

**Satellite Personal Communications Networks (S-PCN);
Network Control Facilities (NCF) for Mobile Earth Stations
(MESs), including handheld earth stations,
for S-PCN in the 1,5/1,6 GHz band,
providing voice and/or data communications
under the Mobile Satellite Service (MSS)**



Reference

DEN/SES-00036 (fko00ico.PDF)

Keywords

NCF, S-PCN, mobile, satellite, service, MSS,
earth station, MES

ETSI

Postal address

F-06921 Sophia Antipolis Cedex - FRANCE

Office address

650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16
Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Internet

secretariat@etsi.fr
Individual copies of this ETSI deliverable
can be downloaded from
<http://www.etsi.org>
If you find errors in the present document, send your
comment to: editor@etsi.fr

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 1999.
All rights reserved.

Contents

Intellectual Property Rights	4
Foreword	4
1 Scope	5
2 References	5
3 Definitions and abbreviations	5
3.1 Definitions	5
3.2 Abbreviations	5
4 Test report	5
5 Suppression of MES transmissions	6
6 Re-enabling of MES transmissions	6
7 Lawful interception	6
History	8

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available **free of charge** from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://www.etsi.org/ipr>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Satellite Earth Stations and Systems (SES), and is now submitted for the Public Enquiry phase of the ETSI standards Two-step Approval Procedure.

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

1 Scope

The present document provides specifications for the standardization of the characteristics of a minimum set of Network Control Facilities (NCF) for Mobile Earth Stations (MESs) with both transmit and receive capabilities.

NCFs are specified in order to protect other users of the frequency spectrum from unacceptable interference, by ensuring that the network operator is able to suppress and enable the transmissions from the MESs. In particular, these facilities will allow certain interference situations, resulting from the emissions from interfering MESs, to be terminated.

The present document defines specifications for the control facilities in an S-PCN network in which MESs as defined in EN 301 681 [1] operate.

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.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1] EN 301 681: "Satellite Personal Communications Networks (S-PCN); Mobile Earth Stations (MESs), including handheld earth stations, for S-PCN in the 1,5/1,6 GHz bands, providing voice and/or data communications under the Mobile Satellite Service (MSS)".

[2] Council Resolution of 17 January 1995 on the lawful interception of telecommunications (Official Journal C.329, p.1, 1996)".

3 Definitions and abbreviations

3.1 Definitions

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

carrier-on time (initial bursts): carrier-on time is the period when an MES is transmitting a signal. For MESs that transmit in a non-continuous mode, the carrier-on time only includes the times when the MES is transmitting a signal

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

MES	Mobile Earth Station
MSS	Mobile Satellite Service
NCF	Network Control Facilities
S-PCN	Satellite Personal Communications Networks

4 Test report

The test report shall contain the results of the test.

5 Suppression of MES transmissions

Purpose:

To inhibit the transmissions from any MES when found necessary, with the Network Control Facilities (NCF).

Specification:

It shall be possible to suppress the transmissions from any MES in a network by entering the appropriate command at the NCF.

Once the command to inhibit an MES is entered into the NCF the necessary mechanism shall be invoked so that the selected MES receives a transmission disable command, suppresses its transmission (carrier-off) within 30 seconds, until the MES transmissions are re-enabled. For systems where no transmission disable command is expected when MES are not transmitting (carrier-off) the MES may only transmit initial bursts until it receives a transmission enable command.

Verification:

By documentary evidence and demonstration. Verification of transmission suppression shall be performed after commanding inhibition under the three following test conditions:

- when the MES is in idle mode;
- during a period of transmission;
- before an intended period of transmission.

6 Re-enabling of MES transmissions

Purpose:

To re-enable transmissions from an MES or MESs whose transmissions have previously been suppressed.

Specification:

At the NCF, provided a link is available, it shall be possible to re-enable transmissions of the MES whose transmissions have previously been suppressed.

Verification:

By documentary evidence and demonstration.

7 Lawful interception

Purpose:

To ensure that lawful interception of users' communications is possible.

To protect "access to interception functions" and "interception data" from abuse.

Specification:

Provisions shall be made so that lawful interception of users' communications is possible. This concerns the real-time communications consisting of "call content" and "call associated data".

The NCF shall provide a real-time and full-time monitoring capability for the lawful interception of users' communications.

The access to the interception functions shall be protected. In order to trace misuse of lawful interception, all data relating to any interception or interception attempt, authorized or unauthorized, shall be recorded and protected. In addition, all data acquired through interception shall be protected.

NOTE 1: Access to the lawful interception functions of the NCF should be made available to the national law enforcement agencies, according to national laws.

NOTE 2: Recording of the data acquired through interception depends on each of the national laws.

NOTE 3: Some countries may require information regarding the location of the intercepted MESs.

NOTE 4: Additional requirements according to national laws may be applicable.

NOTE 5: General information contained in European Union Council Resolution 9529/95/EEC [2].

NOTE 6: To date, no generic standard on technical interception requirements has been published by ETSI.

Verification:

By documentary evidence and demonstration.

History

Document history		
V1.1.1	June 1999	Public Enquiry PE 9945: 1999-06-09 to 1999-11-05