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**Title:**                    **Information Flows Document**  
**Date:**                    January 20-21, 1999  
**Source:**                 TTC WG6-2 & 6-3  
**Agenda point:**        2  
**Purpose:**                    Discussion

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## **1. Introduction**

Specification of GSM-evolved 3G system has been progressed in TTC aiming at approval of draft specifications in the end of March 1999. After 3GPP is established, TTC plans to transfer all relevant draft specifications to 3GPP. In order to meet TTC's tight schedule, draft 3GPP specifications would need to be approved at the TSG Plenary in March 1999.

This contribution lists TTC documents which are relevant for TSG SA WG2 (Architecture). Also through referring to the listed documents, it addresses the TTC process used to create Information Flows Document. Finally, it is proposed that Information Flows document would be treated as one of base documents, to progress the specification work, in WG2.

## **2. Relevant TTC Draft Specifications**

The following TTC draft specifications are relevant for 3GPP TSG SA WG2.

### (1) Spec. No. 2: System Configuration

TTC currently assumes that Q.1711 (Network Functional Model for IMT-2000; previously known as Q.FNA) is imported from ITU to TTC as this specification. Q.1711 specifies functional entities for IMT-2000. These are used as the basis for discussion of Information Flows in TTC. Also, relevant GSM/UMTS documents could be used as a basis for this specification.

### (2) Spec. No. 6: Requirements for Core Network

There are two documents supposed to be included in Spec. No. 6.

- Q.1701 (Framework for IMT-2000 Network; previously known as Q.FIN)
- GSM evolved network requirements

Q.1701 specifies the framework and guideline for IMT-2000. Especially, it defines 'Family Concept' which is the basis for IMT-2000 standardization. Therefore, TTC assumes that Q.1701 will be used as a framework document for IMT-2000.

Furthermore, TTC assumes that the "GSM evolved network requirements" document, which is being developed by TTC, will be used together with relevant GSM/UMTS documents as the basis for information flow developments. In ETSI documents, several UMTS requirements documents can be found. If these documents are clearly defined and include all TTC requirements, the 'GSM Evolved Network Requirements' document does not have to be one of base documents in 3GPP.

### (3) Spec. No. 3: Information Flows

Based on Q.1721 (previously known as Q.FIF) as of May 1998, Q.1711, and GSM evolved network requirements (TTC document) together with the UMTS/GSM-related documents, TTC is developing an Information Flows document which defines functional relationships between functional entities or logical nodes.

In case of IMT-2000/UMTS, where relationships between multiple functional entities (or logical nodes) is involved in providing a service or requirement, the relationship and functional entity (or logical node) actions have to be clearly defined. Information Flows can define such relationships, overall coordination and actions clearly. Information Flows are very useful to understand overall system capabilities. Also all protocol works inside TTC's protocol groups have been and are to be based on the Information Flows together with the UMTS/GSM-related documents to specify the protocols. Therefore, Information Flows document is regarded as a necessary recommendation in TTC.

The Annex of this contribution presents the Table of Contents of the Information Flow document.

### 3. TTC Process used to create Information Flows Document

Figure 1 shows the process used to create Information Flows in TTC.

