Report from the UMTS Forum

Workshop on Assessing the Requirements for Deploying 3G Services.

Sophia Antipolis, 23 to 24 April 2001

Antonella Napolitano - Chair UMTS Forum 3GPP Co-ordination Group

Andy Watson - Rapporteur

1. Introduction

The workshop was set up in order to ensure that the 3G standards will enable services to be developed which meet market requirements. 110 delegates registered, and many items, which require significant further action, were identified and recorded in the documentation. Furthermore, the organisations, which need to undertake these actions, include not only various 3GPP Working Groups, but also other SDOs and industry Fora such as IETF, UMTS Forum, GSA and GSM Association.

The workshop was jointly hosted by the UMTS Forum and ETSI, with the GSA providing the social hosting. There was significant participation from members of all the 3GPP working groups as well as support from the Mobile Competence Centre 3GPP project team. Members of other SDOs and MRPs such as 3G.IP, IETF and MWIF also participated. The GSM Association well represented.

The ETSI Director-General, Karl-Heinz Rosenbrock, highlighted the importance of the closer co-operation between the SDOs and MRPs and welcomed the initiative by the UMTS Forum to organise such an event.

The Chairman of the UMTS Forum, Bernd Eylert underlined the role that the MRPs are playing in 3GPP. He mentioned the latest Market Study of the UMTS Forum, the format of the workshop and highlighted the main goal of the workshop which was to close the gap between market expectations, technical possibilities, and economical commonsense.

The agenda for the meeting is in Annex B of this report and sincere thanks go to the many people, presenters, session chairmen, rapporteurs, contributors and organisers as well as the participants, who all contributed to the success of the event.

2. Background

The workshop was agreed by the Market Representation Partners (MRPs) which include the UMTS Forum, GSM Association, Global mobile Suppliers Association, MWIF, 3G.IP and Ipv6 Forum etc. The MRPs deal with high-level objectives, especially market requirements. The Workshop followed the publication of a new Market Study on 3G Services by the UMTS Forum. This study forecasts which services are going to be the main revenue generators on 3G. It is freely available in two parts, downloadable from:
http://www/umts-forum.org   - reports number 9 and 13 (parts 1 and 2 respectively).

The task set for the workshop was to establish that all the necessary standards (Features, Building Blocks and Work Items) will be available in order that the forecasted services can be deployed. In the 3G environment,

services are not specifically standardised as they were in 2G. What is standardised are the services capabilities which enable customised and operator specific services to be developed. A good example of this is the toolkits such as MexE, SAT, VHE, OSA and CAMEL. Standards are needed for 3G services not just from 3GPP but also from bodies such as IETF. With the specific aim of forecasting service revenues conveniently and correctly, the Forum's market forecast examined a very large number of potential 3G service concepts which have been proposed or identified by the industry and found that they could be mapped into six main Services Categories: Mobile Internet Access, Intranet/Extranet Access, Customised Infotainment, Location Services, Multimedia Messaging Services and "Rich Voice" (which corresponds to the IMS Services). These Service Categories were used to evaluate the availability of the necessary standards.

3. Keynote Presentations
The first part of the workshop comprised keynote presentations to set the scene and to ensure a common understanding between standards participants and market representatives. Details of the presentations can be seen in the workshop documentation, which is available at: http://www.3gpp.org/ftp/workshop/3G_Services_Workshop/

Summarising the main points of the presentations:
Antonella Napolitano, chairperson of the 3GPP Co-ordination Group opened the formal presentations with the objectives of the workshop and kicked off the first session on the market perspectives. Then Paola Tonelli, Manager for the Market Study and Chairperson of the Operators' Group, summarised the results of the study. Eileen Healy, president of Telecompetition, the consultants who developed the forecast, presented the forecast methodology and showed how service concepts being developed by the industry relate to the service categories used to forecast revenues. It was later noted that the UMTS Forum has adopted a wider definition of the service category "Multimedia Messaging Service" than the service currently under development by 3GPP (MMS). The UMTS Forum's use of MMS includes additional features as used by Instant Messaging Services which are very popular in the fixed internet. Also, it was noted that 3GPP SA1 use a slightly extended list of services categories, but they are very similar and encompass the same set of actual services. These last two points are important to note by people working with both the 3GPP and UMTS Forum documentation. John Horrocks presented on UMTS Naming and Addressing (including GPRS, but not IMS) - work done jointly by the UMS Forum GSM Association and the Ipv6 Forum. Clarification and guidance is needed on the relationship of operators to Internet Service Providers including the allocation of IP addresses to terminals. It was recommended that the GSM Association should prepare guides for operators. The session concluded with comments about IP Multimedia from the Tiphon perspective. The main recommendations were that the definition of new services should include the naming arrangements and the management and allocation of the names while a clear focus on naming addressing and routing is needed both in the

standards work and in the organisation arrangements for supporting operators. New resolution support services may be needed.

