ETSI TS 101 823-3-1 V1.1.1 (2001-12)

Technical Specification

Broadband Radio Access Networks (BRAN);
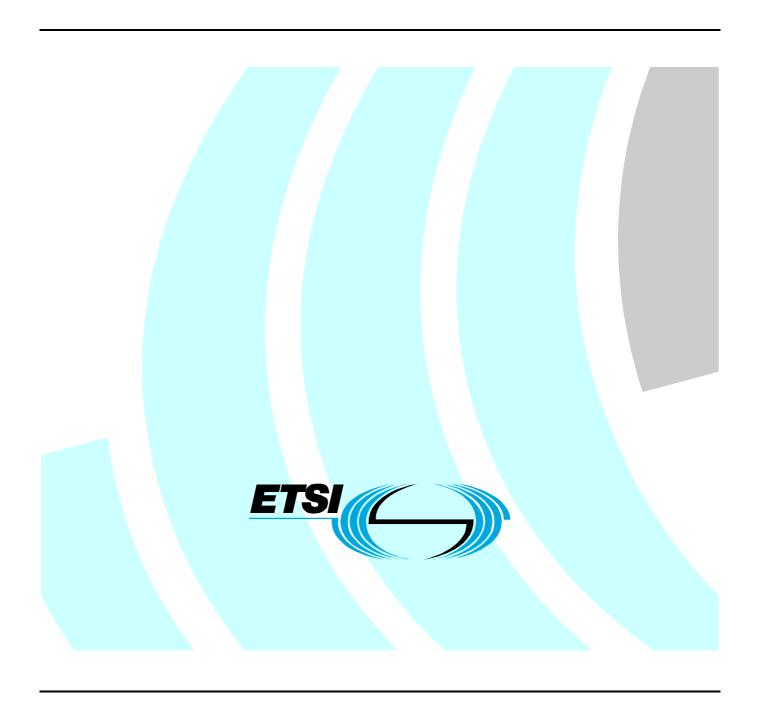## HIPERLAN Type 2;
Conformance testing for the
Data Link Control (DLC) layer;
Part 3: Profile for Business Environment;
Sub-part 1: Profile Requirement List (PRL) proforma

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Foreword

This Technical Specification (TS) has been produced by ETSI Project Broadband Radio Access Networks (BRAN).

The present document is part 3, sub-part 1 of a multi-part deliverable covering Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) layer, as identified below:

Part 1:   "Basic data transport function";

Part 2:   "Radio Link Control (RLC) sublayer";

Part 3:   "Profile for Business Environment";

Sub-part 1:   "Profile Requirement List (PRL) proforma";

Sub-part 2:   "Test Suite Structure and Test Purposes (TSS&TP) specification";

Sub-part 3:   "Profile Test Specification (PTS) - Profile Specific Test Specification (PSTS)".

Part 4:   "Extension for Home Environment";

Part 5:   "Profile for Home Environment".

Introduction

To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a telecommunication specification. When such a statement is based on a profile, it is called Profile Requirement List (PRL).

1   Scope

The present document provides the Profile Requirement List (PRL) proforma for BRAN HIPERLAN type 2 DLC layer, Profile for Business Environments as defined in TS 101 761-3 [1] in compliance with the relevant requirements, and in accordance with the relevant guidance given in ISO/IEC 9646-7 [4] and ETS 300 406 [2].

It details in tabular form the implementation options, i.e. the optional functions additional to those which are mandatory to implement.

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 101 761-3 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Data Link Control (DLC) Layer; Part 3: Profile for Business Environment".

[2]   ETSI ETS 300 406 (1995): "Methods for testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

[3]   ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".

[4]   ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

[5]   ETSI TS 101 761-1 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Data Link Control (DLC) Layer; Part 1: Basic Data Transport Functions".

[6]   ETSI TS 101 823-1-1: "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) protocol; Part 1: Basic data transport function; Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma".

[7]   ETSI TS 101 823-2-1: "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) protocol; Part 2: Radio Link Control (RLC) sublayer; Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma".

[8]   ETSI TS 101 811-1-1: "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the packet based convergence layer; Part 1: Common part; Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma".