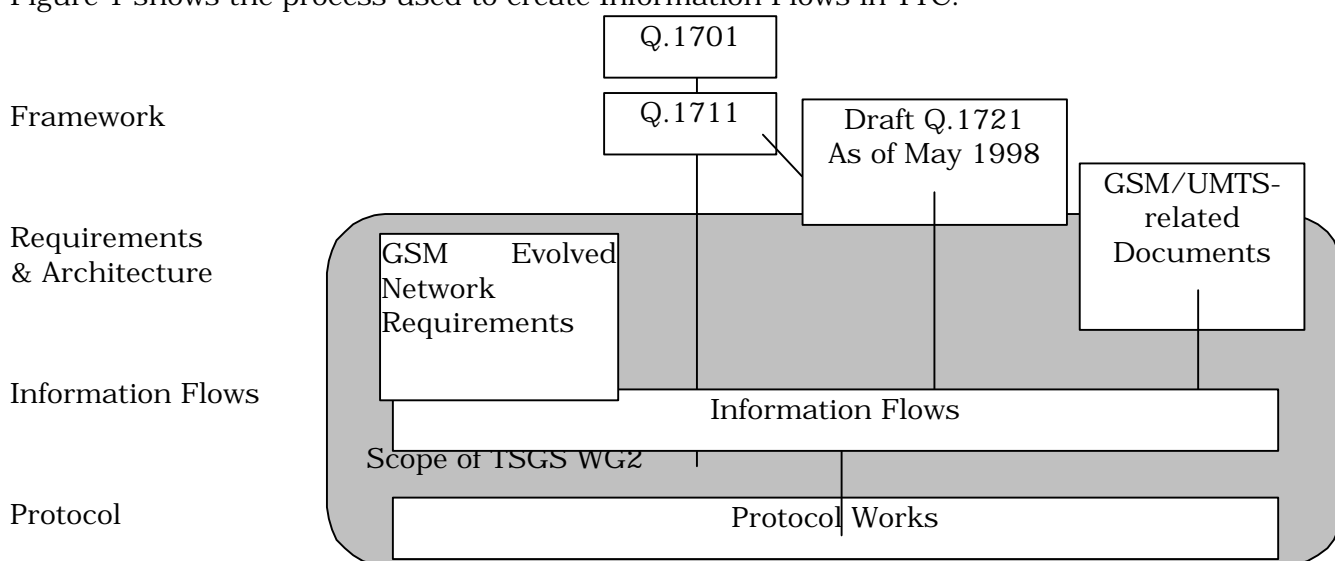


Figure 1. TTC process used to create Information Flows document.

### 4. Relationship of TTC's Information Flow document with GSM/UMTS documents

According to TTC understanding, there are only few GSM or UMTS documents (GSM 09.09 and UMTS xx.yy) defining similar information flows. That is, in GSM and UMTS specification work, information flows have been used as a system design tool to a limited extent only. The Information Flows document developed by TTC aims at describing all information flows at system level. Therefore, TTC feels that this document is useful and should be regarded as one of base documents in 3GPP TSG-S WG2.

Current Information Flows document may include some differences in terms of notation, terminology, network model etc. compared with specifications developed by other SDOs. Although the RAN related part of the document has been newly developed based on new radio technologies, the document is largely in line with existing GSM specifications for the CN part and some draft UMTS specifications. Therefore, especially GSM evolution points and other possible improvements contained in the Information Flows document need to be clarified. Also possible duplications with existing approved GSM specifications need to be identified. Consequently, TTC plans to clarify these issues by the next WG2 meeting so that the usability

of Information Flows document would be clearer to other SDOs and 3GPP work could be accelerated.

## **5. Proposal**

Pending on clarification of the issues mentioned, TTC proposes that TTC's Information Flows document will be used as one of base documents in 3GPP TSG SA WG2 to progress the specification of protocols.