The second set of presentations were on technical perspectives of 3G services. Stephan Keuneke for T-Mobil and the GSM Association presented on services platforms. The key message is that no one can predict killer applications, operators need a platform which can be rapidly adapted to new services. It seems that the key enabler required is third party billing. Fred Harrison presented on "All IP", mainly from a network perspective, with the main justification being ease of integration and cost reduction. However, Fred pointed out a number of instances where "All IP" (IMS) can be used to create combinational services, which enhance the user experience, for example gaming (infotainment) plus conversational voice. His view is that IMS can considerably enhance the operators' ability to compete with off-network IP services. James Walker presented the roadmap for the multimedia industry, relating it to mobile and stimulating a lot of thoughts on future needs. It noted that enhancements to PSS and uplink streaming are potential issues. Josef Huber presented on the 3G business model and in particular the Portal roadmap. One of his key messages was that the WAP Roadmap needs to be updated for 3G.

Session 3 was on the current standardisation programmes. John Meredith presented for 3GPP. John pointed out that while the Project Team can provide information on progress, it cannot drive the process - it is contribution driven. Thus it is important to establish any gaps or delays, which the MCC could identify. Tommi Kokkola presented on the 3G service requirements for the IP Multimedia Core Network Subsystem. He acknowledged the lack of user experience with the PS services, but most importantly proposed that the service examples need to be broken down in the breakout groups and discussed with S2 to ensure that all the necessary components will be present. Some participants believed that the services capability approach, adopted by S1 will not be sufficient for multimedia services.

Yanik Pouffary and Mohammad Mahouljian from IETF presented on IP and in particular, interoperability. Many 3GPP-IETF dependencies were identified. The Mobile IP technique was presented. Francois Courau presented on the RAN. Teuvo Jarvela presented on the architecture work in S2. He highlighted that the services provided by VHE and OSA need to be identified.

4. Breakout Groups
The main work of the workshop was done in three breakout groups covering the following areas: 1) Network Infrastructure, 2) Services Architecture and Principles, and 3) Terminals and Applications. The break-out groups were all able to identify many worthwhile issues and in most cases were able to identify target groups to pursue further work. An input document developed with the support of the Forum (a Matrix, which mainly links existing features to services) was used initially, but so many new issues were found that each Group documented these separately. These outputs have been combined

into a single table, which lists the topics, issues, recommendations, action points and actionees. This combined table is Annex A of this report (below).

4.1 Network Infrastructure

This group reviewed the input document (matrix). Their conclusion was that all the items were covered in the work items. However, the specific services (also listed in the matrix), used by Telecompetition to develop the services categories stimulated the main issues for discussion.   Areas identified included billing, the use of alternative access networks, a new charging API and APIs for external service providers.

4.2 Services Architectures

This group produced a significant list of topics and recommendations. Again, billing was considered to be the most important issue, particularly third Party Billing, which needs new APIs. One of the key proposals is for a standard billing interface for ASPs and ISPs. It was considered that more long-term work on numbering and addressing is needed.

4.3 Terminals and Services

Key issues were the provision of terminal capability information to enable services to be delivered consistently, protection of content and avoidance of viruses. Also messaging (excluding presence), uplink streaming, formats for special multimedia such as ring tones, graphics and many more.   A particularly challenging one concerns terminal capability: A relatively low tier terminal might signal to the network that it has limited display and processing capabilities.   However, if it is connected to something like a laptop, the capability is greatly increased.   However, there is no method currently available to indicate the capability of a connected terminal equipment and hence the optimum format for information (especially video and graphics) to be sent from the network to the terminal.

5. Conclusions

The next step should be to take this as a report into the next 3GPP TSG SA (Plenary). Following up on the actions should be the combined task of 3GPP, the UMTS Forum and the GSM Association.

In his summary the ETSI Director General, Karl-Heinz Rosenbrock, thanked the UMTS Forum for having organised this 1st Workshop between SDOs and MRPs and proposed to organise a so called "macro" follow-on meeting later the year. The Chairman of the UMTS Forum, Bernd Eylert, welcomed this proposal and after a short discussion in the plenary it was decided to hold the meeting by the end of the year, taking into account the work done in 3GPP in the meantime and in particular the Long Term Vision Workshop planned by SA for October.

