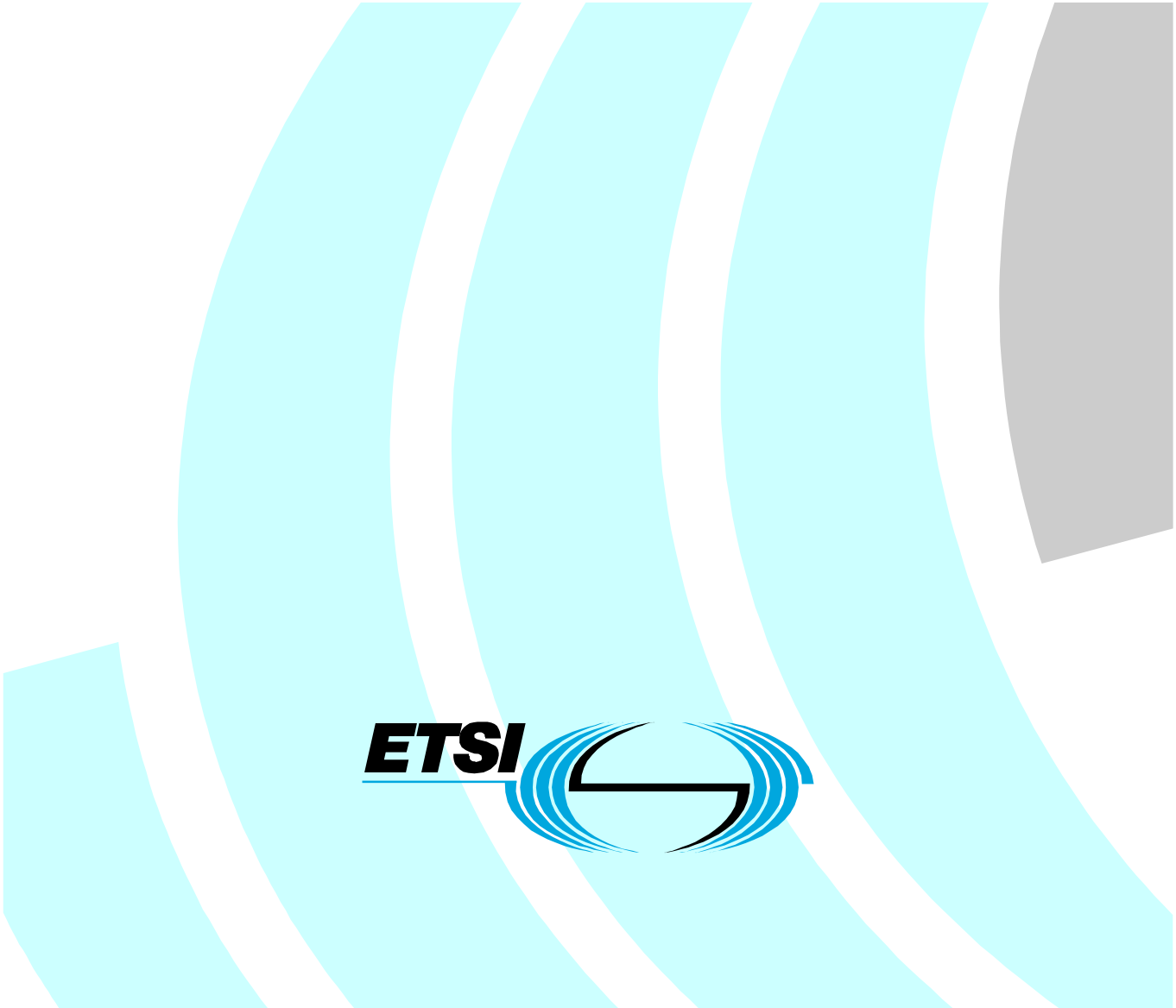
ETSI TS 101 823-3-1 V1.2.1 (2003-07)

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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ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - 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
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Contents

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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. Full details of the entire series can be found in part 1, sub-part 1 [5].

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 Broadband Radio Access Networks (BRAN) HIPERLAN Type 2 DLC layer, Profile for business environment 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.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

[1] ETSI TS 101 761-3 (V1.2.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Data Link Control (DLC) Layer; Part 3: Profile for Business Environment".

[2] ETSI ETS 300 406: "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 101 823-1-1 (V1.3.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) layer; Part 1: Basic data transport functions; Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma".

[6] ETSI TS 101 823-2-1 (V1.3.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) layer; Part 2: Radio Link Control (RLC) sublayer; Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma".

[7] ETSI TS 101 823-4-1 (V1.2.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) layer; Part 4: Extension for Home Environment; Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma".

[8] ETSI TS 101 811-1-1 (V1.3.1): " 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 ".

[9] ETSI TS 101 811-2-1 (V1.2.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the packet based convergence layer; Part 2: Ethernet Service Specific Convergence Sublayer (SSCS); Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma".

[10] ETSI TS 101 811-3-1 (V1.2.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the packet based convergence layer; Part 3: IEEE 1394 Service Specific Convergence Sublayer (SSCS); Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma".

[11] ETSI TS 101 811-4-1 (V1.2.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the packet based convergence layer; Part 4: IEEE 1394 Bridge Layer; Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma".

3 Definitions

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

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

This annex contains the Profile specific ICS proforma covering the parts of the protocols which are not covered by the individual PICS 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 PICS.