ANNEX. Table of Contents of Information Flows Document

1	Scope
2	Normative references
3	Definitions
4	Symbols and abbreviations
5	Description of Information Flow Modeling Techniques
6	[No contents]
7	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	User ID retrieval
7.1.2	Detach
7.1.2.1	Common procedure modules used
7.1.2.2	Information flow diagram
7.1.2.3	Information flows and associated information elements
7.1.2.4	Functional entity actions (FEAs)
7.1.3	Service profile interrogation [Not specified in TTC GSM Evolved IF PH1]
7.1.4	Service profile modification [Not specified in TTC GSM Evolved IF PH1]
7.1.5	Service profile transfer [Not specified in TTC GSM Evolved IF PH1]
7.1.6	Terminal equipment validation
7.1.6.1	Common procedure modules used
7.1.6.2	Information flow diagram
7.1.6.3	Information flows and information elements
7.1.6.4	Functional entity action
7.1.7	Terminal location updating (when changing LMF)
7.1.7.1	Common procedure modules used
7.1.7.2	Information flow diagram
7.1.7.3	Information flows and associated information elements
7.1.7.4	Functional entity actions (FEAs)
7.1.8	Terminal location updating (without need to update Home LMF)
7.1.8.1	Common procedure modules used
7.1.8.2	Information flow diagram
7.1.8.3	Information flows and associated information elements
7.1.8.4	Functional entity actions (FEAs)
7.1.9	User authentication
7.1.9.1	Common procedure modules used
7.1.9.2	Information flow diagram
7.1.9.3	Information flows and associated information elements
7.1.9.4	Functional entity actions (FEAs)
7.1.10	UIM holder verification
7.1.10.1	Common procedure modules used
7.1.10.2	Information flow diagram
7.1.10.3	Information flows and associated information elements
7.1.10.4	Functional entity actions (FEAs)
7.1.11	Service provider authentication [Not specified in TTC GSM Evolved IF PH1]
7.1.12	Encryption [Not specified in TTC GSM Evolved IF PH1]
7.1.13	Update of user's shared secret data (SSD) [Not specified in TTC GSM Evolved IF PH1]
7.1.14	Update of user's call history count [Not specified in TTC GSM Evolved IF PH1]
7.1.15	Call history count request procedure [Not specified in TTC GSM Evolved IF PH1]
7.1.16	System access information procedures
7.1.16.1	Common procedure modules used
7.1.16.2	Information flow diagrams
7.1.16.3	Information flows and associated information elements
7.1.16.4	Functional entity actions (FEAs)
7.1.17	Mobile station initialization

- 7.1.17.1 Common procedure modules used
- 7.1.17.2 Information flow diagram
- 7.1.17.3 Information flows, associated information elements, and FEAs
- 7.1.18 Missing 2<sup>nd</sup> generation capability procedures
  - 7.1.18.1 Exchange of authentication data between VLRs to ensure more efficient use of the authentication triplets
  - 7.1.18.2 Subscriber data management procedures
  - 7.1.18.3 User information interrogation
  - 7.1.18.4 Fault recovery procedures
  - 7.1.18.5 Supplementary services control procedures [Not specified in GEIF PH1]
  - 7.1.18.6 New or updated information elements
- 7.1.19 GSM evolved procedures
  - 7.1.19.1 MS Purge
  - 7.1.19.2 Provide Subscriber Info
- 7.1.20 Identification procedure
- 7.1.21 MM Information procedure
  - 7.1.21.1 Information flow diagram
  - 7.1.21.2 Information flows
- 7.1.22 Attach
  - 7.1.22.1 Alternative1: Combined MM for CS and PS
  - 7.1.22.2 Alternative2: Separate MM for CS and PS
- 7.1.23 Packet Detach
  - 7.1.23.1 Packet Detach (MS initiated(RRC Dedicated))
  - 7.1.23.2 Packet Detach ( ( MS initiated ( RRC RACH/FACH ) )
  - 7.1.23.3 Packet Detach ( MS initiated ( RRC RACH/PCH ) )
  - 7.1.23.4 Packet Detach ( MS initiated ( RRC IDLE ) )
  - 7.1.23.5 Packet Detach (SGSN initiated(RRC Dedicated))
  - 7.1.23.6 Packet Detach (SGSN initiated(RRC RACH/FACH))
  - 7.1.23.7 Packet Detach ( SGSN initiated ( RRC RACH/PCH ) )
  - 7.1.23.8 Packet Detach ( SGSN initiated ( RRC IDLE ) )
  - 7.1.23.9 Packet Detach ( HLR initiated ( RRC Dedicated ) )
  - 7.1.23.10 Packet Detach ( HLR initiated ( RRC RA/FA ) )
  - 7.1.23.11 Packet Detach (HLR initiated(RRC RACH/PCH))
  - 7.1.23.12 Packet Detach (HLR initiated(RRC IDLE))
- 7.1.24 Purge
- 7.1.25 Authentication of subscriber
- 7.1.26 P-TMSI Reallocation
- 7.1.27 Identity Check
- 7.1.28 CELL UPDATE
  - 7.1.28.1 Intra-URA Intra-RNC Cell Update Procedure
  - 7.1.28.2 Inter-URA Intra-RNC Cell Update Procedure
  - 7.1.28.3 InterRNC ,Intra-RA Cell-Update Procedure
  - 7.1.28.4 Inter-RA ,Intra-SGSN Cell-Update Procedure
  - 7.1.28.5 Inter-SGSN Cell-Update
- 7.1.29 URA UPDATE
  - 7.1.29.1 Intra-RNC URA Update
  - 7.1.29.2 Inter-RNC ,Intra-RA URA-UPDATE
  - 7.1.29.3 Inter-RA ,Intra-SGSN Cell-Update Procedure
  - 7.1.29.4 Inter-SGSN URA-Update
- 7.1.30 RA update
  - 7.1.30.1 Intra-SGSN RA update
  - 7.1.30.2 Inter-SGSN RA update
  - 7.1.30.3 Combined Intra-SGSN RA/LA Update
  - 7.1.30.4 Combined Inter-SGSN RA/LA Update

