

# ETSI TS 145 015 V4.1.0 (2006-01)

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*Technical Specification*

**Digital cellular telecommunications system (Phase 2+);  
Release independent Downlink Advanced  
Receiver Performance (DARP);  
Implementation guidelines  
(3GPP TS 45.015 version 4.1.0 Release 4)**

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Reference

RTS/TSGG-0145015v410

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Keywords

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# Foreword

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Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
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- 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.

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# 1 Scope

The present document specifies requirements on MSs supporting Downlink Advanced Receiver Performance (DARP) that are independent of release. TSG GERAN has agreed that the standardisation of DARP be independent of a release. However, in order to implement an MS that conforms to a particular release but supports DARP, which is specified in a later release, it is necessary to specify some extra requirements.

DARP is contained in the Release 6 specifications. In order to implement an MS conforming to Release 4 but supporting DARP, it is necessary for the MS to additionally conform to some parts of the Release 6 specifications, such as the radio frequency requirements for DARP and some signalling extensions relating to the MS Classmark and radio access capabilities.

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# 2 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] 3GPP TS 45.005: "Radio transmission and reception (Release 6)".

[2] 3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core Network protocols; Stage 3 (Release 6)".

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# 3 Definitions and abbreviations

Unless listed below, all definitions and abbreviations used in the present document are listed in documents referenced in clause 2.

## 3.1 Abbreviations

For the purposes of the present document, the following abbreviations apply:

DARP                      Downlink Advanced Receiver Performance

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# 4 DARP MS Independent of Release

MSs that conform to Release 4 and support DARP shall support the following requirements in Release 6.

## 4.1 RF Requirements

The MS shall comply with the RF requirements for DARP specified in [1]. These requirements are:

Section 6.3: Reference interference level.

## 4.2 Signalling Requirements

The MS shall support the following information elements specified in [2]:

Section 10.5.1.7 Mobile Station Classmark 3, with the following exceptions:

- Fields *High Multislot Capability*, *GERAN Iu mode Capabilities*, *T-GSM 400 Bands Supported / T-GSM 400 Associated Radio Capability*, *T-GSM 900 Associated Radio Capability* and *DTM GPRS High Multi Slot Class / Offset required / DTM EGPRS High Multi Slot Class* shall be indicated as not present since they are not defined in Release 4. This is done by setting the indication bit to '0'.
- Parameters *GERAN Feature Package 2* and *DTM Enhancements Capability* shall be indicated as not supported since they are not defined in Release 4. This is done by setting the bit value '0' for each of these parameters.
- In addition, for *GMSK Multislot Power Profile* and *8-PSK Multislot Power Profile*, the value '00' shall be used as it indicates the same power reduction as defined in Release 4 except that the Release 4 MS might be transmitting at 1dB higher than indicated by this parameter.

Section 10.5.5.12a MS Radio Access Capability, with the following exceptions:

- Fields *High Multislot Capability*, *GERAN Iu Mode Capabilities* and *DTM GPRS High Multi Slot Class / DTM EGPRS High Multi Slot Class* shall be indicated as not present since they are not defined in Release 4. This is done by setting the indication bit to '0'.
- Parameters *Multiple TBF Capability*, *Extended RLC/MAC Control Message Segmentation Capability*, *DTM Enhancements Capability* and *PS Handover Capability* shall be indicated as not supported since they are not defined in Release 4. This is done by setting the bit value '0' for each of these parameters.
- In addition, for *Access Technology Type*, the values '1001' through to '1011' shall not be used since GSM T 380, GSM T 410 and GSM T 900 are not supported in Release 4; and for *GMSK Multislot Power Profile* and *8-PSK Multislot Power Profile*, the value '00' shall be used as it indicates the same power reduction as defined in Release 4 except that the Release 4 MS might be transmitting at 1dB higher than indicated by this parameter.

NOTE: The lack of one or more of the fields following the Downlink Advanced Receiver Performance field in Mobile Station Classmark 3 IE or MS Radio Access Capability IE should not be considered as an error by the network. In this case the meaning "not supported" or "not present" should be assumed as indicated above.

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## Annex A (informative): Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
2004-11	22	GP-042853			Version for Release 4		4.0.0
2006-01	28	GP-060329	0003	2	Release independent DARP Implementation guidelines update	4.0.0	4.1.0



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# History

<b>Document history</b>		
V4.0.0	November 2004	Publication
V4.1.0	January 2006	Publication