



SLOVENSKI STANDARD
SIST ETS 300 326-2 E1:2003
01-december-2003

**Radijska oprema in sistemi (RES) – Prizemni letalski telefonski sistem (TFTS) – 2.
del: Govorne storitve, radijski vmesnik**

Radio Equipment and Systems (RES); Terrestrial Flight Telecommunications System (TFTS); Part 2: Speech services, radio interface

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Ta slovenski standard je istoveten z: **ETS 300 326-2 Edition 1**
<https://standards.iteh.ai/catalog/standards/sist/65000795-1c5e-4a64-acb5-554103c2b1b3/sist-ets-300-326-2-e1-2003>

ICS:

33.060.01	Radijske komunikacije na splošno	Radiocommunications in general
49.090	U] i^{ æ/ Å • d~ { ^} çç : æ } ãÖÅ Å^• [b \ ãÖÅ [çãã@	On-board equipment and instruments

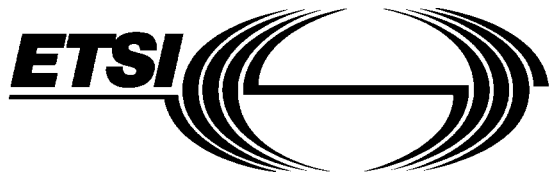
SIST ETS 300 326-2 E1:2003

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST ETS 300 326-2 E1:2003](https://standards.iteh.ai/catalog/standards/sist/65000795-1c5e-4a64-acb5-554103c2b1b3/sist-ets-300-326-2-e1-2003)

<https://standards.iteh.ai/catalog/standards/sist/65000795-1c5e-4a64-acb5-554103c2b1b3/sist-ets-300-326-2-e1-2003>



EUROPEAN
TELECOMMUNICATION
STANDARD

ETS 300 326-2

January 1996

Source: ETSI TC-RES

Reference: DE/RES-5-01/12

ICS: 33.060.50

Key words: TFTS, radio interface

iTeh STANDARD PREVIEW
Radio Equipment and Systems (RES);
(standards.itih.ai)
Terrestrial Flight Telephone System (TFTS);
SIST ETS 300 326-2 E1:2003
Part 2: Speech services, radio interface
<http://standards.itih.ai/standards/ets/300/326-2/e1/2003/554103c2b1b3/sist-ets-300-326-2-e1-2003>

ETSI

European Telecommunications Standards Institute

ETSI Secretariat

Postal address: F-06921 Sophia Antipolis CEDEX - FRANCE

Office address: 650 Route des Lucioles - Sophia Antipolis - Valbonne - FRANCE

X.400: c=fr, a=atlas, p=etsi, s=secretariat - **Internet:** secretariat@etsi.fr

Tel.: +33 92 94 42 00 - Fax: +33 93 65 47 16

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 1996. All rights reserved.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST ETS 300 326-2 E1:2003](https://standards.iteh.ai/catalog/standards/sist/65000795-1c5e-4a64-acb5-554103c2b1b3/sist-ets-300-326-2-e1-2003)

<https://standards.iteh.ai/catalog/standards/sist/65000795-1c5e-4a64-acb5-554103c2b1b3/sist-ets-300-326-2-e1-2003>

Contents

Foreword	15
1 Scope	17
2 Normative references	17
3 Abbreviations	19
4 Introduction to TFTS.....	22
4.1 General.....	22
4.2 Interface specification objectives.....	22
4.3 Interface characteristics	22
5 Protocol modelling principles	22
5.1 AS-GSS layering.....	23
6 TFTS user-to-network reference configuration.....	24
6.1 General.....	24
6.1.1 Reference configurations	24
6.1.2 Functional groups	24
6.1.3 Reference points	25
6.1.4 Terminal Equipment (TE)	25
6.2 TFTS reference configuration	25
6.3 Interfaces.....	27
7 Channel structures and access capabilities.....	27
7.1 General.....	27
7.2 Channel types and their use: Traffic Channels	27
7.3 Channel types and their use: Control channels.....	28
7.3.1 Logical control channel types.....	28
7.3.1.1 Broadcast Control CHannel (BCCH).....	28
7.3.1.2 Random Access CHannel (RACH).....	28
7.3.1.3 Initial Response Control CHannel (IRCCH).....	28
7.3.1.4 Radio Control CHannel (RCCH)	28
7.3.1.5 Dedicated Control CHannel (DCCH).....	28
7.4 GS Access capability	28
7.5 AS access capability	30
8 TFTS Radio Interface Layer 1	31
8.1 Interfaces to the physical layer.....	31
8.1.1 Interface to layer 2.....	31
8.1.2 Interface to radio resource management.....	31
8.1.3 Interface to other functional units	31
8.2 Services of Layer 1	31
8.2.1 Service Access Point (SAP)	32
8.2.2 Service provided	32
8.2.2.1 Specific services of layer 1 in the AS.....	32
8.3 Primitives of layer 1	32
8.3.1 Generic names of primitives between layer 1 and layer 2 for the transfer of layer 2 frames.....	33
8.3.2 Generic names of primitives between layer 1 and the radio resource management entity of layer 3	33
8.3.3 Primitive types	33
8.3.4 Parameter definition	33

