



SLOVENSKI STANDARD

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Širokopasovna radijska dostopovna omrežja (BRAN) – Zelo zmogljivo radijsko lokalno omrežje (HIPERLAN), tip 2 – Specifikacija za preskušanje skladnosti protokola krmiljenja podatkovnih povezav (DLC) – 2. del: Podplast kontrole radijske povezave (RLC) – 1. poddel: Izjava o skladnosti izvedbe protokola (PICS) - Proforma specifikacija

Broadband Radio Access Networks (BRAN) HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) protocol; Part 2: Radio Link Control (RLC) sublayer; Subpart 1: Protocol Implementation Conformance Statement (PICS) proforma

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35.110	Omreževanje	Networking

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European Standard (Telecommunications series)

**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**

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Contents

Intellectual Property Rights	5
Foreword.....	5
Introduction.....	5
1 Scope.....	6
2 References.....	6
3 Definitions and abbreviations.....	6
3.1 Definitions.....	6
3.2 Abbreviations.....	7
4 Conformance to this PICS proforma specification.....	7
Annex A (normative): Protocol ICS proforma for TS 101 761-2 V1.1.1.....	8
A.1 Guidance for completing the PICS proforma.....	8
A.1.1 Purposes and structure.....	8
A.1.2 Abbreviations and conventions.....	8
A.1.3 Instructions for completing the PICS proforma.....	10
A.2 Identification of the implementation.....	10
A.2.1 Date of the statement.....	11
A.2.2 Implementation Under Test (IUT) identification.....	11
A.2.3 System Under Test (SUT) identification.....	11
A.2.4 Product supplier.....	11
A.2.5 Client (if different from product supplier).....	12
A.2.6 PICS contact person.....	12
A.3 Identification of the EN.....	13
A.4 Global statement of conformance.....	13
A.5 Roles.....	13
A.6 Mobile Terminal MT.....	13
A.6.1 Major MT capabilities and functionalities of RLC.....	13
A.6.1.1 Services supporting ACF: Association Control Function.....	14
A.6.1.1.1 Association functions.....	14
A.6.1.1.2 Security functions.....	14
A.6.1.1.3 Disassociation functions.....	16
A.6.1.1.4 Multicast functions.....	16
A.6.1.1.5 CL Broadcast functions.....	16
A.6.1.2 Services supporting RRC: Radio Resource Control.....	17
A.6.1.3 Services supporting DUC: DLC User Connection Control.....	17
A.6.2 RLC PDU descriptions, seen from MT.....	19
A.6.2.1 PDU descriptions for ACF support.....	19
A.6.2.2 PDU descriptions for RRC support.....	21
A.6.2.3 PDU descriptions for DUC support.....	23
A.6.2.4 PDU descriptions for unsupported messages.....	25
A.6.3 PDU parameters.....	25
A.7 Access Point AP.....	25
A.7.1 Major AP capabilities and functionalities of RLC.....	25
A.7.1.1 Services supporting ACF: Association Control Function.....	26
A.7.1.1.1 Association functions.....	26
A.7.1.1.2 Security functions.....	26
A.7.1.1.3 Disassociation functions.....	28
A.7.1.1.4 Multicast functions.....	28
A.7.1.1.5 CL Broadcast functions.....	28

A.7.1.2	Services supporting RRC: Radio Resource Control.....	29
A.7.1.3	Services supporting DUC: DLC User Connection Control	29
A.7.2	RLC PDU descriptions, seen from AP	31
A.7.2.1	PDU descriptions for ACF support.....	31
A.7.2.2	PDU descriptions for RRC support.....	33
A.7.2.3	PDU descriptions for DUC support	35
A.7.2.4	PDU descriptions for unsupported messages.....	37
A.7.3	PDU parameters	37
A.8	PDU parameters.....	37
A.8.1	Parameters of PDUs for ACF support	37
A.8.1.1	Association	37
A.8.1.2	Security	40
A.8.1.3	Authentication	42
A.8.1.4	Disassociation.....	44
A.8.1.5	Multicast.....	44
A.8.1.6	Broadcast.....	45
A.8.2	Parameters of PDUs for RRC support	46
A.8.2.1	Handover	46
A.8.2.2	Dynamic Frequency Selection (DFS).....	50
A.8.2.3	Change frequency	53
A.8.2.4	Uplink power control	53
A.8.2.5	MT alive.....	53
A.8.2.6	MT absence	54
A.8.2.7	Power saving	54
A.8.3	Parameters of PDUs for DUC support.....	55
A.8.3.1	DUC setup.....	55
A.8.3.2	DUC release	56
A.8.3.3	DUC modify	56
A.8.3.4	Direct Mode DUC setup.....	57
A.8.3.5	Direct Mode DUC release	59
A.8.3.6	DUC relay release.....	59
A.8.3.7	Direct Mode DUC modify	60
A.8.4	Parameters of PDUs for non support	62
History	63

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Project Broadband Radio Access Networks (BRAN).