Workshop on Assessing the Requirements for Deploying 3G Services
Sophia Antipolis, 23 to 24 April 2001

Issues, Recommendations and Actions From the Workshop Break Out Groups
Rapporteur: Andy Watson

1. Network Architectures - 1

Topic (UMTS Forum Service category)	Issues	Recommendations	Addressees & Actions
Voice-Activation (Intranet/Extranet, Multimedia Messaging)	Application may be in the Terminal or voice recognition servers might also be located in the network (application level - e.g. voice browsers). Only impact is the need to specify the use of a given codec.	To request that SA4 examine whether the current 3GPP default speech coders are compatible with voice recognition systems.	SA4 to be requested to investigate and to report back whether information is available which confirms or casts doubt on their suitability
Multimedia - non real time audio & video streaming (Customised Infotainment)	Store and forward might be an issue in the network	To request that SA2 investigate whether the network architecture needs to take store and forward of non real time streamed multimedia. SA4 may need to advise on the quantity of data which requires to be stored.	SA2 and SA4 to be requested to collaborate on investigating this.
Advertising (customised infotainment, Multimedia messaging)	Whether facilities for "negative charging" need to be devised (i.e. customer receives a rebate for accepting advertisements)	To be considered in the first instance by GSM association. If required, then needs to be considered by SA5 and SA2.	Request GSM Association to advise 3GPP on any implications of advertising.

Network Architectures-2

Topic	Issues	Recommendations	Addressees & Actions
Charging API **TOP PRIORITY** (Customised Infotainment, Intranet/Extranet)	There is a need to specify a charging API, which allows Network Operators to exchange information with external Service Providers so that the SP or the NO can provide a combined bill to the customer. This does not prevent to have separate billing provided by the Network Operator and/or by the Service Provider.	A study group (Ad-Hoc) probably needs to be set up to look into this. Would comprise SA5 and SA2 members	Bring up at SA (Plenary) for discussion and further action
IP multimedia sessions (Rich Voice)	Improving the success rate of initial transactions for IP multimedia sessions is and one aspect to be considered to improve it is for the UE and CN to know in advance the capability of the AN. The problem is to identify the earliest time at which the limitations of the AN can be identified to limit the abortive signalling.	This has already been recognised by TSG RAN who are already working on it. CN and SA2 now need to be involved.	**Introduce as a work item at CN Plenary**
Transitions issues (All service categories)	one of the key problems concerns the cohabitation of IPv6 entities with IPv4 ones	to be investigated by TSG CN (already aware of this issue)	**CN**
Automatic Routing to Service Provider's PoP (Intranet/Extranet, Customised Infotainment (Portal), Mobile Internet access)	To provide ease of use, for the mass market, the mobile subscriber does not want to bother with having to look up country codes, access codes and dialling numbers in order to access his home network. Most corporate intranets have Points of Presence (PoP) in many countries and locations, as do the larger ISPs. There should be a facility for the mobile user to automatically route to the nearest PoP with a single button "attach" (similar to DHCP in a homogeneous network)	Suggest that this is discussed as a service requirement by SA1 in the first instance.	SA1 then SA2 and CN

2. Services Architectures - 1

Topic	Issues	Recommendations	Addressees & Actions
Billing			
Third party billing - Charging (Customised Infotainment)	How to get the application dependent charging information, how to derive billing information, from what NE? What are the means to collect third party information for billing? What are the implications of roaming while using third party applications?	To request SA5 (SA2, SA1) to look at a common concept for third party billing and to develop a generic interface (covering on-line/pre-paid, event charging, successful invocation of service etc.). This should be a joint effort, including GSMA, European Billing, IPDR... To request SA1 for clear definition of on-line billing and pre-paid.	SA5: To develop concept and interface GSMA: To elaborate requirements and to contribute to SA5 work
Third party billing - Relationships (Customised Infotainment, Mobile Internet Access)	For e/m-commerce some end-to-end billing is the focus, not so much the operator billing, e.g. transaction of a user with a on-line bookshop. There is a need to better understand the commercial relationship between ASP, ISP and operator. Who is addressing billing, charging standards (SA5, GSMA TADIG, IPDR)?	On-line trading end-to-end is transparent to the network and it would appear that there is no additional requirement. Question to GSMA: Are there any additional requirements? Ask them to look at payment models and current commercial relationship in order to ensure that all requirements are covered. There is a need to create a list of bodies where billing issues are dealt with and their scope of activities.	Question to GSMA Request to UMTS Forum: To create the list of groups/fora etc.
Third party billing - APIs (Customised Infotainment, Mobile Internet)	There is a requirement to define the billing interface which supports the commercial relationship between ASP, ISP and operators, both on-line and off-line).		SA5: To develop concept and interface MA: To elaborate requirements and to contribute to SA5 work
Multi-Party Charging (Customised Infotainment)	What concepts should be pursued to allow for multi-party charging? What is the information we need for multi-party billing? Relation between address <-> service/application <-> billing information? What is the unique identifier for service/application and how we relate it to the user/subscriber?		SMA: To elaborate requirements