8.4	Layer 1 procedures	35
8.4.1	States of layer 1.....	35
8.4.2	Remap procedure.....	35
8.4.2.1	Channel remap protocol	36
8.4.3	Layer 1 interface procedures.....	36
8.5	Layer 1 peer to peer exchanges.....	37
8.5.1	BCCH Synchronisation (S) transmission	37
8.5.2	Layer 1 radio control.....	37
8.5.3	Layer 1 random access procedures.....	37
8.5.4	Layer 1 channel access transaction	38
8.6	TDMA characteristics	38
8.6.1	General	38
8.6.2	Slot structure	39
8.6.2.1	General slot types	39
8.6.2.1.1	Field data	39
8.6.2.2	Synchronisation slot types	41
8.6.2.2.1	Field data	41
8.6.3	Functions of logical channels and mapping to physical channels.....	42
8.6.4	Timing requirements	47
8.6.5	Coding aspects	47
8.6.5.1	G1 Slot.....	47
8.6.5.2	G2 Slot.....	47
8.6.5.3	G3 Slot.....	47
8.6.5.4	Coding and interleaving of G2 and G3 slots	47
8.6.5.5	Coding of S1 slot.....	49
8.6.5.6	Coding of S2 slot.....	49
8.7	Modulation characteristics.....	49
8.7.1	General	49
8.7.1.1	Type of modulation.....	49
8.7.1.2	Channel transmission rate.....	50
8.7.1.3	Data clock stability.....	50
8.7.2	Modulator	50
8.7.2.1	Phase definition.....	50
8.7.2.2	Modulation filtering and modulated signal definition	51
8.7.2.3	Modulator and transmitter accuracy	53
8.7.2.3.1	Ideal case.....	53
8.7.2.3.2	Real case	53
8.7.2.4	Scrambler	54
8.8	Radio transmission and reception characteristics	55
8.8.1	General characteristics	55
8.8.1.1	Channelling.....	55
8.8.1.1.1	Frequency range	55
8.8.1.1.2	Radio frequency channel arrangement..	55
8.8.1.2	Channel selection time.....	55
8.8.1.3	Frequency stability.....	55
8.8.1.3.1	AS.....	55
8.8.1.3.2	GS.....	55
8.8.1.4	Modulation	56
8.8.2	Transmitter	56
8.8.2.1	Polarisation	56
8.8.2.2	Radiated power.....	56
8.8.2.2.1	AS.....	56
8.8.2.2.2	GS.....	56
8.8.2.2.2.1	En Route GS (ERGS).....	56
8.8.2.2.2.2	Intermediate GS (INTGS)	56
8.8.2.2.2.3	Airport GS (APGS).....	56
8.8.2.3	Power ramping procedure	56
8.8.2.4	RF spectrum mask.....	58
8.8.2.5	Out of band emissions.....	58
8.8.2.6	Spurious emissions	58