**APPENDIX A DATA ELEMENTS IN UIM (USER IDENTIFICATION MODULE)**

**7.2. Call Control & Radio Resource Management related information flows**

7.2.1 Common Procedure Modules

**7.2.1.1. Deleted**

**7.2.1.2. Terminal paging**

- 7.2.1.2.1. RACF originated Paging
- 7.2.1.2.2. SACF originated Paging
- 7.2.1.2.3. PSCF originated 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

**7.2.1.4. Deleted**

**7.2.1.5. UE-UTRAN related Connection Control**

- 7.2.1.5.1. RRC Connection Setup
  - 7.2.1.5.1.1. RRC Connection Setup (DCH)
  - 7.2.1.5.1.2. RRC Connection Setup (CCH)
- 7.2.1.5.2. RRC Connection Release
  - 7.2.1.5.2.1. RRC Connection Release(DCH)
  - 7.2.1.5.2.2. RRC Connection Release(CCH)
- 7.2.1.5.3. Transport CH Reconfiguration
  - 7.2.1.5.3.1. Transport CH Reconfiguration (DCH-DCH)
  - 7.2.1.5.3.2. Transport CH Reconfiguration (DCH-CCH)
  - 7.2.1.5.3.3. Transport CH Reconfiguration (CCH-DCH)
  - 7.2.1.5.3.4. Transport CH Reconfiguration (CCH-CCH)
- 7.2.1.5.4. Physical CH Reconfiguration
  - 7.2.1.5.4.1. Physical CH Reconfiguration (DCH-DCH)
  - 7.2.1.5.4.2. Physical CH Reconfiguration (DCH-CCH)
  - 7.2.1.5.4.3. Physical CH Reconfiguration (CCH-DCH)
- 7.2.1.5.5. RACH/FACH and RACH/PCH related Procedure
  - 7.2.1.5.5.1. From RACH/FACH to RACH/PCH transition
  - 7.2.1.5.5.1. From RACH/PCH to RACH/FACH transition
- 7.2.1.5.6. Measurement Control/Report\*

**7.2.1.6. UTRAN-CN related Connection Control**

- 7.2.1.6.1. lu signaling connection setup
- 7.2.1.6.2. lu signaling connection release
- 7.2.1.6.3. Direct Transfer with lu Signaling Connection Establishment

**7.2.1.7. SACF, LMF, and PSCF related Connection Control**

- 7.2.1.7.1. RACF Information Inquiry (CS originated)
- 7.2.1.7.2. RACF Information Inquiry (PS originated)

