INTERNATIONAL TELECOMMUNICATION UNION

INTERNATIONAL MOBILE TELECOMMUNICATIONS 2000 (IMT-2000)

Document IMT/14
1 November 2001

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IMT-2000 Project Manager[1]

LIAISON STATEMENT TO STANDARD DEVELOPMENT ORGANIZATIONS ON THE COMPLETION OF THE REVISION OF RECOMMENDATION ITU-R M.1457[2]

ITU-R Working Party 8F would like to thank the External Organizations (EO's) for their best and final submission, including their update to the Global Core Specifications for the terrestrial component of Recommendation ITU-R M.1457 "Detailed specifications of the radio interfaces of IMT-2000".

At its 6th meeting, Working Party 8F approved the draft revision to Recommendation ITU-R M.1457-1 for the terrestrial component. Once adopted by Study Group 8 and approved by the ITU Member States, this will become Recommendation ITU-R M.1457-2. The timing of the approval process is shown in Annex 1.

Deadline for submission of final materials

At the 6th meeting, WP 8F acted upon a request from a partnership project to consider extending the deadline for the results of transposition to be received by the ITU (i.e., the "references" to the SDOs' transposed standards) to 31 May 2002 from the originally indicated 1 April 2002.

WP 8F has therefore adopted 31 May 2002 as the date by which transposition is to be completed by the SDOs **and** the associated materials (as requested by this correspondence) be received by the ITU. This deadline adjustment has been uniformly applied to all technology updates encompassed in this revision of Recommendation ITU-R M.1457.

As this proposed revision has now been sent to Study Group 8 for adoption, the 31 May 2002 deadline is now fixed. No further extensions will be granted.

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[2] This liason statement is principally directed to the SDO's but should also be sent to the relevant EO's for their information.

If all of the requested materials are not received by the 31 May 2002 deadline, Recommendation ITU-R M.1457-2 will be adjusted appropriately to reflect this situation.

Final materials to be supplied to the ITU by 31 May 2002

1 References

The SDOs must submit directly to the ITU IMT-2000 Project Manager by 31 May 2002, for forwarding to the ITU Radiocommunication Bureau the relevant reference links for §5.x.2 of Recommendation ITU-R M.1457 (including the SDO doc/version number, status, date and location).

2 Certifications as required by ITU Document IMT/1(Rev.2)

The individual SDOs must submit directly to the ITU IMT-2000 Project Manager by 31 May, 2002, the certification that the standards incorporated by reference into the revised and to-be-published Recommendation ITU-R M.1457 correspond to the set of specifications agreed by the SDOs to be transposed into standards, as well as the certification that the standards are consistent with the relevant Section 5.x.1 of Recommendation ITU-R M.1457 and the Global Core Specification as presented by WP 8F to SG 8.

3 Letters of Conveyance as required by ITU Document IMT/2(Rev.1)

Doc. IMT/2(Rev.1) imposes requirements on stakeholder SDOs to provide to the ITU an understanding of their respective positions on transpositions. Letters of conveyance have been received by the 6th meeting of WP 8F, as requested. If the SDOs have altered their position with respect to Part B, the SDO must submit directly to the ITU IMT-2000 Project Manager by 31 May, 2002 “letters of conveyance, Part B only” so that the ITU is fully apprised of the status of each stakeholder SDO s’ reference link materials as delineated above. This will ensure that the process of placing the tranposed material in M.1457-2 is fully synchronized between the SDO and the ITU.

If an SDO has previously submitted (prior to 31 May 2002) all the requisite references and corresponding certifications of transposition and consistency (i.e, all obligations imposed by WP 8F as well as those in Docs. IMT/1(Rev.2) and IMT/2(Rev.1) have been fulfilled) and no additional changes are submitted, then it is not necessary for the SDO to resubmit these materials.