	8.8.2.7	Modulation accuracy	58
8.8.3	Receiver		58
	8.8.3.1	Frequency offsets	58
	8.8.3.2	Static propagation conditions	59
	8.8.3.2.1	Without interferer	59
	8.8.3.2.2	With an interferer created by the intermodulation of two interfering signals	59
	8.8.3.2.3	With adjacent interferer: TDM at the AS receiver and TDMA (uniform timeslot level) at the GS receiver	59
	8.8.3.2.4	With co-channel TDMA interferer: variable timeslot level for GS receiver ..	60
8.8.4	Dynamic propagation conditions		60
	8.8.4.1	Basic BERs	60
	8.8.4.2	BERs with interfering signals	61
	8.8.4.3	GS receivers	61
8.8.5	Propagation models		61
	8.8.5.1	General	61
	8.8.5.2	Doppler spectrum types	61
	8.8.5.3	Models	62
	8.8.5.3.1	Airport manoeuvring	62
	8.8.5.3.2	Take-off	63
	8.8.5.3.3	In-flight	63
8.9	GS antenna characteristics		63
8.9.1	General		63
8.9.2	Common characteristics for all GS types		63
	8.9.2.1	Frequency range	63
	8.9.2.2	Polarisation	63
	8.9.2.3	Energy acceptance capability	64
8.9.3	Specific characteristics for each type of GS		64
	8.9.3.1	Radiation patterns	64
	8.9.3.1.1	En route stations	64
	8.9.3.1.2	Intermediate stations	65
	8.9.3.1.3	Airport stations	65
	8.9.3.2	Antenna height	65
8.10	Radio sub-system link control		65
8.10.1	General		65
8.10.2	Handover general		65
	8.10.2.1	Overall process	65
	8.10.2.2	Decision strategy for GS to GS handover	66
	8.10.2.2.1	Primary handover decision	66
8.10.3	R.F. power control		66
	8.10.3.1	Purpose	66
	8.10.3.2	Timing	66
	8.10.3.3	Initial exchanges	66
8.10.4	RF power control at call initiation		66
8.10.5	Handover procedure		67
8.10.6	Cell selection and re-selection		68
	8.10.6.1	Overall process	68
	8.10.6.2	Reception of broadcast information	68
	8.10.6.3	GS selection	68
	8.10.6.4	Synchronisation	69
	8.10.6.5	Negotiation	69
8.10.7	Network pre-requisites		69
	8.10.7.1	BCCH	69
	8.10.7.1.1	BCCH(S)	69
	8.10.7.1.2	BCCH(D)	69
	8.10.7.2	GS Handover	69
8.10.8	Radio Link Measurements (RLM)		69

	8.10.8.1	Signal strength.....	69
	8.10.8.2	Signal quality	69
		8.10.8.2.1 AS.....	70
		8.10.8.2.2 GS.....	70
		8.10.8.2.3 Range of parameter	70
	8.10.8.3	Absolute distance (AS only).....	70
		8.10.8.3.1 Range of parameter	70
	8.10.8.4	Radio Link Failure (RLF).....	70
	8.10.9	Timing control.....	70
	8.10.10	Control parameters.....	70
		8.10.10.1 Definition of network parameters.....	71
		8.10.10.2 Definition of Radio Resource (RR) parameters.....	72
		8.10.10.3 Definition of other parameters.....	72
		8.10.10.4 Calculation of range limit.....	73
8.11		Radio sub-system synchronisation	74
	8.11.1	Introduction.....	74
	8.11.2	GS synchronisation.....	74
	8.11.3	Cold Start Synchronisation (CSS)	74
		8.11.3.1 AS cold start requirements	74
		8.11.3.1.1 GS acquisition.....	74
		8.11.3.1.2 Transmitted S2 slot	74
		8.11.3.1.3 Received G3 slot.....	74
		8.11.3.1.4 Timing adjustment.....	75
		8.11.3.2 GS cold start requirements.....	75
		8.11.3.2.1 S2 reception	75
	8.11.4	Tracking procedure.....	75
		8.11.4.1 AS requirements	75
		8.11.4.2 GS requirements	75
	8.11.5	Warm Start Synchronisation (WSS).....	75
		8.11.5.1 GS	75
		8.11.5.2 AS.....	75
		SIST ETS 300 326-2 E1:2003	
9		TFTS radio interface layer 2.....	75
	9.1	General.....	76
	9.2	Layer 2 services.....	76
	9.3	Overview description of LAPDa functions and procedures	78
		9.3.1 General	78
		9.3.2 Unacknowledged operation	79
		9.3.3 Acknowledged operation	79
		9.3.4 Information transfer mode	80
		9.3.4.1 Information transfer on the BCCH.....	80
		9.3.4.2 Information transfer on the DCCHs.....	80
		9.3.5 Release of layer 2	80
		9.3.6 Identification of layer 2 end points.....	80
	9.4	Service characteristics and requirements	81
		9.4.1 General requirements	81
		9.4.2 Services provided to layer 3.....	81
		9.4.2.1 General.....	81
		9.4.2.2 Priority	81
		9.4.2.3 Segmentation	81
		9.4.2.4 Unacknowledged information transfer service.....	81
		9.4.2.5 Acknowledged information transfer service	82
		9.4.3 Services required from the physical layer	83
		9.4.4 Administrative services.....	84
		9.4.4.1 General description of administrative services.....	84
		9.4.4.2 Definition of primitives for administrative services	84
	9.5	Overview of Layer 2 structure	84
		9.5.1 Functional composition	84
		9.5.2 Layer 2 procedure.....	85
	9.6	Layer 2 specification.....	85