Services Architectures - 2

Topic	Issues	Recommendations	Addressees & Actions
APIs			
Awareness of APIs (All services categories)	A "simple" guide for application developers is needed. There are APIs inside the service architecture. Billing could become a third party service using a API. OSA is under progress. We agree that standard APIs are necessary. In 3GPP CN5, SA2 and T2 are tackling these (terminal and network based). GSMA started recently some efforts to take ASPs on board to involve the application community. The clear outcome of a initial workshop in January was that clear and transparent interfaces/APIs are needed to allow for third party application development.	ICT group of UMTS Forum, GSMA (whatever body within GSMA) and 3GPP to try to develop a guideline for application developers. Action should be taken to make the ISP service developer community aware of the specific requirements of the mobile world (what need to be reflected, e.g. QoS). GSA offered assistance through it's New Ventures Program Make the results of the GSMA Workshop available. UMTS Forum also has a dedicated group, the ICT group, looking at these issues.	ICT Group of UMTS Forum GSMA The best solution is probably joint GSMA, GSA & UMTSF Action with 3GPP S1 Request to GSMA
What APIs are needed? (all services categories)	Additional APIs probably need to be defined. For example between what entities? Currently there are some specific APIs under progress, e.g. for LCS. There is a need to capture the requirements from third parties, e.g. ASPs etc. Are there any mechanism for this? Current experience tells that the know-how in this area is very limited inside 3GPP. For the time being often specific solutions are addressed.	In addition to the action on establishing awareness (see above), the same Joint Group should establish an activity to identify the interface requirements and APIs. To start with the exercise one could run a gap analysis, what APIs we are missing etc. 3GPP should take into account progress of Parlay, because Parlay group is ahead of 3GPP. While addressing OSA in CN5 they should try to reflect Parlay and keep close contacts.	ICT Group of UMTS Forum GSMA The best solution is probably joint GSMA & UMTSF Action with 3GPP S1 LS to CN5

Services Architectures - 3

Topic	Issues	Recommendations	Addressees & Actions
Privacy & Security			
End-to-end security for intranet access and m-commerce. (Intranet/Extranet access, Customised Infotainment)	There is the question what security issues 3GPP does cover and whether additional requirements or techniques provided by other bodies (such as IETF) need to be taken into account. It might be worthwhile to identify security requirements per service category. Is it possible to express security requirements from the service architecture point of view, e.g. per application and not just from the network architecture perspective? IPv6 will provide many of the security mechanism needed. However, IPv4 will stay alive for some time. IPsec could be used via IPv4. However, it needs to be mandated by the operator community.	SA1 is invited to consider the security issues while running the service requirements analysis. It is understood that SA3 has done a good work in this area and there are no obvious issues left out. SA1 Should do a case by case analysis, looking at the actual services and to approach the respective group when needed. For the overall approach, the suitability of solutions for the mobile environment needs to be reflected, e.g. to keep signalling load to a reasonable level. To invite GSMA SG to carry out a risk analysis and to mandate the use of Ipsec if they are satisfied.	SA1 GSMA SG SA1 to undertake case by case analysis SA1 LS to GSMA SG
Security of addressing and numbering (all services categories)	Current E.164 concept assumes that only authorised parties can handle addresses and there is no fraud possible. As soon address translation becomes necessary nobody can guarantee for the correct address etc. This is more a generic issue, not just one of the mobile world. TIPHON probably may have some ideas already, These may be limited to Voice IP at present.	To invite SA3 to study the matter jointly with TIPHON. Is DNS security an issue? Does TIPHON have solutions which could be extended to other IP services and to mobile?	SA3 Project TIPHON

Services Architectures - 4

Topic	Issues	Recommendations	Addressees & Actions
Privacy (All services categories)	There is a need to categorise the issues concerning End user privacy and regulatory requirements. The information to be provided needs to be considered. What groups are working on privacy, e.g. WAP Forum, IETF, LIF.... Some co-ordinated action is necessary. SA1 did not privacy in a specific manner, e.g. per applications. Privacy of DNS need to be addressed as well. There is a question what 3GPP can do when application sits on top of the bearer without knowledge of the operator? SA1 did discuss the requirements on the example of presence services. Conclusion is, that any mechanism need to be very flexible to cater for different cultures etc. In GSM there is simple CLI service and CLIR for privacy. What is the respective means for LCS? Also applies to Instant Messaging - who is allowed to put you on somebody's "buddy"-list?	To invite GSMA L&R to gather regulatory requirements as a permanent task and to submit it to SA1 and SA3. Regulators should also try to develop a common view, SA1 is invited to take the lead, to elaborate user requirements and to liase with user groups, starting some sort of co-operation with external bodies. Possibly SA could address privacy aspects form a generic point of view (generic privacy definitions), e.g. elaborating guidelines for service development. Those guidelines would need to applied when developing services. SA should develop a recommendation for this also.	GSMA L&R UMTS Forum Regulatory Aspects Group SA1 SA1 SA1

