SLOVENSKI STANDARD
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Harmonizacija telekomunikacij in internetnega protokola prek omreġij (TIPHON), 4. izdaja - Definicija zahtev protokolnega vmesnika - Specifikacija TIPHON razġirjenega paketa H.248/MEGACO (EMP) - ICF krmiljenje prek referenį ne toį ke

Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON) Release 4; Interface Protocol Requirements Definition; TIPHON Extended H.248/MEGACO Package (EMP) Specification; ICF Control over Reference Point

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Technical Specification

Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON) Release 4; Interface Protocol Requirements Definition; TIPHON Extended H.248/MEGACO Package (EMP) Specification; ICF Control over Reference Point

Reference
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Foreword

This Technical Specification (TS) has been produced by ETSI Project Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON).

Introduction

The purpose of this H.248/MEGACO package is to extend the currently available standard packages to allow control of Quality of Service and Media Firewall functions using the H.248/MEGACO protocol. It complements the Release 4 H.248/MEGACO Technology Mapping for Reference Point N (see TS 101 885 [1]).

1 Scope

The present document is applicable to TIPHON reference point I3 and provides a H.248/MEGACO Package for use in implementing the relevant interface.

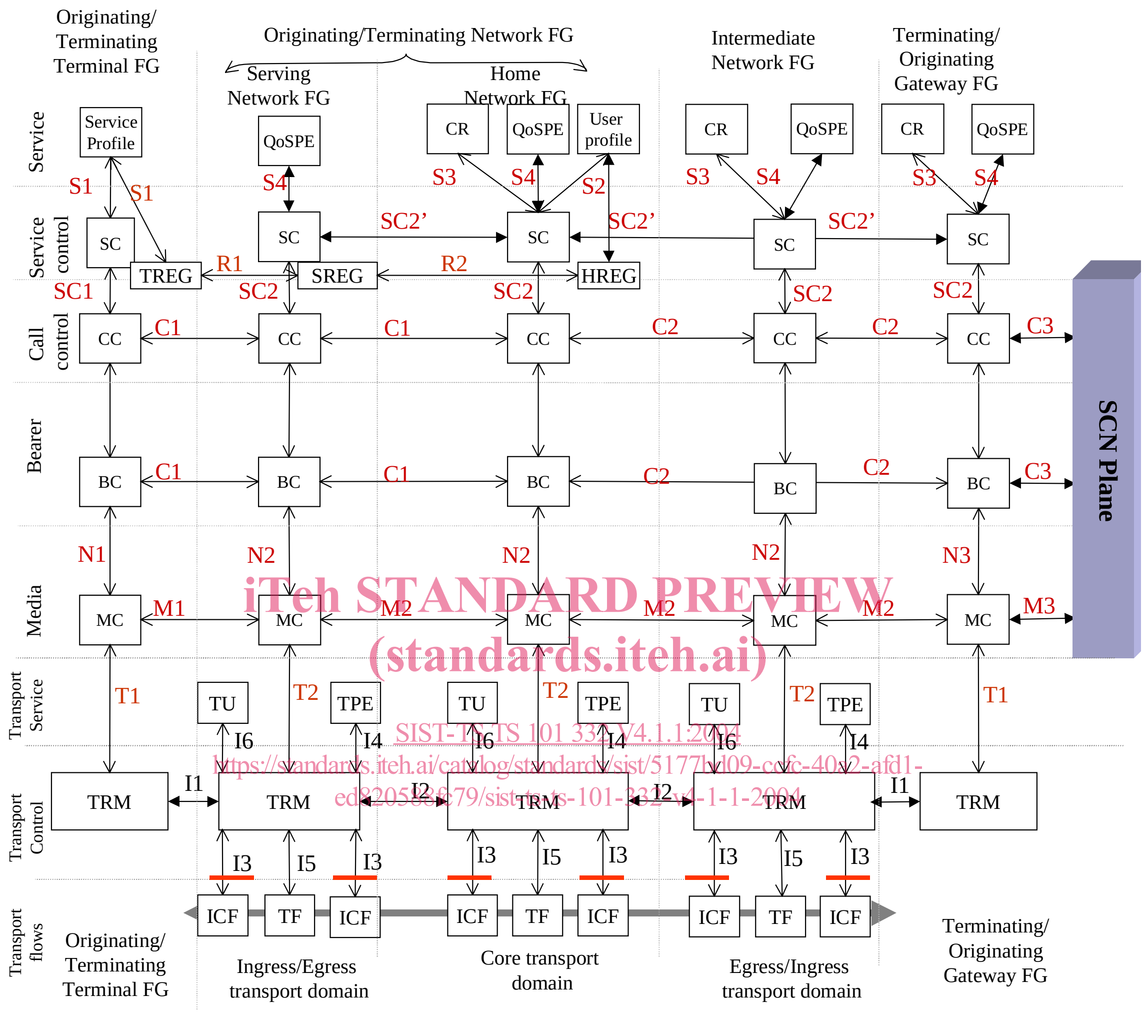

Figure 1: Entities involved in control over the reference point

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 and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

[1] ETSI TS 101 885: "Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON) Release 3; Technology Mapping; Technology Mapping of TIPHON reference point N to H.248/MEGACO protocol".

[2] IETF RFC 2234 (1997): "Augmented BNF for Syntax Specifications: ABNF".

[3] IETF RFC 3015 (2000): "Megaco Protocol Version 1.0".

[4] IETF RFC 2216: "Network Element Service Specification Template".

3 Definitions

For the purposes of the present document, the following term and definition applies:

middlebox: physical implementation of an InterConnect Function (ICF)

4 Middlebox Package

Package ID: EMP (0x????).

Version : 1.

Extends: None.

This package defines a property to enable the MGC to act as a MIDCOM Agent and control a "gateway" acting as a Middlebox.

4.1 Properties

1) **Interface ID**

- **Description:** a MB can have a number of logical interfaces, each of which is associated with an IP addressing space/range external to the MB. This property enables the controller to explicitly identify the logical interface that is applicable to the related ephemeral termination.

