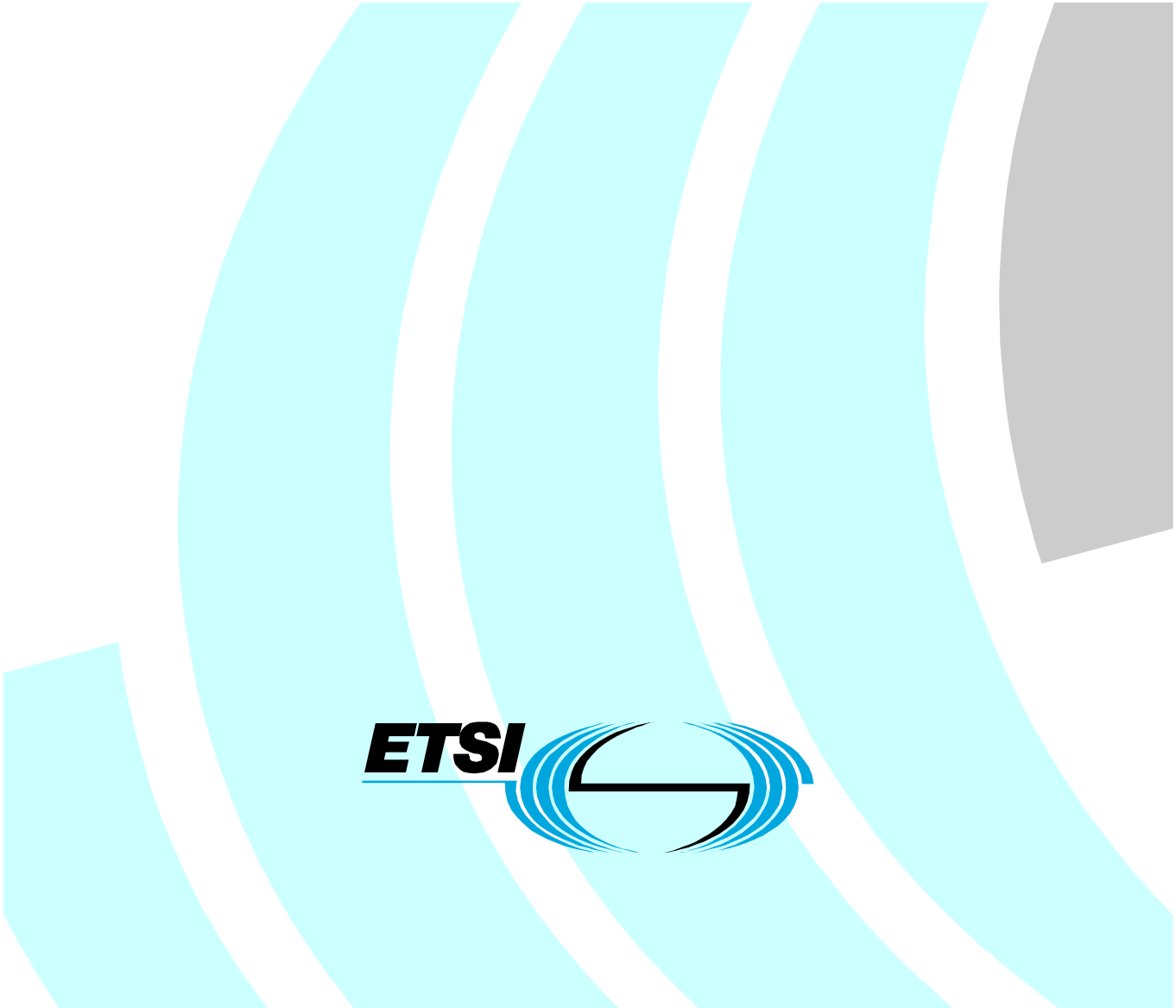
# ETSI TR 101 772 V1.1.2 (2001-12)

*Technical Report*

**Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON) Release 3; Service independent requirements definition; Lawful interception - top level requirements**



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# Contents

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# Foreword

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

The version numbers of the present document follow the convention:

(Edition).(Technical revision).(Editorial revision)

# 1 Scope

The present document describes the top-level requirements for lawful interception in a TIPHON environment and is based upon the recommendations found in TR 101 750 [2].

# 2 References

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


[1] ETSI ETR 331: "Security Techniques Advisory Group (STAG); Definition of user requirements for lawful interception of telecommunications; Requirements of the law enforcement agencies".

[2] ETSI TR 101 750 (V1.1.1): "Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON); Security; Studies into the Impact of lawful interception".

[3] ETSI ES 201 671: "Telecommunications security; Lawful Interception (LI); Handover interface for the lawful interception of telecommunications traffic".

[4] ETSI ES 201 158: "Telecommunications Security; Lawful Interception (LI); Requirements for network functions".

[5] ETSI TS 101 509: "Digital cellular telecommunications system (Phase 2+); Lawful interception; Stage 2 (3GPP TS 03.33 version 8.1.0 Release 1999)".

[6] ETSI EN 301 040: "Terrestrial Trunked Radio (TETRA); Security; Lawful Interception (LI) interface".

