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Foreword

This Technical Specification has been produced by the 3rd 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:

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1 Scope

The present document specifies the 5G radio network layer signalling protocol for the E1 interface. The E1 interface provides means for interconnecting a gNB-CU-CP and a gNB-CU-UP of a gNB within an NG-RAN, or for interconnecting a gNB-CU-CP and a gNB-CU-UP of an en-gNB within an E-UTRAN, or for interconnecting an eNB-CP and an eNB-UP of an eNB within an E-UTRAN, or for interconnecting an ng-eNB-CU-CP and an ng-eNB-CU-UP of an ng-eNB within an NG-RAN. The E1 Application Protocol (E1AP) supports the functions of E1 interface by signalling procedures defined in the present document. E1AP is developed in accordance to the general principles stated in TS 38.401 [2] and TS 37.480 [3].

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 38.401: "NG-RAN; Architecture Description".
- [3] 3GPP TS 37.480: "E1 general aspects and principles".
- [4] 3GPP TS 38.300: "NR; Overall description; Stage-2".
- [5] 3GPP TR 25.921 (version.7.0.0): "Guidelines and principles for protocol description and error".
- [6] 3GPP TS 38.413: "NG-RAN; NG Application Protocol (NGAP)".
- [7] ITU-T Recommendation X.691 (2002-07): "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".
- [8] ITU-T Recommendation X.680 (07/2002): "Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation".
- [9] ITU-T Recommendation X.681 (07/2002): "Information technology – Abstract Syntax Notation One (ASN.1): Information object specification".
- [10] 3GPP TS 38.331: "NR; Radio Resource Control (RRC); Protocol Specification".
- [11] 3GPP TS 23.401: "General Packet Radio Service (GPRS) Enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access".
- [12] 3GPP TS 23.203: "Policy and Charging Control Architecture".
- [13] 3GPP TS 33.501: "Security Architecture and Procedures for 5G System".
- [14] IETF RFC 5905: "Network Time Protocol Version 4: Protocol and Algorithms Specification".
- [15] 3GPP TS 29.281: "General Packet Radio System (GPRS) Tunnelling Protocol User Plane (GTPv1-U)".
- [16] 3GPP TS 38.414: "NG-RAN; NG Data Transport".
- [17] 3GPP TS 38.323: "NR; Packet Data Convergence Protocol (PDCP) specification".