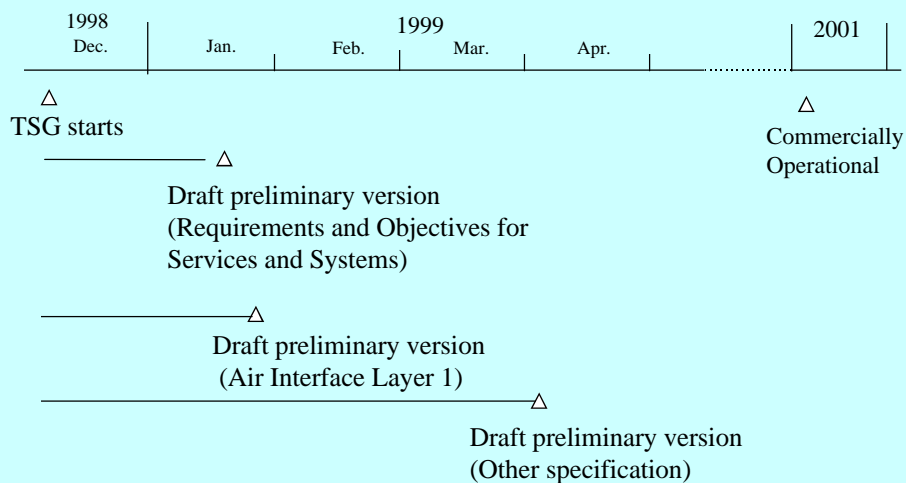


TTC Work Items for IMT-2000 - System Aspect TSG -

3GPP System Aspect TSG
Sophia Antipolis, France
December 7-8, 1998
TTC SWG6-2-1 & 6-3-1

Overall Schedule for IMT-2000



Work Item: VHE

Requirements

- Support of Standardized GSM supplementary services
- Support of existing PDC operator specific services
- Support of Multimedia Services
- Support of Operator Specific HMI
- Support of Supplementary Service Control by Subscribers

Documents	System Configuration	Network Requirements	Information Flows
	✓	✓	✓

Work Item: High Speed Packet

Requirements

- Support various QoS requirements
- Co-ordination of Mobility Management for Circuit and Packet switched service
- Access point selection

Documents	System Configuration	Network Requirements	Information Flows
	✓	✓	✓

Work Item: High Speed Data

Requirements

- Various Bearer Capabilities
(Voice, audio, video, data, unrestricted digital, etc.)
- Asymmetric Bearer

Documents	System Configuration	Network Requirements	Information Flows
	✓	✓	✓

Work Item: ATM

Requirements

- ATM as high performance transport technology
- AAL 2 as high efficient transport for voice call
- ATM-SVC for various QoS support and network efficient usage
- Mapping between GPRS and ATM-SVC

Documents	System Configuration	Network Requirements	Information Flows
	✓	✓	✓

Work Item: W-CDMA


Requirements

- Soft Handover (Diversity Handover)
- Handover Triggered from both MT and NW
- Service and QoS
- Protection of Security and Privacy
- Efficient Resource Usage
- MS Classmark Information

Documents	System Configuration	Network Requirements	Information Flows
	✓	✓	✓

Work Item: Routing

Requirements

- Efficient Usage of Network Resources
 - Inter-network Signalling Optimization
 - No Impact on Existing Network
- 
- Introduction of GLR
 - Paging for Multi-MS
 - Path Minimization
 - Pre-Routing Paging

Documents	System Configuration	Network Requirements	Information Flows
	✓	✓	✓

Work Item: Call/Connection Control

Requirements

- Multicall Services
 - Bearer Change
 - Bearer Negotiation
 - Bearer Modification
 - Codec/Adaptor Control
 - Security Enhancement
- Point-to-multipoint
 - Emergency Call

Documents	System Configuration	Network Requirements	Information Flows
	✓	✓	✓

Annex: ToC of Information Flows (1)

