3GPP TS 23.122 V7.0.0 (2005-01)

Technical Specification

3rd Generation Partnership Project; Technical Specification Group Core Network; NAS Functions related to Mobile Station (MS) in idle mode (Release 7)



The present document has been developed within the 3rd Generation Partnership Project (3GPP TM) and may be further elaborated for the purposes of 3GPP.

The present document has not been subject to any approval process by the 3GPP Organisational Partners and shall not be implemented. This Specification is provided for future development work within 3GPP only. The Organisational Partners accept no liability for any use of this Specification.



Keywords

UMTS, network, terminal

3GPP

Postal address

3GPP support office address

650 Route des Lucioles - Sophia Antipolis Valbonne - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet

http://www.3gpp.org

Copyright Notification

No part may be reproduced except as authorized by written permission. The copyright and the foregoing restriction extend to reproduction in all media.

© 2005, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TTA, TTC). All rights reserved.



Contents

Forew	ord	
1	Scope	
1.1	References	
1.2	Definitions and abbreviations	
2	General description of idle mode	
3	Requirements and technical solutions	
3.1	PLMN selection and roaming	
3.2	Regional provision of service	
3.3	Borders between registration areas	
3.4	Access control	
3.4.1	Access control	1
3.4.2	Forbidden LA for regional provision of service	1
3.5	No suitable cell (limited service state)	1
3.6	CTS fixed part selection (A/Gb mode only)	1
4	Overall process structure	1
4 4.1	Process goal	
4.1	States description	
4.2	List of states	
4.3.1	List of states for the PLMN selection process	
4.3.1.1	•	
4.3.1.2		
4.3.2	List of states for location updating (figure 3)	
4.3.3	List of states for location registration (figure 3)	
4.4	PLMN selection process	
4.4.1	Introduction	
4.4.2	Registration on a PLMN	
4.4.3	PLMN selection	
4.4.3.1		
4.4.3.1	· · · · · · · · · · · · · · · · · · ·	
4.4.3.1		
4.4.3.2	User reselection	1
4.4.3.2	2.1 Automatic Network Selection Mode	1
4.4.3.2	2.2 Manual Network Selection Mode	1
4.4.3.3		
4.4.3.4	6 · I	
4.4.4	Abnormal cases	
4.4.5	Roaming not allowed in this LA	
4.5	Location registration process	
4.5.1	General	
4.5.2	Initiation of Location Registration	
4.5.3	Periodic Location Registration	
4.5.4	IMSI attach/detach operation	
4.5.5	No Suitable Cells In Location Area	
4.6	Service indication (A/Gb mode only)	
4.7 4.8	Pageability of the mobile subscriber MM Restart Procedure	
5	Tables and Figures	
Anne	x A (normative): HPLMN Matching Criteria	28
Anne	x B (normative): PLMN matching criteria to be of same country as VPLMN	3
Anne	x C (informative): Change history	3



Foreword

This Technical Specification (TS) has been produced by the 3rd Generation Partnership Project (3GPP).

The present document specifies functions related to Mobile Station (MS) in idle mode and within the 3GPP system.

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.



1 Scope

The present document gives an overview of the tasks undertaken by the Core network protocols of a Mobile Station (MS) when in idle mode, that is, switched on but typically not having a dedicated channel allocated. It also describes the corresponding network functions. The idle mode functions are also performed by a GPRS MS as long as no dedicated channel is allocated to the MS. The conditions when the idle mode functions are performed by an MS in the UTRA RRC connected mode states are specified in TS 25.331.

This 3GPP TS outlines how the requirements of the 22 series Technical Specifications (especially 3GPP TS 22.011) on idle mode operation shall be implemented. Further details are given in 3GPP TS 24.008.

Clause 2 of this 3GPP TS gives a general description of the idle mode process. Clause 3 outlines the main requirements and technical solutions of those requirements. Clause 4 describes the processes used in idle mode. There is inevitably some overlap between these clauses.

1.1 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document.*

[1]	Void.
[2]	3GPP TS 22.001: "Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN)".
[3]	3GPP TS 22.002: "Circuit Bearer Services (BS) supported by a Public Land Mobile Network (PLMN)".
[4]	3GPP TS 22.003: "Circuit Teleservices supported by a Public Land Mobile Network (PLMN)".
[5]	3GPP TS 22.004: "General on supplementary services".
[6]	Void.
[7]	Void
[8]	Void.
[9]	3GPP TS 22.011: "Service accessibility".
[10]	3GPP TS 22.016: "International Mobile station Equipment Identities (IMEI)".
[11]	Void.
[12]	3GPP TS 22.024: "Description of Charge Advice Information (CAI)".
[13]	3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)".
[14]	Void.
[15]	3GPP TS 22.041: "Operator Determined Barring (ODB)".
[16]	3GPP TS 22.081: "Line identification Supplementary Services; Stage 1".



DOCKET

Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

