Work Item Description

Title

Speech Enabled Services Based on Distributed Speech Recognition (DSR)

1 3GPP Work Area

	Radio Access
X	Core Network
X	Services

2 Linked work items

End to End QoS (Concept and Architecture) for PS Domain (SA2)
Extended Transparent End-to-End Packet Switched Streaming Service (PSS-E) (SA4)
Packet-switched Conversational multimedia Applications (SA4)
IMS (SA1)

3 Justification

Forecasts show that speech-driven services will play an important role on the 3G market. People want the ability to access information while on the move and the small portable mobile devices that will be used to access this information need improved user interfaces using speech input. At present, however, the complexity of medium and large vocabulary speech recognition systems are beyond the memory and computational resources of such devices.

Distributed Speech Recognition (DSR) overcomes these problems, and it will provide 3G users with a high performance distributed speech interface to server-based automatic information and transactional services.

The types of services include those that are voice only, for example, automatic speech access to information. In the future, a new range of multi-modal applications is also envisaged incorporating different modes of input (e.g. speech, keyboard, pen) and speech and visual output.

4 Objective

4.1 To enable all these benefits in a wide market, such as 3G, containing a variety of players including terminal manufacturers, operators, 3rd Party Service Providers and recognition vendors, a standard for the FE is needed to ensure compatibility between the terminal and the remote recogniser. The first standard for a DSR front-end and compression was published by ETSI in Feb 2000.

~~**3GPP will examine the impact of ETSI DSR codecs for terminals in Release 5.**~~

4.2 In addition to the DSR front-end, a standard DSR protocol stack is needed to support end-to-end interoperability. ETSI STQ Aurora has also been developing proposals for these transport protocols that will be standardized by the IETF. DSR applications will be based on the IETF packet protocols using RTP (Real Time Protocol), SDP (Session Description Protocol) and SIP (Session Initiation Protocol).

3GPP will standardise the minimum to allow inter-operability.

5 Service Aspects

The WI will define the necessary components for speech enabled services based on Distributed Speech Recognition (DSR), for example automatic speech access to information.
This WI will identify the necessary changes and additions required in the current SA1 specifications.

6 MMI-Aspects

Man Machine Interface aspects have to be considered but not standardised.

7 Charging Aspects

Charging aspects have to be considered. Same as IMS charging.

8 Security Aspects

Security aspects have to be considered. Same as IMS.

9 Impacts

Affects:	USIM	ME	AN	CN	Others
Yes		x			
No	x				
Don't know				X	

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
	~~ETSI ES 201 108*~~			~~SA#13 Beijing~~	~~SA#14 Kyoto~~	
TS 22.xxx	DSR stage 1.			SA#14 Kyoto		Will be done by SA1 with contributions from ETSI Aurora.

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
TR 22.941		Inclusion of DSR in IMS Framework Document	~~SA#14 Kyoto~~Done	Will be done by SA1 with contributions from ETSI Aurora.
~~TS 22.228xxx~~		~~Inclusion of DSR in IMS stage 1.~~	~~SA#14 Kyoto~~	~~Will be done by SA1 with contributions from ETSI Aurora. May be a stand alone stage 1.~~
TS 23.~~228~~xxx		Inclusion of DSR in ~~IMS~~ stage 2.	~~SA#14 Kyoto~~tbd	Will be done with contributions from ETSI Aurora. May be a stand alone stage 2.
TS 23.207		Inclusion of DSR in QoS spec.	~~SA#14 Kyoto~~tbd	Will be done with contributions from ETSI Aurora.
TS 24.xxx?		SDP protocols extension to include DSR	~~CN#14 Kyoto~~tbd	Awaiting guidance from CN. Will be done by ETSI Aurora and presented to 3GPP for approval

~~*~~Note: ETSI ES 201 108: Existing ETSI specification “Speech processing, Transmission and Quality Aspects (STQ); Distributed Speech Recognition; Front-end feature extraction algorithm; Compression algorithms” will be referenced by appropiate 3GPP TS(s)~~become a 3G TS~~.

11 Work item raporteurs

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12 Work item leadership

TSG SA WG 1

13 Supporting Companies

Alcatel, Motorola, Qualcomm, France Telecom, Texas Instruments, Vodafone, Mannesmann, Omnitel, IBM, Sony.

14 Classification of the WI (if known)

	Feature (go to 14a)
x	Building Block (go to 14b)
	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

(list of Work Items identified as building blocks)

14b The WI is a Building Block: parent Feature

Speech Recognition and Speech Enabled Services

14c The WI is a Work Task: parent Building Block

(one Work Item identified as a building block)

Technical Specification Group Services and System Aspects Meeting #13, Beijing, China, 24-27 September 2001

TSGS#13(01)0559

Source: MCC (Adrian Scrase)

Title: Report of Support Team activities

Document for: Information

Agenda Item: 10

1 Introduction

This report covers the period between TSG#12 and TSG#13 and contains detailed information concerning the implementation of TSG#12 results.

