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Technical Report

Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON) Release 3; Terms and Definition

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Foreword

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

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1 Scope

The present document specifies the definition the definition of terms to be adopted for all deliverables contained in TIPHON Release 3.

2 References

For the purposes of this Technical Report (TR) the following references apply:

[1]	ITU-T Recommendation Q.931: "ISDN user-network interface layer 3 specification for basic call control".
[2]	ITU-T Recommendation E.164: "The international public telecommunication numbering plan".
[3]	ITU-T Recommendation G.100: "Definitions used in Recommendations on general characteristics of international telephone connections and circuits".
[4]	ITU-T Recommendation H.323: "Packet-based multimedia communications systems".
[5]	ITU-T Recommendation I.112: "Vocabulary of terms for ISDNs".
[6]	ITU-T Recommendation G.111: "Loudness ratings (LRs) in an international connection".
[7]	ITU-T Recommendation G.121: "Loudness ratings (LRs) of national systems".
[8]	ITU-T Recommendation P.64: "Determination of sensitivity/frequency characteristics of local telephone systems". (standards.iteh.ai)
[9]	ITU-T Recommendation P.76: "Determination of loudness ratings; fundamental principles".
[10]	SIST-TP TR 102 008 V1.1.1.2004 ITU-T Recommendation P.79: "Calculation of loudness ratings for telephone sets".
[11]	ITU-T Recommendation 1.210: "Principles of telecommunication services supported by an ISDN and the means to describe them".
[12]	IETF RFC 1631: "The IP Network Address Translator (NAT)".
[13]	ISO/IEC 9646 (all parts): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

access provider: provides a user of some network with access from the user's terminal to that network

accounting: process of collecting the call information data for purposes of attributing costs between service providers or network operators

address: string or combination of digits and symbols which identifies the specific termination points of a connection/session and is used for routeing

administrative domain: collection of physical or functional entities under the control of a single administration

aggregate bearer: logical association of functional entities in an IP Telephony application and transport network which creates one or more concurrent end to end media flows and which is not limited to the duration of a single call

aggregate bearer admission control: functional entity that determines whether or not a flow is to be admitted as part of an established aggregate bearer

aggregate bearer measurement: functional entity that determines the capacity used and remaining in an aggregate bearer as a result of measuring the actual media flows after taking into account what flows were requested

application data: media or signalling information content

authentication: process of proving identity within its context

NOTE: This normally entails proving the possession of a secret (uniquely associated with the identification) to the authenticator.

authorization: process of granting permission on the basis of identity, to access or use a service, or to access information

NOTE: Authorization is performed by the entity that controls the resource, and, if payment is required, that same entity is responsible for accounting to the customer or other party.

backward call clearing: ability for the called party to release a call during the call

basic call control: Signalling protocol associated with the DSS1 - ISDN Basic Call control procedures of ITU-T Recommendation Q.931 [1].

bearer: logical association of functional entities in an IP Telephony application and Transport Network that creates an end to end media flow for no longer than the duration of a call

bearer service: type of telecommunication service that provides the capability for the transmission of signals between user-network interfaces

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billing: process of presenting the user with a request for payment e.g. based on network usage; possibly including supporting information such as call records SIST-TP TR 102 008 V1.1.1.2004

broker: provider of a business service to facilitate the interworking between multiple IP service providers and SCN operators involved in the delivery of a telephony servicep-tr-102-008-v1-1-1-2004

NOTE: This may be restricted to accounting settlements, but can also include routing assistance, authorization of use of resources, price information exchange.

call: any connection (fixed or temporary) capable of transferring information between two or more users of a telecommunications system. In this context a user may be a person or a machine

called number: normally a name written as a numerical string identifying the called party or called terminal

carrier: provider of a transit network or services

channel: Often used in the literature to describe a single data stream and will therefore be treated synonymously to *flow* through the present document.

charging: process of determining the amount of money a user shall pay for usage of a certain service

circuit loudness rating: loudness loss between two electrical interfaces in a connection or circuit, each interface terminated by its nominal impedance which may be complex

codec: combined speech encoder and decoder

collect call: call paid for by the called party

NOTE: Caller indicates a request for a collect call and the service provider asks the called party to accept.

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contact ID: intermediate identifier for the destination of the next point of resolution (i.e. the destination of the next hop for the signalling messages)

NOTE: The form of the contact ID may vary and may or may not depend on the protocol and the technology used in the transport plane. (Contact IDs are used more in IP based networks than in SCNs).

content of communication: information exchanged between two or more users of a telecommunications service, excluding intercept related information

NOTE: This includes information which may, as part of some telecommunications service, be stored by one user for subsequent retrieval by another.

country code for geographic areas: combination of one, two or three digits identifying a specific country, countries in an integrated numbering plan, or a specific geographic area (e.g. ITU-T Recommendation E.164 [2])

credit card call: calls charged to a credit card user

dBm: power level with reference to 1 mW

dBm0: at the reference frequency (1 020 Hz), L dBm0 represents an absolute power level of L dBm measured at the transmission reference point (0 dBr point), and a level of L + x dBm measured at a point having a relative level of x dBr (See ITU-T Recommendation G.100 [3], annex A.4)

demand service, demand telecommunication service: type of telecommunication service in which the communication path is established almost immediately, in response to a user request affected by means of user-network signalling

dialling plan: string or combination of decimal digits, symbols, and additional information that defines the method by which the numbering plan is used

NOTE: A dialling plan includes the use of prefixes, suffixes, and additional information, supplemental to the numbering plan, required to complete the call (e.g. ITU-T Recommendation E.164 [2]).

directory service provider; provider of directory information e.g., providing an E.164 number from an email address

domain: collection of physical or functional entities within an administrative domain which share a consistent set of policies and common technologies

domain identifier: globally unique identifier of a domain

NOTE: Domain identifiers may be mapped to the IP Telephony Administrative Domain (ITAD) Numbers, registered by IANA and used by the TRIP Protocol.