3   Definitions and abbreviations

3.1   Definitions

For the purposes of the present document, the terms and definitions given in TS 101 761-3 [1], in ISO/IEC 9646-1 [3] and in ISO/IEC 9646-7 [4] apply.

- terms defined in ;

- terms defined in and in ISO/IEC 9646-7 [4].

In particular, the following terms and definitions given in ISO/IEC 9646-1 [3] apply.

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.

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

Protocol ICS (PICS): ICS for an implementation or system claimed to conform to a given protocol specification

Profile Requirement List (PRL): requirement list for an implementation or system claimed to conform to a given profile specification

3.2   Abbreviations

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

ACF	Association Control Function
AP	Access Point
DLC	Data Link Control
IUT	Implementation Under Test
MAC	Medium Access Control
MT	Mobile Terminal
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statement
RLC	Radio Link Control
RRC	Radio Resource Control
TP	Test Purposes
TSS	Test Suite Structure

4   Conformance to this PRL proforma specification

If it claims to conform to the present document, the actual PICS proformas to be filled in by a supplier shall be technically equivalent to the text of the PICS proformas given in reference and shall preserve the numbering/naming and ordering of the proforma it. In addition, the profile specific ICS of annex A, and the PRL of annex B to be filled in by a supplier shall be technically equivalent to the text of these proformas .

A PICS which conforms to the present document shall be a conforming PICS proforma completed in accordance with the guidance for completion given in clause A.1.

Annex A (normative):
Profile specific ICS proforma for TS 101 761-3

Notwithstanding the provisions of the copyright clause related to the text of the present document, ETSI grants that users of the present document may freely reproduce the Profile specific ICS proforma in this annex so that it can be used for its intended purposes and may further publish the completed Profile specific ICS.

This annex contains the Profile specific ICS proforma covering the parts of the protocols which are not covered by the individual Profile specific ICS on which the profile is based.

This Profile specific ICS proforma may be empty if no additional capabilities are required.

In addition, this annex provides instructions to handle the individual Profile specific ICS.

A.1   Guidance for completing the proforma

A.1.1   Purposes and structure

The purpose of this Profile specific ICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in TS 101 761-3 may provide information about the implementation in a standardized manner.

The Profile specific ICS proforma is subdivided into clauses for the following categories of information:

-    guidance for completing the Profile specific ICS proforma;

-    identification of the implementation;

-    identification of the TS 101 761-1;

-    global statement of conformance;

-    roles;

-    major capabilities;

-    PDUs;

-    PDU parameters.

A.1.2   Abbreviations and conventions

The Profile specific ICS proforma contained in this annex is comprised of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7.

Item column

The item column contains a number which identifies the item in the table.

Item description column

The item description column describes in free text each respective item (e.g. parameters, timers, etc.). It implicitly means "is <item description> supported by the implementation?".

Status column

The following notations, defined in ISO/IEC 9646-7, are used for the status column:

m	mandatory - the capability is required to be supported.
o	optional - the capability may be supported or not.
n/a	not applicable - in the given context, it is impossible to use the capability.
x	prohibited (excluded) - there is a requirement not to use this capability in the given context.
o.i	qualified optional - for mutually exclusive or selectable options from a set. "i" is an integer which identifies an unique group of related optional items and the logic of their selection which is defined immediately following the table.
ci	conditional - the requirement on the capability ("m", "o", "x" or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying an unique conditional status expression which is defined immediately following the table.
i	irrelevant (out-of-scope) - capability outside the scope of the reference specification. No answer is requested from the supplier.

NOTE 1: This use of "i" status is not to be confused with the suffix "i" to the "o" and "c" statuses above.

Reference column

The reference column makes reference to TS 101 761-1, except where explicitly stated otherwise.

Support column

The support column shall be filled in by the supplier of the implementation. The following common notations, defined in ISO/IEC 9646-7, are used for the support column:

Y or y	supported by the implementation.
N or n	not supported by the implementation.
N/A, n/a or -	no answer required (allowed only if the status is n/a, directly or after evaluation of a conditional status).

If this Profile specific ICS proforma is completed in order to describe a multiple-profile support in a system, it is necessary to be able to answer that a capability is supported for one profile and not supported for another. In that case, the supplier shall enter the unique reference to a conditional expression, preceded by "?" (e.g. ?3). This expression shall be given in the space for comments provided at the bottom of the table. It uses predicates defined in the SCS, each of which refers to a single profile and which takes the value TRUE if and only if that profile is to be used.