2 The Support Team

2.1 MCC Departures

There have been no departures since TSG#12 and none are expected in the period to TSG#13. However, Michael Sanders will be returning to Australia at the beginning of next year and hence will be leaving MCC at the end of December. He will be participating in TSG#14 so it is premature at this point in time to write his obituary and hand out the flowers.

2.2 MCC Arrivals

There have been no new arrivals in MCC since TSG#12.

2.3 MCC Vacancies

There are currently no specific vacancies within MCC. However, some vacancies will occur towards the end of 2001 with some seconded experts expected to have returned to their home organizations by that time. Individual Members are earnestly requested to look for suitable candidates for these future vacancies.

2.4 Organization of MCC

The figure given below shows the allocation of resources to each entity with 3GPP and is a snapshot taken on 3 September. It can be seen that the recent structural changes in GERAN have now been reflected in the chart, but the final decision on the support of the new GERAN working groups is still under discussion. This chart is regularly maintained and the latest version may always be obtained from the 3GPP website at http://www.3gpp.org/

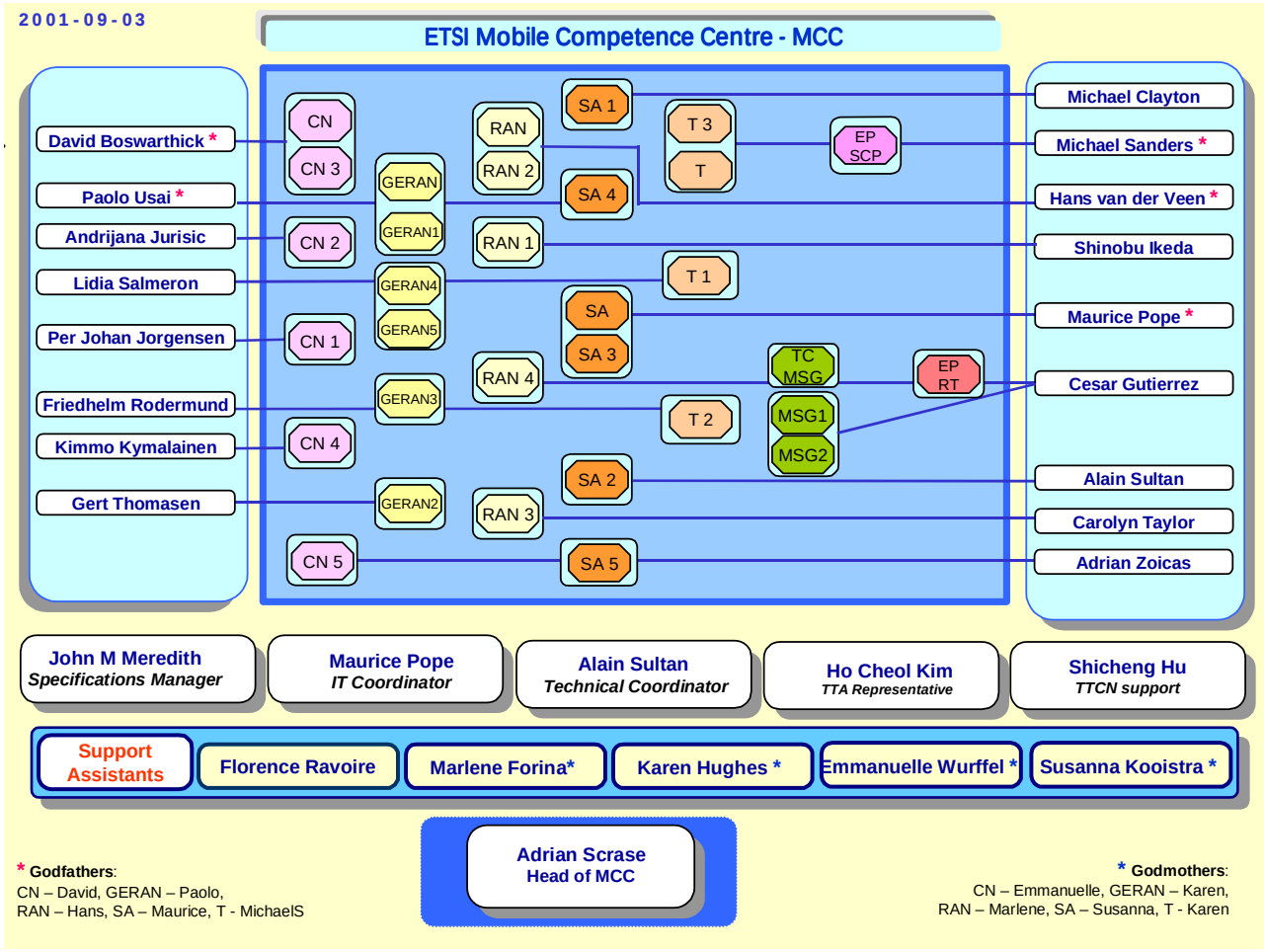


Figure 1: MCC Organizational Chart

3 Statistics and meeting targets

3.1 Interesting statistics

At the start of TSG#13, and with the advent of Release 4, MCC are managing 2103 active specifications. The distribution of those specifications looks as follows:

CLASSIFICATION	NUMBER
3G Specifications	515
GSM Specifications	1289
Common Specifications	299
TOTAL SPECIFICATIONS	**2103**

The number of change requests for these specifications continues to be high. When looking at the trend of approved change requests the following picture emerges:

CLASSIFICATION	CRs in 1999	CRs in 2000	CRs in 2001 (up to TSG#12)
3G Specifications	561	2931	1684
GSM Specifications	1906	1559	1580
Common Specifications	570	1243	679
TOTAL	**3037**	**5733**	**3943**

In addition to the table above, it should be noted that approximately 1200 CRs will be approved during the TSG#13 meetings.

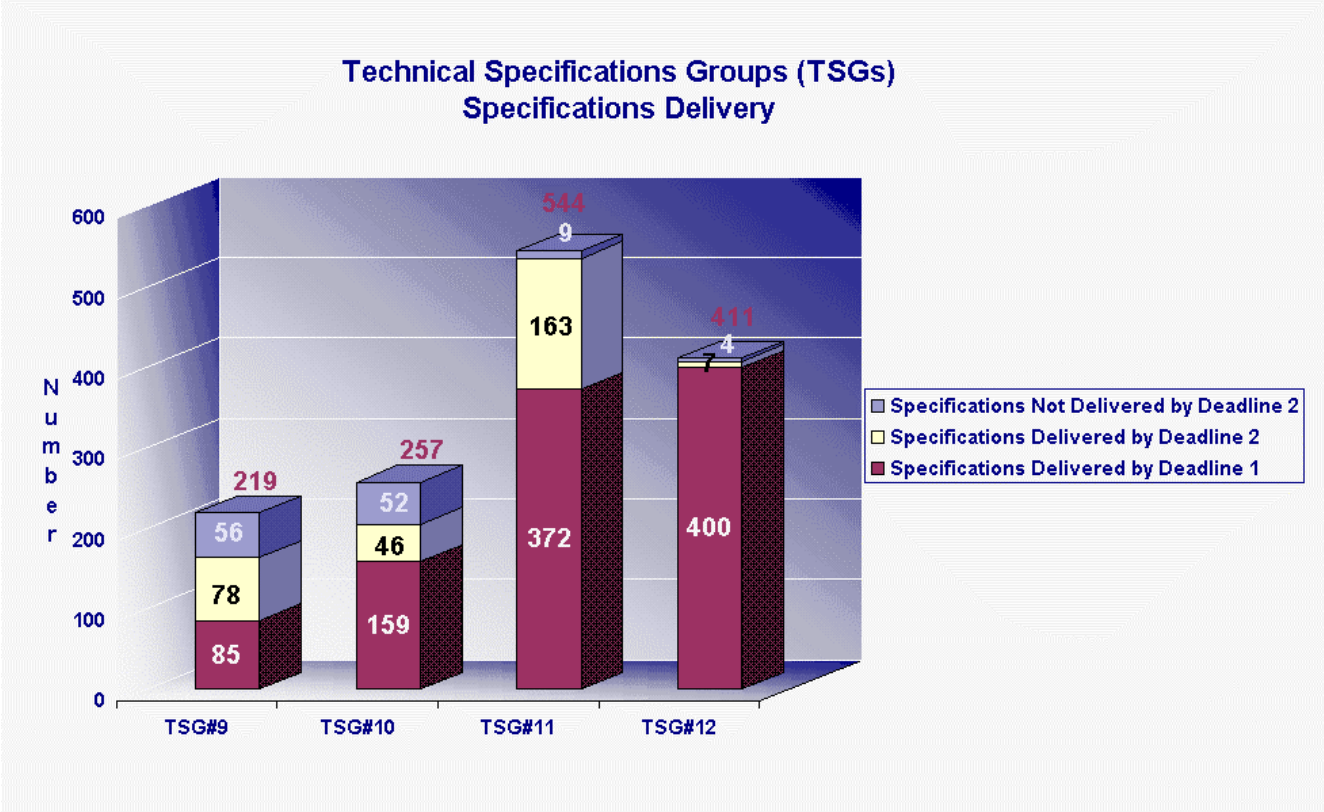
When looking at the distribution of CRs across the different 3GPP Releases, the following picture emerges:

CLASSIFICATION	CRs in 1999	CRs in 2000	CRs in 2001 (up to TSG#12)	TOTAL
Rel 99 Specifications	1345	4662	1648	**7655**
Rel-4 Specifications		455	1620	**2075**
Rel-5 Specifications		36	292	**328**
TOTAL	**1345**	**5153**	**3560**	

3.2 MCC performance

The MCC task having the highest priority continues to be the implementation of Change Requests and the delivery of the revised specifications within the shortest possible time. Of course, inherent in the demand for a fast turnaround of the specifications is the need for absolute accuracy.