Services Architectures - 5

Numbering & Addressing, incl. IPv6 Inter-working (incl. E.164 and host addressing) (all services categories)	What addressing scheme for what service category will be used in future, at least for IMS based services? Where this question is being addressed? Possibly some more long term analysis is required, where we want to be, considering machine addressing etc. While doing this we also would identify transition/migration issues. Report No.12 from UMTS Forum covers one paragraph questioning the need for several ISP connections in parallel for one user. There was no solution for this scenario.	Addressing has been discussed in some depth in SA2 and CN.SA2 should be contacted with the questions raised – input paper for SA2 In principle for all the issues SA2 would the most likely starting point. Bring this to the attention of SA2	John Horrocks to elaborate the input paper for SA2 SA2 SA2
Transition from IPv4 -> identifying the road map from operators perspective.... (Portal services)	Transition scenarios have been discussed in SA2. The infra structure break-out group does address this also. In addition to the actions taken by the operators we need to know the time table for the rest industry, e.g. in what pace corporate VPN migrate to IPv6. We need to know how long the transition period may last. IPv6 Forum runs a TF addressing DNS deployment.	GSMA needs to take-up the scenarios and to elaborate the road-map. IPv6 Forum to address the speed of migration of the industry. GSMA and IPv6 Forum should co-operate to address these issues.	GSMA LS to IPv6 Forum MRPs and 3GPP should participate in the IPv6 workshop end of June
Address Translation	Differencies between ENUM and TIPHON - TIPHON's is based on using E.164 numbers for PSTN services provided on IP networks with an option to use names of the form 'user@domain' in addition - not as an alternative. The choice of which part of E.164 numbers should be used will be dependent on the characteristics of the telephone service (e.g. shall the global code always be used for all telephone services on IP?). TIPHON is working on documents, which describe the relevant frameworks which will include several options (step by step routing up to end-to-end routing like Internet).	Messaging services only exist in PLMN's and in the Internet today. Thus, the TIPHON proposal is actually not relevant here, although address translation should not be handled much differently for voice as SMS is addressed with E.164. The increasing market value of SMS however, and the dominance of e-mail, the upcoming instant messaging now requires a quick solution for address translation. Solution proposed by the IETF/ENUM group uses the DNS domain "arpa" putting the reversed E.164 number with dots between the digits in front. There is a dispute, more about the domain name than about the way of address translation. This generic solution would not need the DNS servers for translation and could therefore be part of a Internet/PLMN Gateway.	The dispute about the ENUM solution should now be finalized. Otherwise the transition from the Internet to GSM and UMTS networks is jeopardized, because numerous interim solutions have to be implemented. It is likely, that the "arpa" domain could finally be accepted.

Services Architectures - 6

Topic	Issues	Recommendations	Addressees & Actions
Portals	Are portal services within the scope of 3GPP or not? (e.g. for content services).	To invite GSMA, GSA and UMTS Forum to look at those requirements, possibly by a dedicated workshop.	GSMA to set up workshop and process to follow through with the recommendations.
	How can the operators move up the value chain by providing mobile portals? What are the requirements in terms of standards, mark-up language etc.?	GSMA should take the lead. Analysis form UMTS forum could be used as an input. Input from SA1, T2 and WAP Forum would be expected. Draw on the practical experience, intelligence and contacts within the portal community now being obtained from GSA's Mobile Portals Study programme. Then decide on the next the step.	UMTSF, 3GPP (SA1, T2) GSA and WAPF to be notified by LS
	There is a proliferation of mark-up languages. Can we store all the different browsers in the handset? What is the conceptual idea and the architecture?		The goal is to make results available for the long term vision workshop in October 2001.
	CSCF architecture handles the most of the issues raised. Probably the definition of a portal needs to be improved. Often from the conceptual point of view it is a front-end. The portal function is usually not part of the ISP, it provides for personalisation, charging, content management etc.	At least guidelines are essential and roaming issues need to be covered.

