

<b>Doc For</b>	<b>TSG SA</b>	<b>TSG CN</b>	<b>TSG RAN</b>	<b>TSG T</b>
<b>Decision</b>				
<b>Discussion</b>	<b>X</b>			
<b>Information</b>		<b>X</b>	<b>X</b>	<b>X</b>

**Agenda Item:**

**Source:** TTC

**Title:** TTC Work Items for IMT-2000 - System Aspect TSG

**Document for:** Discussion

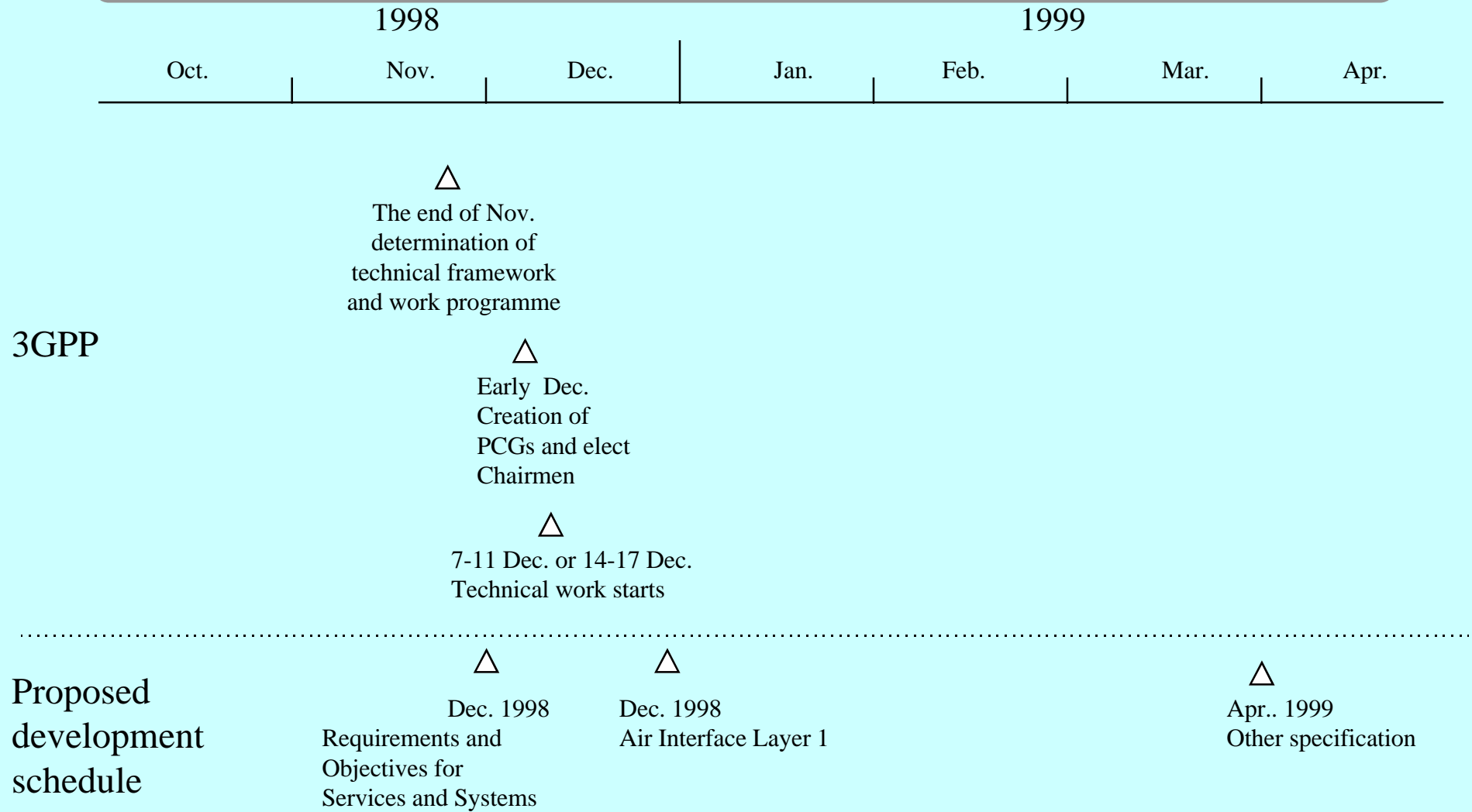
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Please see attached Presentation

**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

# TTC's 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

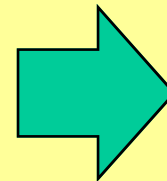
Documents	System Configuration	Network Requirements	Information Flows
	✓	✓	✓



# Work Item: Routing

## Requirements

- Efficient Usage of Network Resources
- Inter-network Signalling Optimization
- No Impact on Existing Network



- Introduction of GLR
- Paging for Multi-MSC
- 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 2<sup>nd</sup> generation capability procedures
  - A.1 Exchange of authentication data between VLRs to ensure more efficient use of the authentication triplets
  - 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(RRC RACH/PCH))
    - 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]
  - 1.9 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]
      - Alternative1: Combined MM for CS and PS
      - Alternative2: Separate MM for CS and PS

# Annex: ToC of Information Flows (2)

## 7.2• Call 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 Celler

#### 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