**7.2.1.8. UE, UTRAN, and CN related Connection Control**

- 7.2.1.8.1. Radio Access Bearer Setup
  - 7.2.1.8.1.1. Radio Access Bearer Setup(DCH-DCH)
  - 7.2.1.8.1.2. Radio Access Bearer Setup(CCH-CCH)
  - 7.2.1.8.1.3. Radio Access Bearer Setup(CCH-DCH)
- 7.2.1.8.2. Radio Access Bearer Release
  - 7.2.1.8.2.1. Radio Access Bearer Release(DCH-DCH)
  - 7.2.1.8.2.2. Radio Access Bearer Release(DCH-CCH)
  - 7.2.1.8.2.3. Radio Access Bearer Release(CCH-CCH)
- 7.2.1.8.3. Radio Access Bearer Reconfiguration
  - 7.2.1.8.3.1. Radio Access Bearer Reconfiguration (DCH-DCH) [ishikawa1]
  - 7.2.1.8.3.2. Radio Access Bearer Reconfiguration (DCH-CCH) [ishikawa2]
  - 7.2.1.8.3.3. Radio Access Bearer Reconfiguration (CCH-DCH) [ishikawa3]
  - 7.2.1.8.3.4. Radio Access Bearer Reconfiguration (CCH-CCH) [ishikawa4]

**7.2.2. Mobile Outgoing Call**

**7.2.2.1. Outgoing CS call addition**

- 7.2.2.1.1. MM IDLE and GMM STANDBY , RRC IDLE
  - 7.2.2.1.1.1. To RRC Dedicated CH
- 7.2.2.1.2. MM IDLE and GMM READY , RRC Dedicated CH
  - 7.2.2.1.2.1. To RRC Dedicated CH
- 7.2.2.1.3. MM IDLE and GMM READY , RRC RACH/FACH
  - 7.2.2.1.3.1. To RRC Dedicated CH
- 7.2.2.1.4. MM IDLE and GMM READY , RRC RACH/PCH
  - 7.2.2.1.4.1. To RRC Dedicated CH
- 7.2.2.1.5. MM READY , RRC Dedicated CH
  - 7.2.2.1.5.1. To RRC Dedicated CH