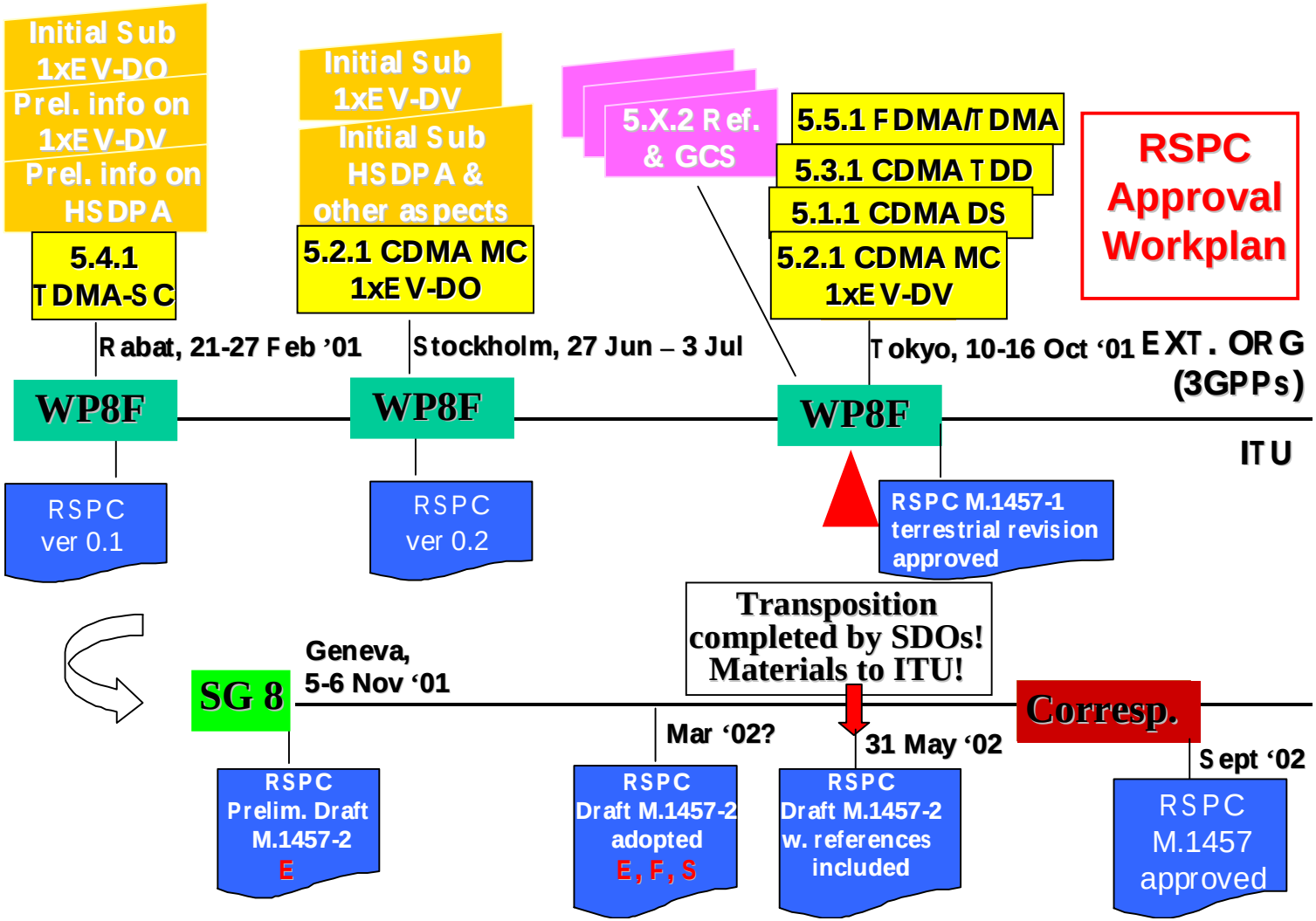
A summary table delineating what has been received and acted upon by WP 8F is presented in Annex 2. This table also indicates what is requested in correspondence by 31 May 2002.

Annex 3 provides the WP 8F roadmap for current work relevant to future updates of Recommendation ITU-R M.1457.

Continuing dialog encouraged

The SDOs are encouraged to submit information to the next two meetings of ITU-R WP 8F on the progress of their respective transposition process. The next meetings of WP 8F will be held on 27 February – 5 March 2002 and 29 May – 4 June 2002.