9.6.1	General	85
9.6.2	Frame structure for peer-to-peer communication	86
9.6.2.1	General	86
9.6.2.2	Frame format	86
9.6.2.3	Frame delimitation	86
9.6.2.4	Header field	86
9.6.2.5	Information field.....	86
9.6.2.6	Fill field	86
9.6.2.7	Frame Check Sequence.....	87
9.6.2.8	Format convention	87
9.6.2.8.1	Numbering convention	87
9.6.2.8.2	Mapping to layer 1 message data.....	87
9.6.2.8.3	Field mapping convention	87
9.6.2.9	Invalid frames.....	88
9.6.3	Elements of procedure and formats of fields for data-link layer peer-to-peer communication.....	88
9.6.3.1	General	88
9.6.3.2	Header field format.....	88
9.6.3.3	Header field variables	89
9.6.3.3.1	Command/Response field bit (C/R)	89
9.6.3.3.2	Service Access Point Identifier.....	89
9.6.3.3.3	Length field	89
9.6.3.3.4	More data bit (M)	89
9.6.3.3.5	Control field.....	89
9.6.3.4	Control field formats	90
9.6.3.4.1	Information transfer (I) format.....	90
9.6.3.4.2	Supervisory (S) format.....	90
9.6.3.4.3	Unnumbered (U) format.....	90
9.6.3.5	Control field parameters and associated state variables	90
9.6.3.5.1	Poll/Final bit	90
9.6.3.5.2	Multiple frame operation, variables and sequence numbers.....	91
9.6.3.5.2.1	Modulus.....	91
9.6.3.5.2.2	Send state variable V(S)	91
9.6.3.5.2.3	Acknowledge state variable V(A)	91
9.6.3.5.2.4	Send sequence number N(S)	91
9.6.3.5.2.5	Receive state variable V(R).....	91
9.6.3.5.2.6	Receive sequence number N(R).....	91
9.6.3.5.3	Unacknowledged operation - variables and parameters	91
9.6.3.6	Frame types.....	92
9.6.3.6.1	Commands and responses	92
9.6.3.6.2	Information (I) commands.....	92
9.6.3.6.3	Set Asynchronous Balanced Mode (SABM) command.....	92
9.6.3.6.4	DISconnect (DISC) command.....	93
9.6.3.6.5	Unnumbered information (UI) command.....	93
9.6.3.6.6	Receive ready (RR) command/response	93
9.6.3.6.7	Reject (REJ) command/response.....	93
9.6.3.6.8	Receive not ready (RNR) command/response.....	94
9.6.3.6.9	Unnumbered Acknowledgement (UA) response.....	94
9.6.3.6.10	Disconnected Mode (DM) response.....	94
9.6.3.6.11	FRaMe Reject (FRMR) response.....	94
9.6.4	Elements for layer-to-layer communication	95
9.6.4.1	General	95
9.6.4.1.1	Generic names.....	95
9.6.4.1.1.1	DL-ESTABLISH.....	97
9.6.4.1.1.2	DL RELEASE.....	97
9.6.4.1.1.3	DL-DATA.....	97
9.6.4.1.1.4	DL-UNIT DATA.....	97
9.6.4.1.1.5	DL-SUSPEND	97
9.6.4.1.1.6	DL-RESUME.....	97

