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**Digital cellular telecommunications system (Phase 2+) (GSM);
Universal Mobile Telecommunications System (UMTS);
General Packet Radio Service (GPRS);
GPRS Tunnelling Protocol (GTP)
across the Gn and Gp interface
(3GPP TS 29.060 version 13.3.0 Release 13)**

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GSM® GLOBAL SYSTEM FOR MOBILE COMMUNICATIONS

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Foreword

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

The present document defines the Gn and Gp interfaces for the General Packet Radio Service (GPRS) within the 3GPP system.

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1 Scope

The present document defines the second version of GTP used on:

- the Gn and Gp interfaces of the General Packet Radio Service (GPRS);
- the Iu, Gn and Gp interfaces of the UMTS system.

NOTE: The version number used in the message headers is 0 for the first version of GTP described in GSM 09.60, and 1 for the second version in 3GPP TS 29.060.

From release 8 onwards, the normative specification of the user plane of GTP version 1 is 3GPP TS 29.281 [41]. All provisions about GTPv1 user plane in the present document shall be superseded by 3GPP TS 29.281 [41].

The present document specifies functions, procedures and information which apply to GERAN Iu mode. However, functionality related to GERAN Iu mode is neither maintained nor enhanced.

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.
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- 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 TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.003: "Numbering, addressing and identification".

[3] 3GPP TS 23.007: "Restoration procedures".

[4] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".

[5] 3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core network protocols; Stage 3".

[6] 3GPP TS 29.002: "Mobile Application Part (MAP) specification".

[7] 3GPP TS 25.413: "UTRAN Iu interface RANAP signalling".

[8] 3GPP TS 33.102: "3G security; Security architecture".

[9] 3GPP TS 43.020: " Security related network functions".

[10] Void.

[11] 3GPP TS 44.064: "Mobile Station - Serving GPRS Support Node (MS-SGSN) Logical Link Control (LLC) layer specification".

[12] IETF RFC 791 (STD 0005): "Internet Protocol", J. Postel.

[13] IETF RFC 768 (STD 0006): "User Datagram Protocol", J. Postel.

[14] IETF RFC 3232: "Assigned numbers", J. Reynolds.

[15] Void.

[16] Void.