EXAMPLE 1: ?3: IF prof1 THEN Y ELSE N

NOTE 2: As stated in ISO/IEC 9646-7, support for a received PDU requires the ability to parse all valid parameters of that PDU. Supporting a PDU while having no ability to parse a valid parameter is non-conformant. Support for a parameter on a PDU means that the semantics of that parameter are supported.

Values allowed column

The values allowed column contains the type, the list, the range, or the length of values allowed. The following notations are used:

- range of values: <min value> .. <max value>
  example: 5 ... 20

- list of values: <value1>, <value2>, ..., <valueN>
  example: 2, 4, 6, 8, 9
  example: '1101'B, '1011'B, '1111'B
  example: '0A'H, '34'H, '2F'H

- list of named values: <name1>(<val1>), <name2>(<val2>), ..., <nameN>(<valN>)
  example: reject(1), accept(2)

- length: size (<min size> .. <max size>)
  example: size (1 .. 8)

Values supported column

The values supported column shall be filled in by the supplier of the implementation. In this column, the values or the ranges of values supported by the implementation shall be indicated.

References to items

For each possible item answer (answer in the support column) within the Profile specific ICS proforma a unique reference exists, used, for example, in the conditional expressions. It is defined as the table identifier, followed by a solidus character "/", followed by the item number in the table. If there is more than one support column in a table, the columns are discriminated by letters (a, b, etc.), respectively.

EXAMPLE 2:   A.5/4 is the reference to the answer of item 4 in table A.5.

EXAMPLE 3:   A.6/3b is the reference to the second answer (i.e. in the second support column) of item 3 in table A.6.

Prerequisite line

A prerequisite line takes the form: Prerequisite: <predicate>.

A prerequisite line after a clause or table title indicates that the whole clause or the whole table is not required to be completed if the predicate is FALSE.

A.1.3   Instructions for completing the Profile specific ICS proforma

The supplier of the implementation shall complete the Profile specific ICS proforma in each of the spaces provided. In particular, an explicit answer shall be entered, in each of the support or supported column boxes provided, using the notation described in clause A.1.2.

However, the tables containing in "user role" or "Mobile Terminal MT" clause shall only be completed for MT implementations, and the tables containing in "network role" or "Access Point AP" clause shall only be completed for AP implementations.

If necessary, the supplier may provide additional comments in space at the bottom of the tables or separately.

More detailed instructions are given at the beginning of the different clauses of the Profile specific ICS proforma.

A.2   Identification of the implementation

Identification of the Implementation Under Test (IUT) and the system in which it resides (the System Under Test (SUT)) should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier information and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the Profile specific ICS should be named as the contact person.

A.2.1 Date of the statement

....

A.2.2 Implementation Under Test (IUT) identification

IUT name:

....

....

IUT version:

....

A.2.3 System Under Test (SUT) identification

SUT name:

....

....

Hardware configuration:

....

....

....

Operating system:

....

A.2.4 Product supplier

Name:

....

Address:

....

....

....

Telephone number:

....

Facsimile number:

....

E-mail address:

....

Additional information:

....

....

....

A.2.5   Client (if different from product supplier)

Name:

....

Address:

....

....

....

Telephone number:

....

Facsimile number:

....

E-mail address:

....

Additional information:

....

....

A.2.6   Profile specific ICS contact person

(A person to contact if there are any queries concerning the content of the Profile specific ICS)

Name:

....

Telephone number:

....

Facsimile number:

....

E-mail address:

....

Additional information:

....

....

....

A.3 Identification of the TS 101 761-3

This proforma applies to the profile described in the following standard:

TS 101 761-3 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Data Link Control (DLC) Layer; Part 3: Profile for Business Environment".

A.4 Global statement of conformance

Are all mandatory capabilities implemented? (Yes/No)   ....

NOTE: Answering "No" to this question indicates non-conformance to the TS 101 761-3 specification. Non-supported mandatory capabilities are to be identified in the Profile specific ICS, with an explanation of why the implementation is non-conforming, on pages attached to the Profile specific ICS proforma.

