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Foreword

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

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Introduction

The present document is part of a TS-family covering the 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication management; as identified below:

32.401	Performance Management (PM); Concept and requirements
52.402	Performance Management (PM); Performance measurements – GSM
32.404	Performance Management (PM); Performance measurements - Definitions and template
32.405	Performance Management (PM); Performance measurements Universal Terrestrial Radio Access Network (UTRAN)
32.406	Performance Management (PM); Performance measurements Core Network (CN) Packet Switched (PS) domain
32.407	Performance Management (PM); Performance measurements Core Network (CN) Circuit Switched (CS) domain
32.408	Performance Management (PM); Performance measurements Teleservice
32.409	Performance Management (PM); Performance measurements IP Multimedia Subsystem (IMS)
32.452	Performance Management (PM); Performance measurements Home Node B Subsystem (HNS)
32.453	**Performance Management (PM); Performance measurements Home enhanced Node B Subsystem (HeNS)**

The present document is part of a set of specifications, which describe the requirements and information model necessary for the standardised Operation, Administration and Maintenance (OA&M) of a multi-vendor Home enhanced Node B Subsystem (HeNS).

During the lifetime of HeNS, its logical and physical configuration will undergo changes of varying degrees and frequencies in order to optimise the utilisation of the network resources. These changes will be executed through network configuration management activities and/or network engineering, see 3GPP TS 32.600 [1].

Many of the activities involved in the daily operation and future network planning of HeNS require data on which to base decisions. This data refers to the load carried by the network and the grade of service offered. In order to produce this data performance measurements are executed in the NEs, which comprise the network. The data can then be transferred to an external system, e.g. an Operations System (OS) in TMN terminology, for further evaluation. The purpose of the present document is to describe the mechanisms involved in the collection of the data and the definition of the data itself.

Annex B of TS 32.404[2] helps in the definition of new performance measurements that can be submitted to 3GPP for potential adoption and inclusion in the present document. Annex B of TS 32.404[2] discusses a top-down performance measurement definition methodology that focuses on how the end-user of performance measurements can use the measurements.

1 Scope

The present document describes the measurements for Home enhanced Node B Subsystem (HeNS).
HeNS [3] is consists of a HeNB and optionally a HeNB GW. And, it is connected by means of the standard S1 interface to the EPC (Evolved Packet Core), more specifically to the MME (Mobility Management Entity) by means of the S1-MME interface and to the Serving Gateway (S-GW) by means of the S1-U interface
TS 32.401 [4] describes Performance Management concepts and requirements.
The present document is valid for all measurement types provided by an implementation of HeNS.
Only measurement types that are specific to HeNS are defined within the present documents. Vendor specific measurement types used in HeNS are not covered. Instead, these could be applied according to manufacturer's documentation.

Measurements related to "external" technologies (such as ATM or IP) as described by "external" standards bodies (e.g. ITU-T or IETF) shall only be referenced within this specification, wherever there is a need identified for the existence of such a reference.

The definition of the standard measurements is intended to result in comparability of measurement data produced in a multi-vendor network, for those measurement types that can be standardised across all vendors' implementations.

The structure of the present document is as follows:

- Header 1: Network Element (e.g. measurements related to HeNB and HeNB GW);
- Header 2: Measurement function (e.g. HeNB registration measurements);
- Header 3: Measurements.

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 32.600: "Telecommunication management; Configuration Management (CM); Concept and high-level requirements".

[2] 3GPP TS 32.404: "Performance Management (PM); Performance measurements - Definitions and template".

[3] 3GPP TS 23.401: “General Packet Radio Service (GPRS) enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access”.

[4] 3GPP TS 32.401: "Telecommunication management; Performance Management (PM); Concept and requirements".

[5] 3GPP TS 36.300: "Evolved Universal Terrestrial Radio Access (E-UTRA); and Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Overall description; Stage 2 (Release 9)".

[6] 3GPP TS 36.413: "Technical Specification Group Radio Access Network; Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 Application Protocol (S1AP)".

[7] 3GPP TS 36.331: "Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Resource Control (RRC) protocol specification".