- 7.2.2.1.6. MM READY , RRC RACH/FACH
    - 7.2.2.1.6.1. To RRC Dedicated CH
  - 7.2.2.2. SMS Setup by UE (CS side) (F.F.S.)\***
    - 7.2.2.2.1. MM IDLE and GMM STANDBY
    - 7.2.2.2.2. MM IDLE and GMM READY
    - 7.2.2.2.3. MM READY
  - 7.2.2.3. PDP Context Activation by UE**
    - 7.2.2.3.1. MM IDLE and GMM STANDBY , RRC IDLE
      - 7.2.2.3.1.1. To RRC Dedicated CH
      - 7.2.2.3.1.2. To RRC RACH/FACH
    - 7.2.2.3.2. MM READY and GMM STANDBY , RRC Dedicated CH
      - 7.2.2.3.2.1. To RRC Dedicated CH
    - 7.2.2.3.3. MM READY and GMM STANDBY , RRC RACH/FACH
      - 7.2.2.3.3.1. To RRC Dedicated CH
      - 7.2.2.3.3.2. To RRC RACH/FACH
    - 7.2.2.3.4. GMM READY , RRC Dedicated CH
      - 7.2.2.3.4.1. To RRC Dedicated CH
    - 7.2.2.3.5. GMM READY , RRC RACH/FACH
      - 7.2.2.3.5.1. To RRC Dedicated CH
      - 7.2.2.3.5.1. To RRC RACH/FACH
    - 7.2.2.3.6. GMM READY , RRC RACH/PCH
      - 7.2.2.3.6.1. To RRC Dedicated CH
      - 7.2.2.3.6.2. To RRC RACH/FACH
  - 7.2.2.4. SMS Setup by UE (PS side) (F.F.S.)\***
    - 7.2.2.4.1. GMM STANDBY and MM IDLE
    - 7.2.2.4.2. GMM STANDBY and MM READY
    - 7.2.2.4.3. GMM READY
  - 7.2.2.5. Anonymous Access PDP Context Activation by MS**
- 7.2.3. Mobile Incoming Call**
- 7.2.3.1. Incoming CS call**
    - 7.2.3.1.1. From MM IDLE and GMM STANDBY , RRC IDLE
      - 7.2.3.1.1.1. To RRC Dedicated CH
    - 7.2.3.1.2. From MM IDLE and GMM READY , RRC Dedicated CH
      - 7.2.3.1.2.1. To RRC Dedicated CH
    - 7.2.3.1.3. From MM IDLE and GMM READY , RRC RACH/FACH
      - 7.2.3.1.3.1. To RRC Dedicated CH
    - 7.2.3.1.4. From MM IDLE and GMM READY , RRC RACH/PCH
      - 7.2.3.1.4.1. To RRC Dedicated CH
    - 7.2.3.1.5. From MM READY , RRC Dedicated CH
      - 7.2.3.1.5.1. To RRC Dedicated CH
    - 7.2.3.1.6. From MM READY , RRC RACH/FACH
      - 7.2.3.1.6.1. To RRC Dedicated CH
  - 7.2.3.2. SMS Setup by NW (CS side) (F.F.S.)\***
    - 7.2.3.2.1. MM IDLE and GMM STANDBY
    - 7.2.3.2.2. MM IDLE and GMM READY
    - 7.2.3.2.3. MM READY
  - 7.2.3.3. PDP Context Activation by Network**
    - 7.2.3.3.1. From MM IDLE and GMM STANDBY , RRC IDLE
      - 7.2.3.3.1.1. To RRC Dedicated CH
      - 7.2.3.3.1.2. To RRC RACH/FACH
    - 7.2.3.3.2. From MM READY and GMM STANDBY , RRC Dedicated CH
      - 7.2.3.3.2.1. To RRC Dedicated CH
    - 7.2.3.3.3. From MM READY and GMM STANDBY , RRC RACH/FACH
      - 7.2.3.3.3.1. To RRC Dedicated CH
      - 7.2.3.3.3.2. To RRC RACH/FACH
    - 7.2.3.3.4. From GMM READY , RRC Dedicated CH
      - 7.2.3.3.4.1. To RRC Dedicated CH
    - 7.2.3.3.5. From GMM READY , RRC RACH/FACH
      - 7.2.3.3.5.1. To RRC Dedicated CH
      - 7.2.3.3.5.2. To RRC RACH/FACH
    - 7.2.3.3.6. From GMM READY , RRC RACH/PCH
      - 7.2.3.3.6.1. To RRC Dedicated CH
      - 7.2.3.3.6.1. To RRC RACH/FACH