ANNEX 1


Initial Sub 1xEV-DO
Prel. info on 1xEV-DV
Prel. info on HSDPA
5.4.1 TDMA-SC
Initial Sub 1xEV-DV
Initial Sub HSDPA & other aspects
5.2.1 CDMA MC 1xEV-DO
5.X.2 Ref. & GCS
5.5.1 FDMA/TDMA
5.3.1 CDMA TDD
5.1.1 CDMA DS
5.2.1 CDMA MC 1xEV-DV
RSPC Approval Workplan
Rabat, 21-27 Feb '01
Stockholm, 27 Jun – 3 Jul
Tokyo, 10-16 Oct '01
EXT. ORG (3GPPs)
WP8F
WP8F
WP8F
ITU
RSPC ver 0.1
RSPC ver 0.2
RSPC M.1457-1 terrestrial revision approved
Transposition completed by SDOs! Materials to ITU!
Geneva, 5-6 Nov '01
SG 8
Corresp.
Mar '02?
31 May '02
Sept '02
RSPC Prelim. Draft M.1457-2 E
RSPC Draft M.1457-2 adopted E, F, S
RSPC Draft M.1457-2 w. references included
RSPC M.1457 approved

ANNEX 2

Summary and Status of inputs or correspondence required for the first revision of the terrestrial interfaces specified in Recommendation ITU-R M.1457 (M.1457-2)

Radio Interface	Submitter (Ref Doc 8F/482r3)	Item	Status or Date Required
CDMA DS	ARIB, CWTS, ETSI, T1, TTA, TTC	Global Core Specifications	Complete
		5.1.1 Overview section required	Complete
		5.1.2 Titles and tables required	Complete
		5.1.2 Final references required	31 May 2002
		Letters of conveyance Part A	Complete
		Letters of conveyance Part B	Complete[1]
		Self declaration of consistency	Complete
		Certifications of references & transposition	31 May 2002
CDMA MC (1xEV-DO)	ARIB, CWTS, TIA, TTA, TTC	Global Core Specifications	Complete
		5.2.1 Overview section required	Complete
		5.2.2 Titles and tables required	Complete
		5.2.2 Final references required	31 May 2002
		Letters of conveyance Part A	Complete
		Letters of conveyance Part B	Complete[1]
		Self declaration of consistency	Complete
		Certifications of references & transposition	31 May 2002
CDMA MC (1xEV-DV)	ARIB, CWTS, TIA, TTA, TTC	Global Core Specifications	Complete
		5.2.1 Overview section required	Complete
		5.2.2 Titles and tables required	Complete
		5.2.2 Final references required	31 May 2002
		Letters of conveyance Part A	Complete
		Letters of conveyance Part B	Complete[1]
		Self declaration of consistency	Complete
		Certifications of references & transposition	31 May 2002
CDMA TDD	ARIB, CWTS, ETSI, T1, TTC	Global Core Specifications	Complete
		5.3.1 Overview section required	Complete
		5.3.2 Titles and tables required	Complete
		5.3.2 Final references required	31 May 2002
		Letters of conveyance Part A	Complete
		Letters of conveyance Part B	Complete[1]
		Self declaration of consistency	Complete
		Certifications of references & transposition	31 May 2002
TDMA SC	TIA	Global Core Specifications	Complete
		5.4.1 Overview section required	Complete
		5.4.2 Titles and tables required	Complete
		5.4.2 Final references required	Complete[2]
		Letters of conveyance Part A	Complete
		Letters of conveyance Part B	Complete
		Self declaration of consistency	Complete
		Certifications of references & transposition	Complete[2]

Radio Interface	Submitter (Ref Doc 8F/482r3)	Item	Status or Date Required
FDMA/TDMA	ETSI	Global Core Specifications	Complete
		5.5.1 Overview section required	Complete
		5.5.2 Titles and tables required	Complete
		5.5.2 Final references required	31 May 2002
		Letters of conveyance Part A	Complete
		Letters of conveyance Part B	Complete[1]
		Self declaration of consistency	Complete
		Certifications of references & transposition	31 May 2002

Note 1 – As received by WP 8F meeting #6, may be revised as explained in this liaison
Note 2 – All materials have been supplied to WP 8F and the SDO has indicated that no further changes will be submitted to the ITU for this revision.

ANNEX **3**

Roadmap for current work relevant to future updates of Recommendation ITU-R M.1457

Representatives of External Organizations (EOs) are invited to submit information to maintain an updated roadmap of planned enhancements to their radio systems.

