Technical Specification Group Services and System Aspects **TSGS#13(01)0487**

Meeting #13, Beijing, China, 24-27 September 2001

Source: **AT&T Wireless Services; Rogers Wireless**

Title: **Comments on SP-010425, Scope of IMS in Release 5**

Agenda item: **SA:** 7.8. Review of TSG-SA Release 5 status and scheduling

Document for: Discussion

Introduction

SP-010425, Scope of IMS in Release 5, proposes that the IMS shall be introduced in two consistent phases, with the first phase included in Release 5 and the second phase included in Release 6. The reasoning behind this proposal is considering the current status and scope of the complete set of IMS related work items, it does not seem possible to complete the work by December 2001. The features proposed for Release 5 are listed in table 1 in SP-010425, and the proposed features for Release 6 are listed in table 2 of SP-010425. The features listed in table 3 of SP-010425 are noted “for further study”.

AT&T Wireless Services and Rogers Wireless has reviewed the proposal in SP-010425, and provide the following comments on those priorities from an operator standpoint. AT&T Wireless Services and Rogers Wireless request consideration for modifications to those priorities as specified in this submission.

It is important to understand that Rel-5 is not only IMS, but includes other important capabilities such as RAN and GERAN; the following is a more comprehensive list of features and capabilities that we view as mandatory for a March 2002 Release 5. From the contributing operators prospective, we view the following features as critical to provide a compelling toolbox for Rel-5:

1) IMS

- Stable application control plane for the basis of future application development
- PCF - Policy control to allow linkage between application/server layer (IMS) and the transport layer (PS Domain)
- QoS signalling support to tie in the PCF
- Subscriber security
- Network hiding
- Charging
- Regulatory requirements

2) RAN

- HSDPA
- WCDMA 1900

3) GERAN

- UMTS (Iu) alignment
- Streaming bearer support for Iups RABs

Comments on the Proposal of SP-010425

AT&T Wireless Services and Rogers Wireless supports the recommendations for principles to be applied to Rel-5 timing and content as stated in SP-010483, Release 5 Content and Timing With Respect to IMS. The principles of SP-010483 and SP-010425 are consistent, with a view that a firm March-2002 Rel-5 date is critical, a phased approach to the IMS introduction is needed, and 3GPP should focus on the priority items for Rel-5.

Additionally, AT&T Wireless Services and Rogers Wireless recommends that 3GPP classify the proposed features in Table 2 of SP-010425 as essential features for Rel-6 (mandatory features), with existing work items (and work completed thus far) be carried over to Rel-6. Further, any non-essential items identified in Table 1 of SP-010425 that are not completed in the Rel-5 timeframe shall be carried over to Rel-6, with an priority of essential.

Comments on Table 1 of SP-010425: Proposed IMS Features for Release 5

Table 1 of SP-010425 contains the work items that should be included in Release 5 to guarantee the delivery of a consistent set of IMS features. Work items have been classified either as essential or non-essential:

- Essential: No IMS without this feature. Release 5 should be delayed if this feature is not available.
- Non-essential: Should be included if and only if finalized in time for Release 5.

AT&T Wireless Services and Rogers Wireless have the following comments; reference numbers to the comments refer to the "Ref." Number in Table 1 of SP-010425.

Ref. 1.4 and 1.5:

The contributing operators would request for consideration that NDS be an essential requirement for Rel-5. If NDS were non-essential and did not complete in the Rel-5 timeframe, then the implementations of NDS would need to occur on a bi-lateral basis, which will result in non-uniform and possibly non-standardized implementations.

Ref. 1.16:

Given the proposed scope of Rel-5 IMS, the contributing operators do not view IMS Local Services to be a critical item for Rel-5, and further recommends consideration of removal of this feature from Rel-5 (e.g. move from Table 1 to Table 2 of SP-010425).

Ref. 1.17, 1.18:

The contributing operators believe that SIP URI is essential for Rel-5, and tel URI should be non-essential for Rel-5. In addition, if tel URI is included in Rel-5, then MSISDN number portability (see Ref. 3.17) also must be supported concurrent with the support of tel URI. Also, E.164 to SIP URI translation should be non-essential.

Ref. 1.20:

The contributing operators believe that the Terminal made up of TE and MT work is not realistic for completion in Rel-5 timeframes, and recommends consideration for removal of this feature from Rel-5 (e.g. move from Table 1 to Table 2 of SP-010425).

