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Evolved General Packet Radio Service (GPRS)  
Tunnelling Protocol for Control plane (GTPv2-C);  
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# Foreword

This Technical Specification has been produced by the 3<sup>rd</sup> Generation Partnership Project (3GPP).

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

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- 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.
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# 1 Scope

The present document specifies the stage 3 of the control plane of the GPRS Tunnelling Protocol, Version 2 (GTPv2-C).

GTPv2-C shall be used over:

- the S2a, S2b, S3, S4, S5, S8, S10, S11, S16, Sm and Sn signalling interfaces in EPC, specified in 3GPP TS 23.401 [3] and 3GPP TS 23.402 [45].
- the N26 signalling interface between EPC and 5GC, specified in 3GPP TS 23.501 [82] and 3GPP TS 23.502 [83].

GTPv2-C based protocols shall also be used over the Sv (see 3GPP TS 29.280 [15]) and S101/S121 (see 3GPP TS 29.276 [14]) interfaces.

In this document, unless otherwise specified, the S2a, S2b, S5 and S8 interfaces refer to the GTP-based S2a, S2b, S5 and S8 interfaces respectively.

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.

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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 TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 23.003: "Numbering, addressing and identification".
- [3] 3GPP TS 23.401: "General Packet Radio Service (GPRS) enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access".
- [4] 3GPP TS 29.060: "General Packet Radio Service (GPRS); GPRS Tunnelling Protocol (GTP) across the Gn and Gp interface".
- [5] 3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core network protocols; Stage 3".
- [6] IETF RFC 791 (STD 0005): "Internet Protocol", J. Postel.
- [7] IETF RFC 768 (STD 0006): "User Datagram Protocol", J. Postel.
- [8] 3GPP TS 32.251: "Telecommunication Management; Charging Management; Packet Switched (PS) domain charging.
- [9] 3GPP TS 32.298: "Telecommunication Management; Charging Management; Charging Data Record (CDR) parameter classification.
- [10] 3GPP TS 36.413: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 Application Protocol (S1AP)".
- [11] 3GPP TS 33.102: "3G security; Security architecture".