1 IMT-2000 CDMA-DS and IMT-2000 CDMA-TDD

The most updated and complete list of all technical areas currently addressed by 3GPP TSG RAN, together with a description of the current status of the activities, can be found on the 3GPP web site www.3gpp.org

Main Technical Areas
Base Station classification
Terminal power saving features
RRM optimisation for Iur and Iub
Radio Access Bearer support enhancements
Improvement of inter-frequency and inter-system measurements
Evolution of the transport in UTRAN
UE (User Equipment) positioning
UMTS 1800/1900
RAN improvement Feature
Radio interface improvement Feature
RAN technical small enhancements and improvements
Radio link performance enhancements (feasibility study)
USTS (UL Synchronous Transmission Scheme) (feasibility study)
Improved common DL channel for cell FACH state (feasibility study)

2 IMT-2000 CDMA-MC

This annex contains the updated Roadmap for IMT-2000 CDMA MC with reference to the component technologies currently under investigation within 3GPP2 TSG-C.

Study Items	Description
Adaptive Antenna Array Systems	Arrays of multiple antennas, combined with digital beam forming techniques and advanced low-complexity base-band signal processing. The Adaptive Antenna Array technique is aimed to enhance the capacity and coverage of the uplink.
Cell Selection Soft Handoff	By reducing the interference to other Mobile Stations and by combining the selected Base Stations signals in the Mobile during the soft handoff, Cell Selection Soft Handoff is aimed to increase the system voice capacity.
Differential Measurement Metric (DMM)	A technique to provide terminal based antenna array implementations with information that is aimed to provide efficient optimization of the transmitter element weightings. It multiplexes antenna weight comparisons periodically into the power control bits sent to a terminal in an adaptive fashion.
LA and LS spreading codes	Unique spreading codes that can be used on the Forward Link and Reverse Link for user multiplexing and channel/cell identification. The LA and LS spreading code is aimed to provide higher spectrum efficiency and voice/data capacity.
Maintenance Channel	A technique for managing terminals from a non-active state to an active state in CDMA systems. The Maintenance Channel is aimed to provide the capability to substantially increase the number of active packet data sessions supported by the systems and the speed in which those users can be swapped in and out of actual transmission status.
Multiple Inputs Multiple Outputs (MIMO) Antenna Techniques	Refers to antenna technologies where multiple transmit antennas and multiple receive antennas exist on both the base station and the mobile station sides. There are Code-Reuse type of MIMO where the multiple transmitting antennas re-use the Walsh code space, and there are transmit diversity type of MIMO, such as open loop Space-Time Spreading or close loop Selection Transmit Diversity. These techniques are aimed to enhance the peak rate, capacity and coverage.
Multiple Quality Control	By controlling the quality of each type of services separately, Multiple Quality Control is aimed to support multiple services and/or multimedia services in a more efficient way.
Reverse Link Throughput Enhancements	There are multiple areas currently been studied for possible enhancements on Reverse Link throughput, such as per-user rate control, efficient combination of scheduled transmission with autonomous transmission. These techniques are aimed to enhanced Reverse Link throughput.
Unequally Protected Video Coding	This technique is aimed to protect the highly error sensitive video information against multi-path fading effects.

3 IMT-2000 FDMA/TDMA

Work item	Completion date
DECT/UMTS interworking	10/2001
Technical Report DECT access to IP networks	10/2001
Technical Specification DECT access to IP networks	06/2002
AT command interface for DECT	09/2002
Business Access Profile	09/2002
High bit rate DECT	09/2002

4 IMT-2000 TDMA-SC

Work item	Provisional completion date
Enhanced or hybrid access technologies	October/December 2001
Real-time IP-based Services	October/December 2001
Continuing Enhancements to QoS	October/December 2001
Improved User Throughput	October/December 2001
Enhanced UE positioning	October 2001
Enhanced Subscriber Authentication and encryption	October 2001
R-UIM application enhancements	October 2001

5 Focus areas for future studies

Based on input contributions, a key area for 2001 will be the development of fast packet access modes. WP 8F should consider setting expected performance requirements (e.g., for fast packet access) and criteria which will lead to continued harmonization and convergence among the IMT-2000 radio interfaces (e.g., refer to Document 8F/123).

It should be noted that at the 2nd meeting of WP 8F (San Diego, 21-25 August 2000), the following sentence on "Focus Areas" was agreed, *"Focus areas could perhaps be techniques to improve spectrum efficiency, increased data rates, changes to the radio interfaces to improve packet and/or IP based services and applications"*.

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