Ref. 1.23:

The contributing operators recommend that the work on ISC be changed from essential to non-essential for Rel-5.

Ref.	3GPP workplan	Major feature	Sub-feature	Impacted 3GPP group	Comment	Essential	Terminal impact
1.4	1576		NDS (procedures)	SA3, CN4		~~N~~Y	N
1.5	1586		NDS (automatic key distribution)	SA3, CN4		~~N~~Y	N
1.16		**IMS Local services**	Advertisement and access of local services Provides the local serving network services for roaming users.	SA2, CN1		~~N~~Rel-6	Y
1.17	1290	**Addressing**	SIP and tel URI	SA2, CN4		~~Y~~Y for SIP URI, N for tel URI	Y

1.18	-		Address Translation Relates to where and how address conversion from E.~~165~~ 164 to SIP URI is carried out	SA2, CN4		~~Y~~N	
1.20	2529		Terminal made up of TE and MT	SA1, T2, SA3	What is the realistic completion date for TE and MT specification?	~~N~~Rel-6	Y
1.23	2233,1673	**ISC (S-CSCF – AS)**	Basic SIP session and registration	CN1	ID 2233 is the WI for all CN1 IMS work	~~Y~~N	N

Comments on Table 2 of SP-010425: Proposed IMS Features for Release 6

As stated earlier, AT&T Wireless Services and Rogers Wireless believe that **Table 2 of SP-010425 shall represent the initial definition of essential items for Rel-6, and the work items and work in progress on those items be carried over from Rel-5.**

The contributing operators have the following comments; reference numbers to the comments refer to the "Ref." Number in Table 2 of SP-010425.

Ref. 2.1, 2.2, 2.3, 2.4:

The contributing operators believe that there are considerable advantages for a non-synchronized highly-efficient optimized voice bearer for the GERAN radio network. Given the lack of ability to provide this in Rel-5, we believe that it is a mandatory essential requirement for Rel-6. Further, we believe that groups other than 3GPP GERAN are impacted by this work (i.e., SA2, CN1).

Ref. 2.6:

The contributing operators believe emergency sessions on IMS should also be addressed under Rel-5 to insure regulatory requirements are met. The recommendation is to add a line item in Table 1 for emergency sessions on IMS to track regulatory requirements.

Ref. 2.11:

The contributing operators recommend that 3GPP define this feature to restrict the inter-working to non-IMS SIP Ipv6 endpoints. There is some relationship between this feature item and that specified in Table 3, 3.25, Ipv4-Ipv6 inter-working; adding the above restriction minimizes the work required by 3GPP for this inter-working. We further believe that with this definition, the inter-working to non-IMS Ipv6 endpoints should be a Rel-5 feature, and moved to Table 1.

Ref.	3GPP workplan	Major feature	Sub-feature	Impacted 3GPP group	Comment	Terminal impact
2.1	2330	**IMS user plane**	UEP in GERAN	GERAN, SA2, CN1	ID 2330 is feature level WI GERAN support for IMS	Y
2.2	-		Rate Adaptation in GERAN	GERAN, SA2, CN1		Y
2.3	-		Header Removal in GERAN	GERAN, SA2, CN1		Y
2.4	-		Specific codec negotiations in GERAN	GERAN, SA2, CN1		Y
2.6	1653	**Emergency sessions on IMS**	Registered user with USIM	SA2, CN1		Y
2.7	2527		Unregistered user or without USIM	SA2, CN1	ID 2527 is feature level WI on IMS emergency calls without UICC/USIM	Y
2.11	2048		With SIP (non IMS) networks (Mm reference point)	CN1, CN3		N

Comments on Table 3 of SP-010425: Remaining IMS Features

The contributing operators have the following comments; reference numbers to the comments refer to the "Ref." Number in Table 3 of SP-010425. For the items not mentioned, the contributing operators believe the prioritization is for further study.

Ref. 3.3:

For Interception of IMS, the contributing operators believe that this work item is required in both Rel-5 and Rel-6 to support regulatory requirements. In the "Comment" field of the table, the "one solution…" should be removed and solutions addressed as the work item proceeds and regulatory requirements are known.

Ref. 3.4, 3.5, and 3.6:

The contributing operators believe that there are components of MRF that are necessary to support services in Rel-5 (an example might be conferencing facilities to support multi-player gaming services). Lack of multimedia conferencing could deter deployment of IMS for non-voice services. AT&T Wireless Services recommends consideration for the MRF feature as non-essential in Rel-5 (Table 1).