A.5 Profile specific ICS proforma

Void.

Annex B (normative):
Profile requirement list

B.1   Purpose and structure

The purpose of this requirement list is to specify the modifications that apply to the status of the items affected in the ICS proforma of each base specifications.

The requirement list is subdivided into clauses each dealing with a given base specification:

- tables for DLC - Error Control protocol [6];

- tables for Radio Link Control protocol [7];

- tables for Convergence layer protocol [8].

B.2   Tables for DLC - Error Control protocol (seeTS 101 823-1-1)

This clause identifies the modifications to the requirements expressed in the Profile specific ICS proforma specification for DLC - Error Control.

B.2.1   Major capabilities

Table B.1: Table A.2 Error control modes

Item	Error control mode	Transmitter		Receiver	
		Profile reference	Profile status	Profile reference	Profile status
1	Acknowledged mode	4	m	4	m
2	Repetition mode	4	m	4	m

B.2.2   Repetition mode - receiver capabilities

Table B.2: Table A.9 Repetition mode - receiver

Item	capabilities	Profile reference	Profile status
1 **(10 in A.9)**	Proper handling of discarded data and correct data (Delivery of LCHs below discard sequence)	4	m

B.3 Tables for Radio Link Control (RLC) protocol (see TS 101 823-2-1)

This clause identifies the modifications to the requirements expressed in the Profile specific ICS proforma specification for DLC - Radio Link Control.

B.3.1 MT implementation

B.3.1.1 Association function

Table B.3: Table A.4 MT association functions

Item	capabilities	Profile reference	Profile status
1 (2 in A.4)	MT sends Association request message	5.2	m
1 (7 in A.4)	MT initiates info transfer procedure with AP (or with MT for Direct Link purpose)	5.2	m

Table B.4: Table A.10 authentication key identifiers assigned in MT

Item	capabilities	Profile reference	Profile status
1 (3 in A.10)	Network access identifier	5.2	m

B.3.1.2 Broadcast and multicast function

Table B.5: Table A.3 MT ACF procedures

Item	capabilities	Profile reference	Profile status
1 (5 in A.3)	Multicast	5.4	m
2 (6 in A.3)	Broadcast	5.4	m

Table B.6: Table A.14 Multicast

Item	capabilities	Profile reference	Profile status
1 (2 in A.14)	MT leaves multicast group (group-leave message is used)	5.4	m

B.3.1.3 Handover function

Table B.7: Table A.16 RRC procedures for MT

Item	capabilities	Profile reference	Profile status
1 (1 in A.16)	MT supports handover	5.5	m

Table B.8: Table A.17 MT handover capabilities

Item	capabilities	Profile reference	Profile status
1 **(2 in A.17)**	MT supports Radio Handover	5.5	m
3 **(5 in A.17)**	MT performs Handover when forced by AP	5.5	m

B.3.2   AP implementation

B.3.2.1   Association function

Table B.9: Table A.47 AP association functions

Item	capabilities	Profile reference	Profile status
1 **(5 in A.47)**	AP supports info transfer procedure	5.2	m

Table B.10: Table A.53 - authentication key identifiers assigned in AP

Item	capabilities	Profile reference	Profile status
1 **(3 in A.53)**	Network access identifier	5.2	m

B.3.2.2   Broadcast and multicast function

Table B.11: Table A.46 AP ACF procedures

Item	capabilities	Profile reference	Profile status
1 **(5 in A.46)**	Multicast	5.2	m
4 **(6 in A.46)**	Broadcast	5.2	m

Table B.12: Table A.57 Multicast

Item	capabilities	Profile reference	Profile status
1 **(2 in A.57)**	AP receives group-leave message from MT	5.2	m

B.3.2.3   Handover function

Table B.13: Table A.59 RRC procedures for AP

Item	capabilities	Profile reference	Profile status
1 **(1 in A.59)**	AP supports handover	5.5	m

No other restriction for AP handover functions which remain optional.

B.4 Tables for Packet based convergence layer - common part (see TS 101 811-1-1)

The profile places no restriction on the support answers requested by the Profile specific ICS proforma provided in Profile specific ICS proforma specification.

History

Document history		
V1.1.1	December 2001	Publication