	9.6.4.1.1.7	Management Data Link (MDL)-RELEASE	98
	9.6.4.1.1.8	MDL-ERROR	98
	9.6.4.1.1.9	PH-DATA	98
	9.6.4.1.2	Primitive types	98
	9.6.4.1.3	Parameter definition	98
	9.6.4.1.3.1	Priority indicator	98
	9.6.4.1.3.2	Message unit	98
	9.6.4.1.3.3	Release mode	99
	9.6.4.1.3.4	Error cause	99
	9.6.4.1.3.5	Establish mode	99
	9.6.4.2	Primitive procedures	99
9.6.5		Definition of the peer-to-peer procedures of the data link layer	100
	9.6.5.1	General	100
	9.6.5.2	Procedure for the use of the P/F bit	100
	9.6.5.2.1	Unacknowledged information transfer	100
	9.6.5.2.2	Acknowledged multiple frame information transfer	100
	9.6.5.3	Procedures for unacknowledged information transfer	101
	9.6.5.3.1	General	101
	9.6.5.3.2	Transmission of unacknowledged information	101
	9.6.5.3.3	Receipt of unacknowledged information	101
	9.6.5.4	Procedures for establishment and release of multiple frame operation	101
	9.6.5.4.1	Establishment of multiple frame operation	101
	9.6.5.4.1.1	General	101
	9.6.5.4.1.2	Normal establishment procedures	102
	9.6.5.4.1.3	Procedure on expiry of timer T200: normal establishment	103
	9.6.5.4.1.4	Contention resolution establishment procedure	103
	9.6.5.4.1.5	Procedure on expiry of timer T200; contention resolution (AS only)	105
	9.6.5.4.2	Information transfer	105
	9.6.5.4.2.1	General requirements	105
	9.6.5.4.2.2	Error conditions	105
	9.6.5.4.2.3	Fill frames	106
	9.6.5.4.3	Suspension and resumption of multiple frame operation ...	106
	9.6.5.4.3.1	General	106
	9.6.5.4.3.2	Suspension	106
	9.6.5.4.4	Resumption of multiple frame operation	107
	9.6.5.4.4.1	Procedure on expiry of timer T200	107
	9.6.5.4.5	Termination of multiple frame operation	108
	9.6.5.4.5.1	General	108
	9.6.5.4.5.2	Normal release procedure	108
	9.6.5.4.5.3	Procedure on expiry of timer T200 for normal release	108
	9.6.5.4.5.4	Local end release procedure	109
	9.6.5.4.6	Idle state	109
	9.6.5.4.7	Collision of unnumbered commands and responses	110
	9.6.5.4.7.1	Identical transmitted and received commands	110
	9.6.5.4.7.2	Different transmitted and received commands	110
	9.6.5.4.7.3	Unsolicited DM response and SABM or DISC command ..	110
	9.6.5.5	Procedures for information transfer in multiple frame operation	110
	9.6.5.5.1	Transmitting I frames	110
	9.6.5.5.2	Receiving I frames	111
	9.6.5.5.2.1	P bit set to "1"	111
	9.6.5.5.2.2	P bit set to "0"	111
	9.6.5.5.3	Receiving acknowledgement	112
	9.6.5.5.4	Receiving REJ frames	112
	9.6.5.5.4.1	Transmitting I frames	113
	9.6.5.5.4.2	Response to supervisory command frames	113
	9.6.5.5.5	Receiving RNR frames	113
	9.6.5.5.6	Data link layer own receiver busy condition	115

	9.6.5.5.7	Waiting acknowledgement.....	115
	9.6.5.6	Abnormal release and re-establishment of multiple frame operation	116
	9.6.5.6.1	Criteria for re-establishment	116
	9.6.5.6.2	Criteria for abnormal release	116
	9.6.5.6.3	Procedures for re-establishment.....	116
	9.6.5.6.4	Procedures for abnormal release.....	116
	9.6.5.7	Exception condition reporting and recovery for multiple frame operation.....	117
	9.6.5.7.1	N(S) sequence error	117
	9.6.5.7.2	N(R) sequence error	117
	9.6.5.7.3	Timer recovery	117
	9.6.5.7.4	Invalid frame condition.....	118
	9.6.5.7.5	Frame rejection condition	118
	9.6.5.7.6	Receipt of an FRMR response frame	118
	9.6.5.7.7	Radio link failure condition	118
	9.6.5.8	List of system parameters.....	118
	9.6.5.8.1	Timer T200	118
	9.6.5.8.2	Maximum number of re-transmissions (N200).....	118
	9.6.5.8.3	Maximum number of octets in an information field (N201).....	118
	9.6.5.8.4	Number of octets in a frame (N202)	119
	9.6.5.8.5	Maximum number of octets in a message unit parameter (N203).....	119
	9.6.5.8.6	Maximum number of outstanding I frames (k).....	119
10	AS - GSS layer 3 specification		119
10.1	Introduction.....		119
	10.1.1	General	119
	10.1.2	Objectives	119
	10.1.3	General characteristics.....	119
	10.1.3.1	Technique of description.....	119
	10.1.3.2	Primitives	120
	10.1.3.3	Peer-to-peer communication.....	120
10.2	Structure of signalling functions		120
	10.2.1	Basic groups of functions	120
	10.2.2	Protocol architecture	120
10.3	Services provided by signalling layer 3 on the AS side.....		122
	10.3.1	CC services	122
	10.3.1.1	General	122
	10.3.1.2	Service state diagram	122
	10.3.1.3	Service primitives.....	123
10.4	Services provided by signalling layer 3 on the GSS side.....		124
	10.4.1	CC services	124
	10.4.1.1	General	124
	10.4.1.2	Service state diagram	124
	10.4.1.3	Service primitives.....	125
10.5	Services assumed from signalling layer 2		126
	10.5.1	General	126
	10.5.2	Service primitives	126
	10.5.2.1	Unacknowledged information transfer.....	126
	10.5.2.2	Acknowledged information transfer	127
10.6	Inter-layer service interfaces on the AS side.....		127
	10.6.1	Services provided by the RRM entity	127
	10.6.1.1	General	127
	10.6.1.2	Service state diagram	128
	10.6.1.3	Service primitives.....	129
10.7	Inter-layer service interfaces on the GS side		130
	10.7.1	Services provided by the RRM entity	130
	10.7.1.1	General	130
	10.7.1.2	Service state diagram	131