E.164 number: Number conforming to the numbering plan and structure specified in ITU-T Recommendation E.164 [2].

eavesdropper: unauthorized listening only participant in a communications channel

echo: unwanted signal delayed to such a degree that it is perceived as distinct from the wanted signal

end-user: entity using the services of an IP telephony service provider or transport network operator

end-user domain: collection of physical or functional entities under the control of an End-User which share a consistent set of policies and common technologies

endpoint: entity that can originate and terminate both signalling and media streams

NOTE: An endpoint can both call and be called. Examples of endpoints include H.323 terminals, SIP User Agents, Gateways, or Multi-party Conference Units.

firewall: device (computer or software or both), used to restrict and monitor usage of computer(s) or the network

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first party (call) clearing: first party to hang up clears the call

flow: single data stream, identified by a set of characteristic values (source address, source port, destination address, destination port, protocol number)

forward call clearing: ability for the calling party to release a call during the call

freephone: call which may be initiated for which the call originator is not charged, also known as a toll free call

functional entity: entity in a system that performs a specific set of functions

functional group: collection of functional entities within a domain. In TIPHON systems functional groups are used to structure the necessary functionality to offer IP telephony services across domains.

GateKeeper (GK): H.323 entity on the network that provides address translation and controls access to the network for H.323 terminals, Gateways and MCUs

NOTE: The Gatekeeper may also provide other services to the terminals, Gateways and MCUx such as bandwidth management and locating Gateways. (See also ITU-T Recommendation H.323 [4]).

gatekeeper service provider: IP service provider who offers services available from gatekeepers to the user

gateway: endpoint on a network which provides for real time, two way communication between an IP based network and an Switched Circuit Network (SCN)

gateway functional group: functional group containing the functionality of a network functional group also the functionality necessary to connect calls to the SCN ARD PREVIEW

NOTE: Gateway functional groups may be classified as Originating or Terminating based upon their location within the topology of a specified call, and site in all

Global User Service - Type GU: provides originating and terminating services for users with an E.164 Global Code number, which requires access to a Global IP Telephony Directory Service https://standards.iteh.ai/catalog/standards/sist/91a19aa7-ea2e-4e75-8ab0-

global service: service defined by the dTU-Th provisioned on the public switched network, to which the ITU-T has assigned a specific country code to enable the provision of that international service between two or more countries and/or integrated numbering plans (e.g. ITU-T Recommendation E.164 [2])

H.323 terminal: entity which provides audio and optionally video and data communications capability in point-to-point or multipoint conferences in packet-based networks

handover interface: physical and logical interface across which the results of interception are delivered from a network operator/access provider/service provider to an LEMF

home network functional group: functional group which is aware of the service application subscribed to by the End-User

NOTE: Home network functional groups may be classified as Originating or Terminating based upon their location within the topology of a specified call.

ICS proforma: document, in the form of a questionnaire, which when completed for an implementation or system becomes a PICS

identification: entity has identification within a specific context, and may therefore possess multiple identities; one for each context in which it must be known

NOTE: All identities within a particular context must be unique. An Identification may consist of a simple string, or a name within a directory mechanism.

identity: technical label which may represent the origin or destination of any telecommunications traffic, as a rule clearly identified by a physical telecommunications identity number (such as a telephone number) or the logical or virtual telecommunications identity number (such as a personal number) which the subscriber can assign to a physical access on a case-by-case basis

Implementation Conformance Statement (ICS): statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented

NOTE: The ICS can take several forms: protocol ICS, profile ICS, profile specific ICS, information object ICS, etc.

information flow: interaction between a communicating pair of functional entities

Integrated Services Digital Network (ISDN): See ITU-T Recommendation I.112 [5], clause 2.3 definition 308.

intercept related information: collection of information or data associated with telecommunication services involving the TI, specifically call associated information or data (e.g. unsuccessful call attempts), service associated information or data (e.g. service profile management by subscriber) and location information

interception (or Lawful Interception): action (based on the law), performed by a network operator/access provider/service provider, of making available certain information and providing that information to an LEMF

NOTE: In the present document the term interception is not used to describe the action of observing communications by an LEA.

interception interface: physical and logical locations within the access provider's/network operator's/service provider's telecommunications facilities where access to the content of communication and intercept related information is provided

NOTE: The interception interface is not necessarily a single, fixed point.

interception measure: technical measure which facilitates the interception of telecommunications traffic pursuant to the relevant national laws and regulations

interception subject: person or persons, specified in a lawful authorization, whose telecommunications are to be intercepted

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interConnect Function: functional entity that interconnects transport domains

NOTE: It provides a policy and/or administrative boundary and may police authorized media flows between two transport domains to ensure they are consistent with the QoS policy specified by the relevant Transport Resource Manager.

interconnection function: functional entity connecting two networks having differing administrative policy such as Quality of Service (QoS) or addressing policy but employing the same signalling protocol, and transport technology, at the point of interconnect

interface: shared boundary between two communicating systems, devices or equipments.

intermediate (transit) network functional group: functional group connecting the Serving Network Functional Group to the Home Network Functional Group. The Intermediate Network Functional Grouping is only present when the Serving Network Functional Grouping and the Home Network Functional Grouping are not directly connected

internal intercepting function: point within a network or network element at which the content of communication is made available

internal network interface: network's internal interface between the internal intercepting function and a mediation device

International Emergency Preference Scheme (IEPS): IEPS enables authorized users to have priority access to telecommunication services and priority processing of communications in support of recovery operations during emergency events

interworking function: function connecting two networks of different signalling or different administrative policies and/or transport technologies