[I] Circuit-Switch Service Information Flows

- 7.1 Information flow diagrams for registration, authentication and privacy related services and network capabilities
- 7.1.1 Common procedure modules
 - 7.1.1.1 UIMF related procedures
 - 7.1.1.2 IMT-2000 user ID retrieval
 - 7.1.2 Detach
 - 7.1.3 Service profile interrogation*
 - 7.1.4 Service profile modification*
 - 7.1.5 Service profile transfer*
 - 7.1.6 Terminal equipment validation
 - 7.1.7 Terminal location registration
 - 7.1.8 Terminal location updating
 - 7.1.9 User authentication
 - 7.1.10 UIM holder verification
 - 7.1.11 Service provider authentication*
 - 7.1.12 Encryption*
 - 7.1.13 Update of user's shared secret data (SSD update)*
 - 7.1.14 Update of user's call history count*
 - 7.1.15 Call history count request procedure*
 - 7.1.16 System access information
 - 7.1.17 Mobile station initialization
- Annex A Missing 2nd generation capability procedures
- A.1 Exchange of authentication data between VLRs to ensure more efficient use of the authentication triples
 - A.2 Subscriber data management procedures
 - A.3 User information interrogation
 - A.4 Fault recovery procedures
 - A.4.1 HLR restart indication
 - A.4.2 Check supplementary services data indication
 - A.4.3 Restore VLR data
 - A.5 Supplementary services control procedures*
 - A.6 New or updated information elements
- Annex B GSM evolved procedures
- B.1 MS-Purge
 - B.2 Provide subscriber info
- Appendix A Structure of TMUI and TMUI assignment source ID*
- Appendix B Distribution of elements of user profile*
- Appendix C Data elements in UIM/User Identification Module)
- Appendix D Allocation and Usage of Identities
- Appendix E Coexistence of Unique and Global Challenge

[II] Packet service and Packet-Circuit switch coordinated Information Flows

1. Information flow diagrams for registration, authentication and privacy related services and network capabilities
- 1.1 Identification procedure [GSM03.60]
 - 1.2 MM Information procedure [GSM03.60]
 - 1.3 Attach[Evolved]
 - Alternative1: Combined MM for CS and PS
 - Alternative2: Separate MM for CS and PS
 - 1.4 Packet Detach[Evolved]
 - 1.4.1 Packet Detach (MS initiated)(RRC Dedicated)
 - 1.4.2 Packet Detach (MS initiated)(RRC RACH/FACH)
 - 1.4.3 Packet Detach (MS initiated)(RACH/FACH)
 - 1.4.4 Packet Detach (MS initiated)(RRC IDLE)
 - 1.4.5 Packet Detach (SGSN initiated)(RRC Dedicated)
 - 1.4.6 Packet Detach (SGSN initiated)(RRC RACH/FACH)
 - 1.5 Purge [GSM03.60]
 - 1.6 Authentication of subscriber [GSM03.60]
 - 1.7 P-TMSI Reallocation [GSM03.60]
 - 1.8 Identity Check [CS terminal equipment validation]
 - Cell update [Evolved]
 - 1.9.1 Intra-URA cell update
 - 1.9.2 Inter-URA Intra-RNC cell update
 - 1.9.3 Inter-RNC Intra-RA cell update
 - 1.9.4 Inter-RA Intra-SGSN cell update
 - 1.9.5 Inter-SGSN cell update
 - 1.10 URA update [Evolved]
 - 1.10.1 RNC URA update
 - 1.10.2 Inter-RNC Intra-RA URA update
 - 1.10.3 Inter-RA Intra-SGSN URA update
 - 1.10.4 Inter-SGSN URA update
 - 1.11 RA update
 - 1.11.1 Intra-SGSN RA update [GSM03.60]
 - 1.11.2 Inter-SGSN RA update [GSM03.60]
 - 1.11.3 Combined Intra-SGSN RA/LA Update [Evolved]
 - 1.11.4 Combined Inter-SGSN RA/LA Update [Evolved]
 - Alternative 1: Combined MM for CS and PS
 - Alternative2: Separate MM for CS and PS

Annex: ToC of Information Flows (2)