[7] ETSI TS 133 107: "Universal Mobile Telecommunications System (UMTS); 3G Security; Lawful Interception Architecture and Functions (3GPP TS 33.107 version 3.1.0 Release 1999)".


# 3 Definitions and abbreviations

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 101 750 [2], ETR 331 [1], ES 201 158 [4] and the following apply:

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

## 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TR 101 750 [2], ETR 331 [1] and ES 201 158 [4] and the following apply:

| | |
|---|---|
| GSM | Global System for Mobile (telephony) |
| IMEI | International Mobile Equipment Identity |
| IMSI | International Mobile Subscriber Identity |
| ISDN | Integrated Services Digital Network |
| ITSI | Individual TETRA Subscriber Identity |
| LI | Lawful Interception |
| MSISDN | Mobile Subscriber International Services Directory Number |
| PSTN | Public Switched Telephone Network |
| TEI | TETRA Equipment Identity |
| TETRA | Terrestrial Trunked Radio |
| UMTS | Universal Mobile Telephone Service |

# 4 Overview

The requirements in the present document are based upon the recommendations described in TR 101 750 [2].

TIPHON covers both the provision of voice related services on IP and the interworking and interconnection with circuit switched technologies. The TIPHON architecture has been developed as an abstract model in TS 101 314 (see bibliography). TIPHON separates the provision of service from the provision of transport and so offers the capability for a user to register from any geographical location and to use any access network which may be located in any geographical location. The identities used by those entities providing transport may not have a deducible relationship to the identities used by those entities providing service.

Lawful Interception of the media stream in a TIPHON environment is provided by the transport plane and may take place in the access network used by the target or in any other network that carries the traffic of the target using an identity provided by the TIPHON application plane.

TIPHON has identified an application environment model shown in figure 1. In the example shown, there are three Service Capabilities, A, B and C. These are distributed across the TIPHON network and service environment model and instantiated as $C_o$, $C_{T2}$ and $C_T$ etc. Lawful interception is one of these distributed service capabilities.

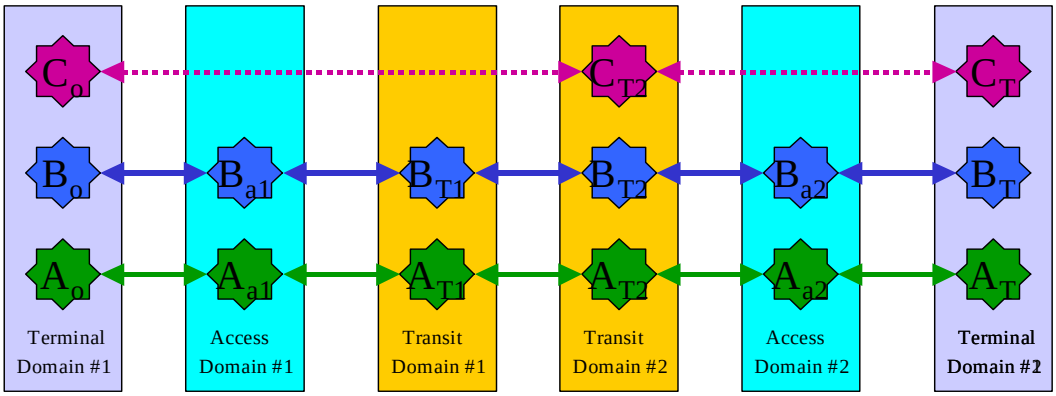


**Figure 1: Service Capabilities interworking across domains**

Table 1 gives a list of the access technologies for which lawful interception requirements have been defined. Table 1 also lists the identifiers for targets that are used in the documents listed.

**Table 1: Lawful Interception specifications for various access technologies**

| Access Network Technology | Reference document | Target identity (note) |
|---|---|---|
| GPRS | TS 101 509 [5] | IMSI, MSISDN, IMEI |
| GSM | TS 101 509 [5] | IMSI, MSISDN, IMEI |
| ISDN, PSTN | ES 201 671 [3] | Directory Number |
| TETRA | EN 301 040 [6] | ITSI, TEI, MSISDN |
| UMTS | TS 133 107 [7] | As for GSM for release 99 |
| NOTE: Within each technology there may be more than one concurrent identity being intercepted (for example an equipment may be intercepted rather than an individual (target as IMEI rather than IMSI), or one of a set of telephone numbers (target as MSISDN rather than IMSI). | | |

Requirements have not yet been specified for xDSL access and access on dedicated circuits such as leased lines, which will be used widely for access to TIPHON networks.

Where the access technologies are circuit switched but are used to carry IP packets, for example IP over ISDN, then the circuit switched technology shall provide lawful interception.

# Annex A: Bibliography


- European Union Council Resolution COM 96/C329/01 of 17 January 1995 on the Lawful Interception of Telecommunications.

- ETSI TS 101 314: "TIPHON Release 3; Information Flow and Reference Points Definition; Network Architecture and Reference Points".

# History

| Document history | | |
|---|---|---|
| V1.1.1 | April 2001 | Publication |
| V1.1.2 | December 2001 | Publication |
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