Ref. 3.7, 3.8, 3.9 and 3.10:

The contributing operators recommend consideration of the inter-working with GSTN, routing, IMS user roaming, and SIP to ISUP inter-working be deferred to Rel-6 (include in Table 2).

Ref. 3.13, 3.14:

The contributing operators recommend that the transport of IMS signalling on top of PS domain for both UTRAN and GERAN be included in Rel-5 as an essential feature (Table 1).

Ref. 3.15:

The contributing operators believe that these WIs cannot be finalized with high quality within the time frame of Release 5 (i.e. end of March). The data transport mechanism needs definition as well as the data synchronization mechanism (e.g. SynchML). AT&T Wireless Services recommends consideration of this feature in Rel-6 (Table 2).

Ref. 3.17:

Insofar as MSISDN numbering is used in Rel-5 IMS, the contributing operators recommend that the interactions with MSISDN number portability becomes a requirements for Rel-5 as well.

Ref. 3.18, 3.19, 3.20, 3.21, 3.22:

The contributing operators recommend that the work on the Go interface is essential for Rel-5 and should be included in Table 1.

Ref. 3.25:

As mentioned under work item 2.11, if the scope of the inter-working is limited to non-IMS SIP Ipv6, then there is minimal work in the area of Ipv4-Ipv6 inter-working that 3GPP will be required to do. We believe that this can be removed.

Ref.	3GPP workplan	Major feature	Sub-feature	Impacted 3GPP group	Comment	Terminal impact
3.3	1299	**Interception for**	(of SIP signaling)	SA3	This may become a regulatory requirement.	N

		IMS	WI 1299 = Lawful interception		~~One solution would be to rely on existing GPRS solutions being traceable and only adding the interception of SIP / SDP signalling.~~	
3.4	-	**MRF**	For bearer level announcements	SA2		N
3.5	-		For Conference	SA2		N
3.6	-		Mr Interface (MRF – CSCF)	SA2,CN1		N
3.7	-	**Inter-working for IMS**	With GSTN (for voice only services)	CN1, CN4 (Mm)		N
3.8	1305		how to route an incoming call/session: towards CS or PS domain	(SA2), CN1, CN4(Mm)	ID 1305 is Roaming between IMS and CS domain networks (roaming support within and between network types)	N
3.9			IMS user roaming in a CS domain			N
3.10			SIP – ISUP	CN3		N
3.13	-		Transport of IMS signaling on top of PS domain (for UTRAN)	SA2, RAN2/3,	Implies possible specific QoS for IMS signalling (signalling RAB).	Y
3.14	-		Transport of IMS signaling on top of PS domain (for GERAN)	SA2, GERAN	Implies possible specific QoS for IMS signalling (signalling RAB).	Y
3.15	1281, 1282	**Terminal capabilities**	Notification mechanism 1281 = Multimedia capabilities 1282 = Terminal capabilities Both with comment e.g. CC capabilities, MS CM, etc. So both WIs look like intention to define a mechanism to notify the terminal capabilities to the network (and maybe to negotiate about which ones are used on a per connection basis) The main WID NP-010143 does not define any goals in this area.		In the 3GPP project plan both 1281 and 1282 look like indication and negotiation mechanisms (in SDP perhaps?) with no position to which services are supported. "the signalling procedure" CN1 should define the scope of the WI	Y
3.17	1732		Number Portability: Interactions with MSISDN number portability	SA2, CN4		N
3.18	2556	**Go (P-CSCF [PCF]– GGSN)**	Authorizing bearers related to IM sessions	CN3	ID 2556 is feature level WI E2EQoS for PS domain including IMS checking the authorization token linked to a IM session, notification of session release	Y
3.19	2556		Notification of Radio bearer loss			N
3.20	2556		Authorizing the destination via set up of the packet classifier in the GGSN		The gate in the GGSN for the prevention of the use of the bearer until the session is completed and ensuring	N

					that the bearer is used to communicate only with an authorized peer.	
3.21	2556		Authorizing the QoS parameters via mapping of the SDP to IP & UMTS QoS Parameters			N
3.22	2556		P-CSCF to tear down the PDP context/GPRS bearer			N
3.25	2048	**IPV6 requirements**	IPV4/IPV6 interworking	SA2, CN3	This considers only IPV4/IPV6 interworking at IMS level (i.e. not on PS domain connectivity level) ID 2048 is CN3 WT interworking between IMS and IP.	N