	10.7.1.3	Service primitives.....	132
10.8		Service assumed from layer 1	133
	10.8.1	General	133
	10.8.2	Service primitives	133
10.9		Functions provided by layer 3 entities.....	133
	10.9.1	Functions provided by the RRM entity	133
	10.9.2	Functions provided by the CC management entity	133
	10.9.3	Functions provided by the distribution entity	133
	10.9.4	Functions provided by the MR entity.....	134
10.10		Call setup examples	134
10.11		Radio interface layer 3 specification.....	135
	10.11.1	General	135
	10.11.1.1	Scope of the specification.....	135
	10.11.1.2	Application to the interface structure.....	135
	10.11.1.3	Structure of the layer 3 procedures	136
	10.11.1.4	Test procedures	136
	10.11.1.5	Use of logical channels.....	136
	10.11.2	Overview of control procedures	136
	10.11.2.1	List of procedures.....	136
	10.11.2.2	Procedure for contention resolution	136
	10.11.2.3	General recovery procedures	137
	10.11.2.3.1	Normal message flow	137
	10.11.2.3.2	Expiry of the request timer T	137
	10.11.2.3.3	Change of dedicated channels using SAPI=0.....	137
	10.11.2.4	Sequenced message transfer operation.....	137
	10.11.2.4.1	Variables and sequence numbers	138
	10.11.2.4.1.1	Send state variable V(SD).....	138
	10.11.2.4.1.2	Send sequence number N(SD).....	138
	10.11.2.4.2	Procedure for the setting, transfer and termination of sequenced message transfer.....	138
	10.11.2.4.2.1	Setting.....	138
	10.11.2.4.2.2	Transfer.....	138
	10.11.2.4.2.3	Termination.....	138
10.11.3		Elementary procedures for RRM	138
	10.11.3.1	Overview.....	138
	10.11.3.1.1	General	138
	10.11.3.1.2	Service provided to upper layers.....	139
	10.11.3.1.2.1	The null state	139
	10.11.3.1.2.2	Services provided in idle mode	139
	10.11.3.1.2.3	Establishment and release of an RR- connection	139
	10.11.3.1.2.4	Service provided in RR connected mode.....	139
	10.11.3.1.3	Service required from data link and physical layers	139
	10.11.3.1.4	Terminology	140
	10.11.3.2	System management procedures.....	140
	10.11.3.2.1	BCCH (D) data acquisition (AS side)..	140
	10.11.3.2.2	Other system data acquisition (AS side).....	140
	10.11.3.2.3	Broadcast system information (GS side).....	140
	10.11.3.3	Paging procedures.....	142
	10.11.3.3.1	Paging of a subscriber	142
	10.11.3.3.1.1	Initiation of the PAGE	142
	10.11.3.3.1.2	Broadcast duration for paging.....	142
	10.11.3.3.1.3	PAGE response	142
	10.11.3.3.1.4	Release of the connection.....	142