The present document is 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; Part 2: Radio Link Control (RLC) sublayer, as identified below:

- Sub-part 1:** "Protocol Implementation Conformance Statement (PICS) proforma";
- Sub-part 2: "Test Suite Structure and Test Purposes (TSS&TP) specification";
- Sub-part 3: "Abstract Test Suite (ATS) specification".

National transposition dates

Date of adoption of this EN:	19 January 2001
Date of latest announcement of this EN (doa):	30 April 2001
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 October 2001
Date of withdrawal of any conflicting National Standard (dow):	31 October 2001

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. Such a statement is called a Protocol Implementation Conformance Statement (PICS).

1 Scope

The present document provides the Protocol Implementation Conformance Statement (PICS) proforma for the Radio Link Control (RLC) layer of Hiperlan type 2 as defined in TS 101 761-2 [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, 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] ETSI TS 101 761-2 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Data Link Control (DLC) Layer; Part 2: Radio Link Control (RLC) sublayer".
- [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".

3 Definitions and abbreviations

3.1 Definitions

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

- terms defined in TS 101 761-2 [1];
- terms defined in ISO/IEC 9646-1 [3] and in ISO/IEC 9646-7 [4].

In particular, the following terms defined 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. 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.

3.2 Abbreviations

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

ACF	Association Control Function
AP	Access Point
BCH	Broadcast CHannel
CC	Central Controller
CL	Convergence Layer
DCC	DLC user Connection Control
DES	Data Encryption Standard
DFS	Dynamic Frequency Selection
DLC	Data Link Control
DM	Direct Mode
DUC	DLC User Connection
EC	Error Control
ICS	Implementation Conformance Statement
IUT	Implementation Under Test
IV	Initialization Vector
MAC	Medium Access Control
MT	Mobile Terminal
PDU	Protocol Data Unit
PICS	Protocol ICS
RLC	Radio Link Control
RRC	Radio Resource Control
SCS	System Conformance Statement
SUT	System Under Test

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4 Conformance to this PICS proforma specification

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If it claims to conform to the present document, the actual PICS proforma to be filled in by a supplier shall be technically equivalent to the text of the PICS proforma given in Annex A, and shall preserve the numbering/naming and ordering of the proforma items.

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): Protocol ICS proforma for TS 101 761-2 V1.1.1

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 PICS proforma in this annex so that it can be used for its intended purposes and may further publish the completed PICS.

A.1 Guidance for completing the PICS 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 101 761-2 [1] may provide information about the implementation in a standardized manner.

The PICS proforma is subdivided into subclauses for the following categories of information:

- guidance for completing the PICS proforma;
- identification of the implementation;
- identification of the TS 101 761-2 [1];
- global statement of conformance;
- roles;
- Mobile Terminal MT,
 - major capabilities,
 - PDUs,
 - PDU parameters,
 - timers.
- Access Point AP;
 - major capabilities,
 - PDUs,
 - PDU parameters,
 - timers.

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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 [4].

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 [4], 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

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The reference column makes reference to TS 101 761-2 [1], except where explicitly stated otherwise.

Support column

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The support column shall be filled in by the supplier of the implementation. The following common notations, defined in ISO/IEC 9646-7 [4], 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 [4], 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.

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Prerequisite line

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

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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 subclause A.1.2.

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

.....
.....
.....
.....

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.....

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:

.....

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.....
.....

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 EN

This PICS proforma applies to the following standard:

TS 101 761-2 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Data Link Control (DLC) Layer; Part 2: Radio Link Control (RLC) sublayer".

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 101 761-2 [1] 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 Roles

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Table A.1: Roles

Item	Role	Reference	Status	Support
1	Mobile Terminal MT	4	o.1	
2	Access Point AP	4	o.1	

o.1: It is mandatory to support at least one of these items.

Comments:

A.6 Mobile Terminal MT

This subclause contains the PICS proforma tables related to the Mobile Terminal MT. They need to be completed for description of MT implementations only.

Prerequisite: A.1/1 Mobile Terminal MT

A.6.1 Major MT capabilities and functionalities of RLC

Table A.2: Major MT functionalities

Item	Services supporting:	Reference	Status	Support
1	Association Control Function ACF	5.1	m	
2	Radio Resource Control RRC	5.2	m	
3	DLC User Connection Control DUC	5.3	m	