- 7.2.3.4. SMS Setup by NW (PS side) (F.F.S.)\*
  - 7.2.3.4.1. GMM STANDBY and MM IDLE
  - 7.2.3.4.2. GMM STANDBY and MM READY
  - 7.2.3.4.3. GMM READY
- 7.2.4. UE initiated Call Release
  - 7.2.4.1. Normal CS Call release
    - 7.2.4.1.1. From MM READY , RRC Dedicated CH
      - 7.2.4.1.1.1. To MM IDLE , RRC Dedicated CH
      - 7.2.4.1.1.2. To MM IDLE , RRC RACH/FACH
      - 7.2.4.1.1.3. To MM IDLE , RRC IDLE
      - 7.2.4.1.1.4. To MM READY , RRC Dedicated CH
      - 7.2.4.1.1.5. To MM READY , RRC RACH/FACH
  - 7.2.4.2. Abnormal release (upon radio link failure)
  - 7.2.4.3. SMS Release by UE(CS side) (F.F.S.)\*
    - 7.2.4.2.1. MM IDLE and GMM STANDBY
    - 7.2.4.2.2. MM IDLE and GMM READY
    - 7.2.4.2.3. MM READY
  - 7.2.4.4. PDP Context Deactivation Initiated by UE
    - 7.2.4.4.1. From GMM READY , RRC Dedicated CH
      - 7.2.4.4.1.1. To GMM STANDBY , RRC Dedicated CH
      - 7.2.4.4.1.2. To GMM STANDBY , RRC RACH/FACH
      - 7.2.4.4.1.3. To GMM STANDBY , RRC IDLE
      - 7.2.4.4.1.4. To GMM READY , RRC Dedicated CH
      - 7.2.4.4.1.5. To GMM READY , RRC RACH/FACH
    - 7.2.4.4.2. From GMM READY , RRC RACH/FACH
      - 7.2.4.4.2.1. To GMM STANDBY , RRC RACH/FACH
      - 7.2.4.4.2.2. To GMM STANDBY , RRC IDLE
      - 7.2.4.4.2.3. To GMM READY , RRC RACH/FACH
    - 7.2.4.4.3. From GMM READY , RRC RACH/PCH
      - 7.2.4.4.3.1. To GMM STADNBY , RRC IDLE
      - 7.2.4.4.3.2. To GMM READY, RRC RACH/FACH
  - 7.2.4.5. SMS Release by UE(PS side) (F.F.S.)\*
    - 7.2.4.5.1. GMM STANDBY and MM IDLE
    - 7.2.4.5.2. GMM STANDBY and MM READY
    - 7.2.4.5.3. GMM READY
  - 7.2.4.6. Anonymous Access PDP Context Deactivation Initiated by Timer expiry
- 7.2.5. NW initiated Call Release
  - 7.2.5.1. Normal CS Call release
    - 7.2.5.1.1. From MM READY , RRC Dedicated CH
      - 7.2.5.1.1.1. To MM IDLE , RRC Dedicated CH
      - 7.2.5.1.1.2. To MM IDLE , RRC RACH/FACH
      - 7.2.5.1.1.3. To MM IDLE , RRC IDLE
      - 7.2.5.1.1.4. To MM READY , RRC Dedicated CH
      - 7.2.5.1.1.5. To MM READY , RRC RACH/FACH
  - 7.2.5.2. Abnormal release (upon radio link failure)
  - 7.2.5.3. SMS Release by NW(CS side) (F.F.S.)\*
    - 7.2.5.3.1. MM IDLE and GMM STANDBY
    - 7.2.5.3.2. MM IDLE and GMM READY
    - 7.2.5.3.3. MM READY
  - 7.2.5.4. PDP Context Deactivation Initiated by NW
    - 7.2.5.4.1. From GMM READY , RRC Dedicated CH
      - 7.2.4.5.1.1. To GMM STANDBY, RRC Dedicated CH
      - 7.2.4.5.1.2. To GMMSTANDBY, RRC RACH/FACH
      - 7.2.4.5.1.3. To GMM STANDBY, RRC IDLE
      - 7.2.4.5.1.4. To GMM READY , RRC Dedicated CH
      - 7.2.4.5.1.5. To GMM READY , RRC RACH/FACH
    - 7.2.5.4.2. From GMM READY , RRC RACH/FACH
      - 7.2.5.4.2.1. To GMM STANDBY, RRC RACH/FACH
      - 7.2.4.5.2.2. To GMM STANDBY, RRC IDLE
      - 7.2.4.5.1.3. To GMM READY , RRC RACH/FACH
    - 7.2.5.4.3. From GMM READY , RRC RACH/PCH
      - 7.2.4.5.3.1. To GMM STANDBY, RRC IDLE
      - 7.2.4.5.3.1. To GMM READY, RRC RACH/FACH