	10.11.3.3.1.5	Abnormal cases	142
	10.11.3.3.2	Engineering paging (ENGPAGE).....	142
	10.11.3.3.2.1	Initiation of the ENGPAGE	142
	10.11.3.3.2.2	Broadcast duration for ENGPAGE.....	142
	10.11.3.3.2.3	ENGPAGE response	143
	10.11.3.3.2.4	Release of the connection.....	143
	10.11.3.3.2.5	Abnormal cases	143
	10.11.3.3.3	Group broadcast.....	143
	10.11.3.3.3.1	Network functionality.....	143
	10.11.3.3.3.2	AS functionality	143
	10.11.3.3.3.3	Broadcast data repeat length	143
10.11.3.4	RR connection establishment initiated by the AS		143
	10.11.3.4.1	Request for resources by the AS.....	143
	10.11.3.4.2	Answer from the GS.....	144
	10.11.3.4.3	Negotiation process.....	144
	10.11.3.4.4	Assignment completion	145
	10.11.3.4.5	Abnormal cases	145
	10.11.3.4.6	Remap Procedure for radio resource establishment.....	145
10.11.3.5	RR-connection transfer phase.....		145
	10.11.3.5.1	Transfer of messages.....	145
	10.11.3.5.2	Handover procedure	145
	10.11.3.5.2.1	Handover procedures on GS side	146
	10.11.3.5.2.2	Handover procedures on AS side.....	147
	10.11.3.5.2.3	Allocation of the new resources to the used Ba, Ma, La channels.....	147
	10.11.3.5.2.4	Physical channel and data link establishment.....	147
	10.11.3.5.2.5	Handover completion	148
	10.11.3.5.2.6	Abnormal cases	148
	10.11.3.5.3	Additional channel assignment.....	148
	10.11.3.5.3.1	Additional assignment procedure initiation.....	148
	10.11.3.5.3.2	Additional assignment completion	149
	10.11.3.5.3.3	Abnormal cases	149
	10.11.3.5.4	Release of assigned channels	149
	10.11.3.5.4.1	Release initiation of assigned channels.....	149
	10.11.3.5.4.2	Abnormal cases	149
10.11.3.6	RR-connection release.....		149
	10.11.3.6.1	Normal release.....	150
	10.11.3.6.1.1	Channel release termination	150
	10.11.3.6.1.2	Abnormal cases	150
10.11.3.7	Alternative procedure.....		150
	10.11.3.7.1	General	150
	10.11.3.7.1.1	Channel release initiation.....	150
	10.11.3.7.1.2	Additional signalling from the maintenance resource entity.....	151
	10.11.3.7.1.3	New set-up of a call or paging resources	151
	10.11.3.7.1.4	Channel release termination	151
	10.11.3.7.1.5	Abnormal cases	151
	10.11.3.7.2	Radio link failure.....	151
	10.11.3.7.2.1	AS side	152
	10.11.3.7.2.2	GS side.....	152
	10.11.3.7.3	Ground network failure	152
	10.11.3.7.4	Remap failure	152
	10.11.3.7.5	Remap interruption.....	152
10.11.4	Elementary procedures for circuit-switched CC.....		152
	10.11.4.1	Overview	152
	10.11.4.1.1	General.....	152

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST ETS 300 326-2 E1:2003
<https://standards.iteh.ai/catalog/standards/sist/65000795-1c5e-4a64-acb5-554103c2b1b3/sist-ets-300-326-2-e1-2003>

	10.11.4.1.2	CC states	155
	10.11.4.1.2.1	Call states at the AS side of the interface	155
	10.11.4.1.2.2	Call states at the GSS side of the interface	155
	10.11.4.1.3	Circuit-switched CC procedures.....	156
10.11.4.2	Aircraft originating call establishment procedures		156
	10.11.4.2.1	General	156
	10.11.4.2.2	Call request	156
	10.11.4.2.3	Invalid call information.....	157
	10.11.4.2.4	Call proceeding	157
	10.11.4.2.5	Notification of interworking in connection with call establishment.....	158
	10.11.4.2.6	Call confirmation indication	158
	10.11.4.2.7	Call connected	158
	10.11.4.2.8	Call rejection	159
10.11.4.3	Signalling procedures during the active state		159
	10.11.4.3.1	User notification procedure.....	159
	10.11.4.3.2	Call rearrangements	159
	10.11.4.3.3	Dual Tone Multi-Frequency protocol control procedure	159
	10.11.4.3.3.1	Send DTMF request by the AS.....	159
	10.11.4.3.3.2	Send DTMF response by the network	160
	10.11.4.3.3.3	Sequencing of subsequent send DTMF requests by the AS.....	160
10.11.4.4	Call clearing		160
	10.11.4.4.1	Terminology	160
	10.11.4.4.2	Exception conditions	161
	10.11.4.4.3	Clearing initiated by the AS	161
	10.11.4.4.4	Clearing initiated by the GSS.....	162
	10.11.4.4.4.1	Clearing when tones/announcements provided	162
	10.11.4.4.4.2	Clearing when tones/announcements not provided.....	162
	10.11.4.4.4.3	Completion of clearing	163
	10.11.4.4.5	Clear collision.....	163
10.11.4.5	Miscellaneous procedures		164
	10.11.4.5.1	In-band tones and announcements.....	164
	10.11.4.5.2	Status procedures	164
	10.11.4.5.2.1	Status enquiry procedure	164
	10.11.4.5.2.2	Receiving a STATUS message by a CC-entity	165
10.11.5	Elementary procedures for maintenance resource management.....		165
	10.11.5.1	Overview.....	165
	10.11.5.1.1	General	165
	10.11.5.2	GSS originated signalling procedures	165
	10.11.5.2.1	General	165
	10.11.5.2.2	Paging.....	166
	10.11.5.2.3	Engineering paging	167
	10.11.5.2.4	Shutdown.....	168
	10.11.5.2.5	Operation and Maintenance (OM).....	168
	10.11.5.2.5.1	General	168
	10.11.5.2.5.2	Transmission of OM data with high priority.....	169
10.11.6	Handling of error conditions		171
	10.11.6.1	General.....	171
	10.11.6.2	Protocol discrimination error	172
	10.11.6.3	Message too short.....	172
	10.11.6.4	Transaction identifier error.....	172
	10.11.6.4.1	Call control.....	172