A.1 Guidance for completing the proforma

A.1.1 Purposes and structure

The purpose of this PICS 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 PICS proforma is subdivided into clauses for the following categories of information:

- guidance for completing the PICS 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 PICS 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 PICS 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 PICS 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 PICS proforma

The supplier of the implementation shall complete the PICS 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 PICS 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 PICS 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 PICS contact person

(A person to contact if there are any queries concerning the content of the PICS)

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: "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 PICS, with an explanation of why the implementation is non-conforming, on pages attached to the PICS proforma.

A.5 Profile specific ICS proforma

This clause is empty.

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:

- DLC - Error Control protocol;
- Radio Link Control protocol;
- Convergence layer protocol.

B.2 DLC - Error Control protocol

This clause applies to AP and to MT and identifies the modifications to the requirements expressed in the PICS proforma specification for DLC Error Control, TS 101 823-1-1 [5].

B.2.1 Major capabilities

Table B.1: Error control modes

Item	Error control mode	AP		MT	
		Profile reference	Profile status	Profile reference	Profile status
1	Acknowledged mode	4	m	4	m
2	Repetition mode	4	m	4	m
2	Unacknowledged mode	4	m	4	m

All error control modes become mandatory for the AP.

B.2.2 Repetition mode - receiver capabilities

Table B.2: Repetition mode - receiver

Item	Capabilities	Profile reference	Profile status
1	Discarding of LCHs	4	m

B.3 Radio Link Control (RLC) protocol

This clause identifies the modifications to the requirements expressed in the PICS proforma specification for RLC - Radio Link Control, TS 101 823-2-1 [6]. Clause B.3.1 applies to MT, the following one (clause B.3.2) applies to AP.

B.3.1 MT implementation

B.3.1.1 Association function

Table B.3: MT association functions

Item	Capabilities	Profile reference	Profile status
1	MT initiates Association request message	5.2	m
1	MT initiates info transfer procedure with AP (or with MT for Direct Link purpose)	5.2	m

Table B.4: Authentication key identifiers assigned in MT

Item	Capabilities	Profile reference	Profile status
1	Network access identifier	5.2	m

The other Authentication key identifiers remain optional

B.3.1.2 Broadcast and multicast function

Table B.5: MT ACF procedures

Item	Capabilities	Profile reference	Profile status
1	Multicast	5.4	o
2	Broadcast	5.4	m

Multicast remain optional for MT, while broadcast is mandatory.

Table B.6: Multicast procedures

Item	Capabilities	Reference	Status	Support
1	Multicast with multicast addressing	5.1.4	o.2	
2	Multicast with N unicast addressing	5.1.4	o.2	
o.1:	It is mandatory to support at least one of these multicast modes, if multicast is supported.			

B.3.1.3 Handover function

Table B.7: Handover procedures for MT

Item	Capabilities	Profile reference	Profile status
1	MT supports handover	5.5	m

Table B.8: MT handover capabilities

Item	Capabilities	Reference	Status	Support
1	MT supports Sector handover	5.2.1.1	m	
2	MT supports Radio handover	5.2.1.2	m	
3	MT supports Network handover	5.2.1.3	m	
4	Token distribution for Network handover	5.2.1.4	m	
5	Handover Rejection	5.2.1.5	m	
6	MT performs Handover when forced by AP	5.2.1.6	m	
7	MT notifies AP of Handover (message RLC Handover Notify is used)	5.2.1.2	m	

All types of handover become mandatory for MT.

B.3.2 AP implementation

B.3.2.1 Association function

Table B.9: AP association functions

Item	Capabilities	Profile reference	Profile status
1	AP supports info transfer procedure	5.2	m

Table B.10: authentication key identifiers assigned in AP

Item	Capabilities	Profile reference	Profile status
1	Network access identifier	5.2	m

The other Authentication key identifiers remain optional

B.3.2.2 Broadcast and multicast function

Table B.11: AP ACF procedures

Item	Capabilities	Profile reference	Profile status
1	Multicast	5.2	m
8	Broadcast	5.2	m

Table B.12: Multicast procedures

Item	Capabilities	Reference	Status	Support
1	Multicast with multicast addressing	5.1.4	o.2	
2	Multicast with N unicast addressing	5.1.4	o.2	
o.2:	It is mandatory to support at least one of these multicast modes, as multicast is mandatory.			

Table B.13: Multicast

Item	Capabilities	Profile reference	Profile status
1	AP receives group-leave message from MT	5.2	m

B.3.2.3 Handover function

Table B.14: Handover procedures for AP

Item	Capabilities	Profile reference	Profile status
1	AP supports handover	5.5	m

Table B.15: AP handover capabilities

Item	Capabilities	Reference	Status	Support
1	MT supports Sector handover	5.2.1.1	o	
2	MT supports Radio handover	5.2.1.2	o	
3	MT supports Network handover	5.2.1.3	m	
4	Token distribution for Network handover	5.2.1.4	o	
5	Handover Rejection	5.2.1.5	m	
6	MT performs Handover when forced by AP	5.2.1.6	m	
7	MT notifies AP of Handover (message RLC Handover Notify is used)	5.2.1.2	m	

Only Network handover becomes mandatory for AP.

B.4 Convergence layer protocols

The profile places no restriction on the support answers requested by the PICS proforma dealing with Convergence layer protocols, TS 101 811-1-1 [8] and TS 101 811-2-1 [9].

History

Document history		
V1.1.1	December 2001	Publication
V1.2.1	July 2003	Publication