At previous TSG meetings a detailed analysis of performance has been presented to demonstrate that improvement actions had been effective. At this TSG meeting it is only necessary to consider the overall performance improvements since TSG#9. This is depicted in the chart below. (You will remember that the default targets are for 90% of the change requests to have been implemented within 2 weeks and 100% within 3 weeks of the close of TSG SA). It can be seen that the percentage of specifications processed within two weeks of the TSG meetings has improved from 38% at TSG#9 to 97% at TSG#12. It is hoped that the number of errors has not increased as a result of this improvement action (although measuring the number of errors is not that easy). The challenge for MCC is now to maintain this improved level of performance.



3.3 Chairman's Satisfaction Survey

In order to obtain an indication of how satisfied TSG and WG Chairmen and Vice Chairmen are with the services provided by MCC, a survey has been undertaken. Following a request made during TSG#12 the number of responses rose to an impressive 70% when compared to the 48% response received for a similar survey undertaken in year 2000. The overall satisfaction rating for the survey was 81,5 % when compared to a rating of 79,3 % for the year 2000 survey.

The survey indicted that, in general, Chairmen are satisfied with the quantity and quality of the support that they receive. There were a number of complementary remarks which were of course pleasing to receive, but the real purpose of the survey was to extract improvement ideas and in this respect the survey was successful.

One common observation concerned the quality and quantity of the 3GPP website. This has led to an immediate improvement action, and following an in depth analysis of the wishes of the community the site has been completely overhauled during the summer months. It is expected that the new site will go live during this TSG session and hopefully it will meet with your approval.

Another common complaint concerned the different methods deployed within the working groups and the need for these to be harmonized. MCC have been aware of this problem for some time but will now take a much more proactive approach to harmonize document templates, report formats, etc to the extent that each working group is willing to conform. This will not be a quick fix, but will require a much more concerted effort over a period of time.

A comprehensive report of the survey results will be prepared in the near future and will be posted on the 3GPP web site.

Once again, thanks are due to those Chairmen who responded to the survey.

4 Budget

The Funding and Finance Group have held a meeting during this TSG session and have reviewed the expenditure incurred to date. 3GPP remains on target to finish the year within the agreed budget.

One area of concern is that funding requirements for specific tasks which the TSGs which to undertake in 2002 are still not known. The Partners will be confirming the year 2002 budget during their next meeting on 9 October and funding requests must be received in advance of that meeting. **TSG Chairman should ensure that their funding requirements for year 2002 are made known as a matter of urgency.**

5 Working methods

5.1 Wireless LANs at TSG meetings

TSG#11 decided that from March 2002 onwards access to the meeting server will be possible by wireless means only. **TSG delegates are reminded of this decision and are urged to acquire their Radio Lan cards by that date**.

5.2 DVD containing GSM document archives

Information was provided during TSG#12 on the availability of an archive DVD containing the meeting reports of every GSM/SMG plenary meeting from 1983 to 2000 (meetings No.1 to No.32), plus all Temporary Documents from meetings No.6 to No.32. Priced at 85 EUR, the DVD may be obtained from the ETSI Publications Office (contact Gabriella Vincent on +33 4 92 94 42 41 or e-mail: publications@etsi.fr).

5.3 DVD of 3GPP TSG Documentation

3GPP delegates have previously requested that a DVD archive be provided after each TSG meeting. In response to this request, MCC will make available a DVD following this TSG which contains all documents, draft meeting reports, and revised specifications. Delegates who are interested in receiving a copy of this DVD should complete the form available in the meeting room. Depending on the response to this service, a decision will be made on whether to continue with such a service in the future.

6 Concluding remarks

It seems that hardly a day passes where comments are not found in the worlds leading press relating to 3G. It also seems that our Industry is the single most influencing factor in the roller coaster of the worlds Stock Markets (with the exception of recent events in the US). With all of this interest, 3GPP is now commonly being referred to in press articles and our work is the focus of attention for many critics. It will become increasingly important for us to demonstrate to the outside world that 3GPP specifications are a sound basis for system deployment and MCC will do its part in making sure that this statement is true.

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