	10.11.6.4.2	Radio resource	172
	10.11.6.4.3	MR.....	172
10.11.6.5	Message type error		172
	10.11.6.5.1	Call control	172
	10.11.6.5.2	Radio resource	172
	10.11.6.5.3	MR.....	173
10.11.6.6	General information elements errors		173
	10.11.6.6.1	Information element out of sequence..	173
	10.11.6.6.2	Duplicated information element.....	173
10.11.6.7	Mandatory information element error.....		173
	10.11.6.7.1	Call control	173
	10.11.6.7.2	Radio resource	174
10.11.6.8	Non-mandatory information element errors		174
	10.11.6.8.1	Unrecognized information element.....	174
	10.11.6.8.2	Non-mandatory information element content error.....	175
	10.11.6.8.2.1	Call control	175
10.11.7	Message functional definitions and contents		175
10.11.7.1	Messages for RRM		175
	10.11.7.1.1	Establish request.....	176
	10.11.7.1.2	Establish confirm.....	176
	10.11.7.1.3	Establish reject	177
	10.11.7.1.4	Handover command.....	177
	10.11.7.1.5	Handover request.....	177
	10.11.7.1.6	Handover reject.....	178
	10.11.7.1.7	Resource release request.....	178
	10.11.7.1.8	Resource release confirm	178
	10.11.7.1.9	Resource abort request.....	179
	10.11.7.1.10	Resource abort confirm	179
	10.11.7.1.11	Identity indication.....	179
	10.11.7.1.12	Handover failure	180
	10.11.7.1.13	Handover complete.....	180
	10.11.7.1.13a	Group broadcast data transfer	180
	10.11.7.1.14	System Information type 1	180
	10.11.7.1.15	System Information type 2	181
	10.11.7.1.16	System Information type 3	181
	10.11.7.1.17	System Information type 4	181
	10.11.7.1.18	System Information type 5	182
	10.11.7.1.19	System Information type 6	182
	10.11.7.1.20	System Information type 7	182
	10.11.7.1.21	System Information type 8	183
	10.11.7.1.21a	System Information type 9	183
	10.11.7.1.22	Status	184
10.11.7.2	Messages for circuit-mode connections CC		184
	10.11.7.2.1	Alerting.....	185
	10.11.7.2.2	Call proceeding	185
	10.11.7.2.3	Connect.....	186
	10.11.7.2.4	Disconnect.....	186
	10.11.7.2.5	Notify	187
	10.11.7.2.6	Progress	187
	10.11.7.2.7	Release.....	187
	10.11.7.2.8	Release complete	188
	10.11.7.2.9	Setup	189
	10.11.7.2.10	Send DTMF.....	190
	10.11.7.2.11	Send DTMF acknowledge.....	190
	10.11.7.2.12	Send DTMF reject.....	191
	10.11.7.2.13	Status	191
	10.11.7.2.14	Status enquiry.....	191
10.11.7.3	Messages for MR management.....		191
	10.11.7.3.1	ENGPAGE channel response	192

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST ETS 300 326-2 E1:2003
<https://standards.iteh.ai/catalog/standards/sist/65000795-1c5e-4a64-ach5-554103c2b1b3/sist-ets-300-326-2-e1-2003>