Currently there is already some level of co-ordination which should be noted and possibly expanded, e.g. MExE does reference WAP specifications. | |
| | What are the standards used by portals, what browsers do handsets need to support? What are the roles of network, handset and portal in regard to personalisation, to cater for roaming etc.? | 3GPP is not necessarily required to develop standards. It could draw up a guidebook, identifying de-facto or other standards in order to smooth the implementation of services and up-take by customers by accelerating the learning curve. One aim should be to reduce options to a manageable amount. | UMTS Forum to consider the possibility of a project to produce the report.

3GPP (TSG SA) to consider how such a guidebook could be produced |
| | | Note that these issues are not restricted to UMTS, they could also relate to GPRS etc. | GSM community to note |

3. Terminals and Services - 1

Topic	Issues	Recommendations	Addressees & Actions
Definition of Services Categories	The Multimedia Messaging Service defined in the UMTS Forum Market Forecast study is not the same as the definition of the MMS service currently being standardised by 3GPP. The Forum's definition is wider - e.g. embracing Instant Messaging Services	Input is needed from UMTS Forum into S1 (next meeting May 7), explaining service concepts used in the market forecast study and listed in "service matrix.doc"	UMTSF 3GPPCG
Standardisation of IMS Services (Rich Voice)	Degree to which standardisation is required for IMS services like for example video conferencing? Need for end - to - end capability negotiation?	This issue may already be being reviewed in 3GPP,. perhaps no need for further action , but if not, it should be addressed. Also, the Service analysis work in 3GPP should cover delivery of services across different terminal types and the provision of information about the UE capabilities, service type and user preferences, e.g. for presentation of content.	Question to TSG SA TSG SA SA1
Terminal capabilities- UE capabilities (Customised Infotainment)	Content adaptation to fit terminal capabilities, service type and user preferences. Should the content be adapted in the network or should the terminal adapt to the content (software download)? Coders are relatively complex. Decoders relatively simple. Downloading objects (e.g. ring tones, graphics)	Content adaptation for Infotainment to be included on service analysis work. Consider possible solution - default coders for uplink, software decoder for downlink SA1 to be invited to consider requirements for minimum formats for ringtones, graphics etc. to allow these and other objects to be exchanged between devices from different manufacturers.	SA1 SA1
Digital Rights Management (Customised Infotainment)	Terminal architecture should support digital rights management With streaming - for certain content, the stream should not be copyable - needs to be ciphered	Requirement to cover protection of content for copyright or privacy reasons, should first be analysed by SA1 for requirements SA1, SA2, SA3?, SA4?, T2? - need to look at requirements and an appropriate secure architecture for Digital Rights Management - also need to liase and align with other bodies like SDMI	New Work Item for SA3 (2nd resp. SA4, T2)?

Terminals and Services - 2

Topic	Issues	Recommendations	Addressees & Actions
Viruses (Multimedia Messaging Service, Mobile Internet Access)	How to prevent damage by harmful content - do we need more than MExE?	Need for protection against harmful code (e.g. viruses) being downloaded into the terminal. This impacts not only MExE but also MMS and potentially other features.	SA1 should consider this.
Personalisation and Customisation (All services categories)	Personalisation - personal data common to many services	Users and operators should be able to go to a single place to personalise/customise all features. Facilities already existing from outside 3GPP need to be considered.	SA1 should consider this.
One stop login (Intranet/Extranet Access)	Ease of use for the non-skilled, mass market data user	SA1 to think about "one stop login" and other requirements in this area. Issues include integrated security and automatic routing to PoP.	SA1 should consider this.
	Authentication mechanisms	SA1 to look at a mechanism for advising the network how the user is authenticated to the terminal (Also to advise whether there is a need for additional authentication mechanisms?)	
Messaging Issues (Multimedia Messaging)	Instant Messaging - how to provide this for 3G - very popular in the fixed internet.	SA1 should consider Instant Messaging (excluding presence)	SA1
	Presence, including attach/detach issues, availability (e.g. for a game or invitation etc.)		
	Notification - Essential for Unified Messaging Service	SA1 to consider Notification - how external events are notified to the terminal.	Sa1
	Uplink Streaming	SA1 to consider whether stage 1 text is required for Uplink streaming (e.g. from a camera on the terminal to a server).	SA1

Terminals and Services - 3

Topic	Issues	Recommendations	Addressees & Actions
Location and Orientation (Location Based Services)	Location and direction (direction in which the handset is pointing)	SA1 should be invited to consider requirements for orientation (direction in which the handset is pointing) as part of the LCS work if it is not already covered.	SA1 LS to LIF to determine whether work is being done in this area
Mailbox Management (Multimedia Messaging Service)	Storage time for mailboxes	SA1 to be invited to consider Mailbox handling - how to control download or other handling of messages stored in the network (e.g. storage time control by sender or recipient)	SA1
Multiple Subscriptions and Devices (All Service Categories)	Requirements for multiple active subscriptions,	SA1 to be invited to consider for example multiple active USIMs multiple IMSI etc. Also consider receipt of calls/messages etc. destined for inactive subscriptions when another subscription used by the same user is active.	SA1
	Synchronisation of data across users' multiple devices and network elements	SA1 to be invited to consider requirements for synchronisation of data across users' multiple devices and network elements	