- 7.2.5.5. SMS Release by NW(PS side) (F.F.S.)\***
  - 7.2.5.5.1. GMM STANDBY and MM IDLE
  - 7.2.5.5.2. GMM STADNBY and MM READY
  - 7.2.5.5.3. GMM READY
- 7.2.5.6. Anonymous Access PDP Context Deactivation by Network**
- 7.2.6. Emergency Call in Wireless\***
  - 7.2.6.1. Emergency call setup
  - 7.2.6.2. Emergency call release
- 7.2.7. Data communication and multimedia services\***
- 7.2.8. Other call control related information flows**
  - 7.2.8.1. Codec Bypass**
  - 7.2.8.2. Echo Cancellor**
  - 7.2.8.3. PDP Context Modification by NW**
    - 7.2.8.3.1. Radio Access Bearer Reconfiguration (DCH-DCH) applied
    - 7.2.8.3.2. Radio Access Bearer Reconfiguration (DCH-CCH) applied
    - 7.2.8.3.3. Radio Access Bearer Reconfiguration (CCH-DCH) applied
    - 7.2.8.3.4. Radio Access Bearer Reconfiguration (CCH-CCH) applied
  - 7.2.8.4. PDP Context Modification by UE**
    - 7.2.8.4.1. Radio Access Bearer Reconfiguration (DCH-DCH) applied
    - 7.2.8.4.2. Radio Access Bearer Reconfiguration (DCH-CCH) applied
    - 7.2.8.4.3. Radio Access Bearer Reconfiguration (CCH-DCH) applied
    - 7.2.8.4.4. Radio Access Bearer Reconfiguration (CCH-CCH) applied
  - 7.2.8.5. Circuit Switched Service Modification by NW**
    - 7.2.8.5.1. Radio Access Bearer Reconfiguration (DCH-DCH) applied
  - 7.2.8.6. Circuit Switched Service Modification by UE**
    - 7.2.8.5.2. Radio Access Bearer Reconfiguration (DCH-DCH) applied
- 7.2.9. Packet specific information flows according to communication level**
  - 7.2.9.1. Traffic Density Increase**
    - 7.2.9.1.1. Physical CH Reconfiguration (CCH-DCH) applied
    - 7.2.9.1.2. Transport CH Reconfiguration (CCH-DCH) applied
    - 7.2.9.1.3. Transport CH Reconfiguration (DCH-DCH) applied
  - 7.2.9.2. Traffic Density Decrease**
    - 7.2.9.2.1. Physical CH Reconfiguration (DCH-CCH) applied
    - 7.2.9.2.2. Transport CH Reconfiguration (DCH-CCH) applied
    - 7.2.9.2.3. Transport CH Reconfiguration (DCH-DCH) applied
  - 7.2.9.3. Timer out in RACH/FACH state (URA Timer Expiry)**
  - 7.2.9.4. Timer out in RACH/PCH state (READY Timer Expiry)**
  - 7.2.9.5. Uplink access in RACH/PCH state**
  - 7.2.9.6. URA Paging**

Note – the sections with \* marks will be provided by the end of January 1999.

### **7.3 Handover Related Information Flows**

- 7.3.1 General
- 7.3.2 Information Flow Diagram for Process 2, 3 and 4
  - 7.3.2.1 Non-diversity Handover
    - 7.3.2.1.1 Anchor Method
    - 7.3.2.1.2 Non-Anchor Method (Streamlining)
    - 7.3.2.1.3 Inter System Hard Handover
  - 7.3.2.2 Handover Radio Link Addition
  - 7.3.2.3 Handover Radio Link Deletion
    - 7.3.2.3.1 Case of deletion by Network side first
    - 7.3.2.3.2 Case of deletion by Mobile Terminal side first
  - 7.3.2.4 Intra-RFTR Non-diversity Handover
    - 7.3.2.1 Anchor Method
    - 7.3.2.2 Non-Anchor Method
  - 7.3.2.5 Intra-RFTR Radio Link Addition
  - 7.3.2.6 Intra-RFTR Radio Link Deletion
    - 7.3.2.6.1 Case of deletion by Network side first
    - 7.3.2.6.2 Case of deletion by Mobile Terminal side first
  - 7.3.2.7 Handover Radio Link Addition & Deletion
- 7.3.3 Power Control
- 7.3.4 Outer-Loop Control
- ANNEX 1 Information Flows

ANNEX 2 Another scheme for Diversity Handover Addition