to investigate the proposed identification of service capabilities, comment on this LS and Annex A, define a complete Annex A, and send back the final terminal capability to be contained in Release 99.**

2. Proposed identification of service capabilities

The proposed identification of service capabilities from the terminal perspectives is shown in Annex A. Services for each service capability need to be defined in the table in Annex A.

The primary intention of this identification for service capabilities is **to clarify the services related with the services capabilities, that have an impact on the completion of specifications and the test conformances, and the implementation of terminals.**

T2 SWG6 will then further define terminal implementation capabilities, based on the information thus identified by S1 in Annex A and relate them to the radio interfaces such as the type of bearers and its speed, its effect on especially hardware implementation. In order to do this, the speed of data should be specified in this work, as it has an impact on RF parameters, Layer 1, etc. T2 SWG6. will use the data in Annex A to fill in a matrix such as the one contained in Annex B in conjunction with other 3GPP WG's. Annex B is attached for your information.

Services from the application layer, (e.g. higher layers than IP) may be out of the scope of this planned activity. If we were to consider application layers, there would be too many possibilities to be listed up and investigated within the immediate scope of this work.

There may be differences of perspective for service capabilities between TSG-S1 and TSG-T2. TSG-S1 has considered and investigated services from the application perspective, i.e. a top-down view. On the other hand, it is also valid that service capabilities may be viewed from the layers close to radio i.e. a bottom-up approach. A bottom-up approach considers the impact of the implementation, especially hardware, of terminals. In our view, there is no contradiction in these two approaches, as the same service capabilities are identified from the top by S1 and from the bottom by T2.

3. The requested consideration on service capabilities

Therefore, TSG-S1 are requested to review and evaluate the suggested service capability/ service matrix in Annex A, define a complete Annex A, and send back the final terminal capability to be contained in Release 99.

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Annex A. List of Service Capabilities and Services for which SWG6 requests S1 responses.

Services / ***Service Capabilities***		Speech	FAX 14.4K	Modem				SMS		Appropriate services
				14.4K	28.8K	33.6K	57.6K	Point-to-point	Cell broadcast	
Speech		✓								
Circuit switched data	8Kbps									
	16Kbps	✓								
	32Kbps	✓	✓	✓						
	64Kbps	✓	✓	✓	✓	✓				
Packet switched data	8Kbps									✓
	16Kbps									✓
	32Kbps									✓
	64Kbps							✓		✓
	144Kbps									✓
	384Kbps									✓
	2048Kbps									✓
SMS	Point to point							✓		
	Cell broadcast								✓	
Supplementary services										✓
Others										✓

- ***Note***
  - S1 is asked to investigate and identify service capabilities and services in the above table.

Annex B. Correspondence of service implementation capabilities to each technical domain according to the identification of service capabilities

SWG6 is in the process of filling the Columns 2-6 based on responses received to our LS.

Technical domain / **Capability**		**RF parameter**		**Radio Layer 1**		**Radio Layer 2**		**Radio Layer 3**		**Codec**	
		Mandate	Option	Mandate	Option	Mandate	Option	Mandate	Option	Mandate	Option
Services Capabilities		***Service implementation capabilities***									
Speech											
Circuit switched data	8Kbps										
	16Kbps										
	32Kbps										
	64Kbps										
Packet switched data	8Kbps										
	16Kbps										
	32Kbps										
	64Kbps										
	144Kbps										
	384Kbps										
	2048Kbps										
SMS	Point-to-point										
	Cell broadcast										
Supplementary services											
Others											

- ***Note***
- S1 is asked to investigate and identify service capabilities in the y-axis of the above table.
- Each technical domain, i.e. RF parameter, Layer 1-3 and Codec, are listed on the x-axis as examples to clarify the correspondence between service capabilities and service implementation capabilities which will be identified by other appropriate WGs.
- For non-transparent circuit switched data, “modem” means data communication interworked with PSTN, and 64.4k is needed to interwork with ISDN.
- The above-mentioned speed of data is correspondent to general capabilities of PSTN and ISDN. Further studied will be required.
- For packet switched data, the speed of uplink and downlink is proposed to combine independently.