Assessing the Requirements for Deploying Key 3G Services
Monday 23rd & Tuesday 24th April 2001
ETSI Headquarters, Sophia Antipolis, France

Workshop Programme

DAY 1 (Monday 23 April)

09:30 Welcoming remarks
Speakers: *Karl Heinz Rosenbrock, Director-General, ETSI and Bernd Eylert, Chairman, UMTS Forum*

Session 1: The 3G Services Market
Chairman: *Antonella Napolitano, MRP Workshop Project Manager, UMTS Forum - 01*
09:45 Chairman's introduction

10:00 3G Service Categorisation
Recent studies conducted by the UMTS Forum have clarified the definitions of services and applications and have introduced a simple but comprehensive categorisation of 3G services viewed from a market perspective. What are the characteristics of these service categories and how do they relate to different business approaches that could be adopted by operators?
Speaker: *Paola Tonelli, Market Study Project Manager, UMTS Forum - 02*

10:15 3G Service Demand Forecasts
Rigorous modelling techniques applied to the UMTS Forum service categorisation has enabled potential service revenues to be forecast at regional and global levels. Significant market demand for 3G services has been identified. Which service categories have most revenue potential, what is the predicted roll-out sequence and priorities and how does this vary between regions?
Speaker: *Eileen Healy, President, Telecompetition consultant to UMTS Forum - 03*

10:30 Numbering and Addressing
In the converged 3G environment names and addresses are of vital importance for both service identification and network interoperability. Numbering and addressing relationships have been the subject of recent studies and have significant implications for the standardisation process.
Speaker: *John Horrocks, UMTS Forum - 04*

10:45 Questions & Answers on Session 1

11:00 Coffee break

<u>**Session 2: Perspectives on 3G Services**</u>
Chairman: *Alan Hadden, President, GSA*

11:30 3G Application Platforms
Operators need open platforms that are capable of providing rapid and continuous support for new applications. Raw IP-connectivity is not enough for integrated multimedia services. What are the implications for protocols, languages and standards?
Speaker: *Stephan Keuneke, GSM Association and T-Mobil - 05*

11:45 Evolution to All-IP – an Operator Perspective
A phased approach to the evolution to all-IP allows controlled investment and managed risks for network operators. What are the critical success factors in such an approach and what are the implications for standardisation of the IP core network and the possible future standardisation of IP RAN and IP Air Interface?
Speaker: *Fred Harrison, 3G.IP and BT Wireless - 06*

12:00 The Multimedia Roadmap
3G is intended to bring Internet multimedia to the mobile user including corporate business applications, information and consumer entertainment applications. 3G must deliver the Internet applications which will exist when it is deployed and as it evolves. What are the current and future developments for Internet browsers (fixed and mobile), video, graphics, music, games, interactive applications, security and e-business?
Speaker: *James Walker, 3GPP member and Motorola - 07*

12:15 Consequences for UMTS entering the Internet Value Chain
A range of business models applicable to the new mobile Internet environment has been explored by the UMTS Forum. What are the characteristics of these business models and what are the implications for standardisation? How would the proposed Mobile Multimedia Portal Platform impact the standards process?
Speaker**:** *Josef Huber, Vice Chairman, UMTS Forum - 08*

12:30 Questions & Answers on Session 2

12:45 Lunch break

<u>**Session 3: Standardisation Activities and Perspectives**</u>
Chairman: *Karl Heinz Rosenbrock, Director-General, ETSI*

13:45 3GPP: Work Plan and Releases
Current status of 3GPP work plan and predicted availability of major work items.
Speaker**:** *John Meredith, MCC, ETSI - 09*

14:00 Service Requirements for the IP Multimedia Subsystem

High level requirements for IP multimedia sessions have been established and include negotiable QoS and support for interworking between packet and circuit switched services. What are the implications for IP multimedia service creation? What other requirements are there in order to meet the "All IP Vision"
Speaker: *Tommi Kokkola, 3GPP TSG SA1 IP multimedia services ad hoc chair -10*