- 7.2 • All Control & Radio Resource Management related information flows
- 7.2.1 • Common Procedure Modules
 - 7.2.1.2. Terminal paging
 - 7.2.1.3. Routing (Only Scenario 1-4 and Scenario C with optimal routing capability)
 - 7.2.1.3.1. Routing - Scenario without optimal routing
 - 7.2.1.3.2. Routing - Scenario with optimal routing
 - 7.2.1.5. RRC Connection Control
 - 7.2.1.5.1. RRC Connection Setup
 - 7.2.1.5.2. RRC Connection Release
 - 7.2.1.5.3. Service Setup
 - 7.2.1.5.4. Service Release(Other Service Remains)
 - 7.2.1.6. CS Paging during PS not IDLE
 - 7.2.1.6.1. CS Paging(RRC IDLE)
 - 7.2.1.6.2. CS Paging(RRC RACH/PCH)
 - 7.2.1.6.3. CS Paging(RRC RACH/FACH)
 - 7.2.1.6.4. CS Paging(RRC Dedicated CH)
 - 7.2.1.7. PS Paging
 - 7.2.1.7.1. PS Paging(RRC IDLE)
 - 7.2.1.7.2. PS Paging(RRC RACH/PCH)
 - 7.2.1.8. PS Paging during CS not IDLE
 - 7.2.1.8.1. PS Paging(RRC Dedicated CH)
- 7.2.2. Mobile Outgoing Call
 - 7.2.2.1. Initial outgoing call
 - 7.2.2.2. Outgoing additional call
 - 7.2.2.3. PDP Context Activation by MS Procedure
 - 7.2.2.4. Anonymous Access PDP Context Activation by MS Procedure
- 7.2.3. Mobile Incoming Call
 - 7.2.3.1. Initial incoming call
 - 7.2.3.2. Incoming additional call
 - 7.2.3.3. PDP Context Activation by Network
- 7.2.4. Mobile Call Release
 - 7.2.4.1. Normal release
 - 7.2.4.2. Abnormal release (upon radio link failure)
 - 7.2.4.3. PDP Context Deactivation Initiated by MS
 - 7.2.4.4. Anonymous Access PDP Context Deactivation Initiated by Timer expiry
 - 7.2.4.5. PDP Context Deactivation Initiated by Network
 - 7.2.4.6. Anonymous Access PDP Context Deactivation by Network
- 7.2.5. Emergency Call in Wireless
 - 7.2.5.1. Emergency call setup
 - 7.2.5.2. Emergency call release
- 7.2.6. Data communication and multimedia services
- 7.2.7. Other call control related information flows
 - 7.2.7.1. Codec Bypass
 - 7.2.7.2. Echo Canceller
 - 7.2.7.3. PDP Context Modification by Network
 - 7.2.7.4. PDP Context Modification by User
- 7.2.8. Packet specific information flows according to communication activity level
 - 7.2.8.1. Data Increase in RACH/FACH state
 - 7.2.8.2. Data Decrease in Dedicated state
 - 7.2.8.3. Timer Out in RACH/FACH state
 - 7.2.8.4. Timer Out in RACH/PCH state
 - 7.2.8.5. Uplink access in RACH/PCH state

Annex: ToC of Information Flows (3)

- C.1 General
- C.2 Information Flow Diagram for Process 1 (Handover Evaluation and Trigger)
 - C.2.1 Trigger evaluated by Network side
 - C.2.2 Trigger evaluated by Mobile Terminal side
- C.3 Information Flow Diagram for Process 2, 3 and 4
 - C.3.1 Non-diversity Handover
 - C.3.1.1 Anchor Method
 - C.3.1.2 Non-Anchor Method (Streamlining)
 - C.3.2 Handover Branch Addition
 - C.3.3 Handover Branch Deletion
 - C.3.3.1 Case of deletion by Network side first
 - C.3.3.2 Case of deletion by Mobile Terminal side first
 - C.3.4 Intra-RFTR Non-diversity Handover
 - C.3.4.1 Anchor Method
 - C.3.4.2 Non-Anchor Method
 - C.3.5 Intra-RFTR Branch Addition
 - C.3.6 Intra-RFTR Branch Deletion
 - C.3.6.1 Case of deletion by Network side first
 - C.3.6.2 Case of deletion by Mobile Terminal side first
- C.4 Code Replacement
- C.5 Power Control
- C.6 Outer-Loop Control
- ANNEX 1 Information Flows
- ANNEX 2 Another scheme for Diversity Handover Addition