- **Property ID:** iface (0x0001).
- **Type:** integer.
- **Possible Values:** any.
- **Defined in:** termination state descriptor.
- **Characteristics:** read/write.

2) **Token Rate**

- **Description:** denotes the continually sustainable data rate (in Kbytes/second) against an ephemeral termination. In addition, the Middlebox requires a "bucket size" to be specified so that it can provide a Token Bucket in accordance with RFC 2216 [4]. It is assumed that the "bucket size" is specified external to this package (e.g. via management). Any packets that exceed the token bucket ((Token Rate x T) + (Bucket Size)) over a time period T shall be silently discarded by the Middlebox. However, the Middlebox shall report the number of discarded octets/packets - see Statistics. This parameter would typically be set against an external/untrusted ephemeral. Absence of this parameter means that no rate checking is performed against the ephemeral termination.
- **Property ID:** tokenrate (0x0002).
- **Type:** Integer.
- **Possible Values:** 0-65535.
- **Defined in:** termination state descriptor.
- **Characteristics:** read/write.

3) **Pin-Hole Time To Live**

- **Description:** denotes the TTL of the pin-hole (in seconds). If absent, an infinite TTL shall be assumed.
- **Property ID:** phttl (0x0003).
- **Type:** 32bit Integer.
- **Possible Values:** any.
- **Defined in:** local control descriptor.
- **Characteristics:** read/write.

NOTE: It can be derived from SDP as well. SDP allows the use of send and receive only flows which provides the means to give a choose on the addresses on the middlebox.

4.2 Events

1) **Pin-Hole Timer Expired**

- **Event ID:** phtoexp (0x000A).
- **Event Description Parameters:** None.
- **Observed Event Description Parameters:** None.

4.3 Signals

None.

4.4 Statistics

1) **Packets Discarded**

- **Statistic ID:** pd (x0001).
- **Description:** Denotes the number of packets (against the ephemeral termination) silently discarded by the Middlebox. The packets may have been discarded either due to failing a source address/port check or if the flow rate exceeds the pre-determined Bandwidth Context.
- **Type:** UINT64.
- **Possible Values:** Any.

2) **Octets Discarded**

- **Statistic ID:** od (x0002).
- **Description:** Denotes the number of octets silently discarded (against the ephemeral termination) by the Middlebox.
- **Type:** UINT64.
- **Possible Values:** Any.

It should also be noted that it is assumed that statistics relating to transmitted packets and octets is obtained (inter alia) via the existing NETWORK and RTP Package statistics.