14:15 IP goes Mobile

3G is expected to bring the Internet to the mobile user. What developments are expected in Internet services and Internet standards, within the 3G timeframe, which might affect 3G services? What is the current status within the IETF regarding QoS, SIP enhancements, security and IPv6?
Speakers: *Yanik Pouffary, IPv6 Forum Technical Directorate, and Mohammad Mahloujian - 11*

14:45 Radio Access Network

Planned Work Items to be developed in 3GPP such as HSDPA, functions of RNS, IP transport and QoS aspects on the various interfaces. How the Radio Access Network needs to be updated to provide innovative features
Speaker: *François Courau, Chairman 3GPP TSG RAN - 12*

15:00 Service Architectures

Operators are not only interested in the elements within Release 5 but also need to understand the plans for evolution of the service architecture for future releases. What are the implications of the future vision on service architectures?
Speaker: *Teuvo Jarvela, immediate past Chairman 3GPP TSG SA2 - 13*

15:15 Questions & Answers on Session 3

15:30 Coffee break

Session 4: Technology Enablers for 3G Services

15:50 Group discussion

Specific technology enablers are required to be in place before each of the service categories discussed in session 1 can be deployed. Many of these technology enablers have already been identified and will be presented as a basis for discussion during this group session. Examples include Streaming Constraints, Private vs. Public Addressing, Security, Voice Interaction, Language Support, SIP Call Control, QoS Management, OSA, SIM Toolkit, MExE, Terminal Capabilities Negotiation, Script and Protocols.
Full audience participation is expected during this session to identify any missing technology enablers and to allocate key technology enablers to the standardisation areas of Network Infrastructure, Services Architecture and Principles, and Terminals and Applications.
Moderator: *Andy Watson, Technical Advisor, UMTS Forum*
Rapporteur: *Eileen Healy, President, Telecompetition consultant to UMTS Forum*

16:30 Break-out Sessions

Workshop participants will be free to join any of the three break-out groups according to their specific areas of interest.

The initial role of each break-out group will be to map the allocated key technology enablers to work items (features and building blocks) and within standardisation bodies. Appropriate templates for this mapping process will be provided.

Each break-out group is then tasked with establishing a priority plan for standardisation activities taking into account 3G service requirements and priorities, the technology enablers, the current standardisation status (including the IP Multimedia Subsystem). Specific items to be addressed by each group include:

- Is the status of the standardisation work in line with the 3G service requirements?
- Are there major gaps in the current standardisation work plan?
- Is the time plan of the standardisation work in line with 3G market needs?
- What are the requirements for the long term vision (services, architecture and technology enablers)?

Group A: Network Infrastructure
Moderators: *François Courau, Chairman 3GPP TSG RAN and Ian Park, Vice Chairman 3GPP TSG CN*
Rapporteur: *Alain Sultan, MCC, ETSI*

Group B: Services Architecture and Principles
Moderator: *Teuvo Jarvela, immediate past Chairman 3GPP TSG SA2*
Rapporteur: *Armin Toepfer, immediate past Vice-Chairman 3GPP TSG SA*

Group C: Terminals and Applications
Moderator: *Kevin Holley, Vice-Chairman 3GPP TSG T*
Rapporteur: *Mark Cataldo 3GPP TSG T2 MeXE ad hoc Chairman*

19:00 End of Day 1

DAY 2 (Tuesday 24 April)

08:30 Plenary Session
Chairmen: *Andy Watson and Antonella Napolitano, UMTS Forum*
Interim reports from moderators of break-out groups on mapping of the allocated key technology enablers to work items (features and building blocks) within standardisation bodies. The main purpose of this session is to ensure that the key technology enablers have been allocated to the correct break-out groups.

09:00 Break-out Sessions – Establishing a Priority Plan for Standardisation Activities
Representatives of the UMTS Forum will be available to all of the break-out groups for discussion and clarification of market-related issues.
Group A: Network Infrastructure
Group B: Services Architecture and Principles
Group C: Terminals and Applications

13:30 Lunch break

Plenary Session – Results from the Break-out Groups
Chairman: *Antonella Napolitano, UMTS Forum*

14:30 Presentation of Results from Group A: Network Infrastructure - 14
Speaker: *Rapporteur of Group A*
14:50 Presentation of Results from Group B: Services Architecture and Principles - 15
Speaker: *Rapporteur of Group B*
15:10 Presentation of Results from Group C: Terminals and Applications - 16
Speaker: *Rapporteur of Group C*

15:30 Coffee break

Final Session – Assessing the Results of the Workshop
Chairman: *Bernd Eylert, Chairman, UMTS Forum*
16:00 Chairman's introduction

16:15 Conclusions, Recommendations and Output from the Workshop
Speaker: *Antonella Napolitano, Workshop Project Manager, UMTS Forum*

17:00 Close of Workshop