



SLOVENSKI STANDARD
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8] [] H U bc`ca fYy`Y`n`]bhY[f]fUb]a]`g]c]f]h] Ua]`f]G8 B`E`5 g]b\ fcb]`dfYbcgb]`bU]b
f5 HA`E`Cgbcj bY`nbU]`bcgh]`]b`Z b`W`g`Y`gdYW]Z`_UW`Y`g]ghYa U5 HA`E`&`XY`.
GdYW]Z`_UW`Y`Ud`Ugh]`j` `6`!`G8 B`5 HA

Broadband Integrated Services Digital Network (B-ISDN); Asynchronous Transfer Mode (ATM); Part 2: B-ISDN ATM layer specification

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ICS:

33.080	Digitalno omrežje z integriranimi storitvami (ISDN)	Integrated Services Digital Network (ISDN)
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**Broadband Integrated Services Digital Network (ISDN);
Asynchronous Transfer Mode (ATM);
Basic characteristics and functional specification of ATM;
Part 2: B-ISDN ATM layer specification**

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Network Aspects (NA) Technical Committee of the European Telecommunications Standards Institute (ETSI).

Asynchronous Transfer Mode (ATM) is the transfer mode solution for implementing a Broadband Integrated Services Digital Network (B-ISDN). It influences the standardization of digital hierarchies, multiplexing structures, switching and interfaces for broadband signals.

This ETS consists of 2 parts as follows:

Part 1: "B-ISDN ATM functional specification".

Part 2: "B-ISDN ATM layer specification".

Transposition dates	
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1 Scope

This European Telecommunication Standard (ETS) is a 2 Part ETS which gives the basic characteristics and functional specification of Asynchronous Transfer Mode (ATM).

This part specifically addresses, from CCITT Recommendation I.361 [1]:

- a) the cell structure and the ATM cell coding;
- b) the ATM protocol procedures.

2 Normative references

This ETS incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- [1] CCITT Recommendation I.361: "B-ISDN ATM layer specification".
- [2] CCITT Recommendation I.432: "B-ISDN user-network interface - Physical layer specification".
- [3] CCITT Recommendation I.311: "B-ISDN general network aspects".
- [4] CCITT Recommendation I.610: "B-ISDN Operation and Maintenance principles and functions".
- [5] CCITT Recommendation I.371: "Traffic control & congestion control in B-ISDN".
- [6] ETS 300 298-1: "Network Aspects (NA); Basic characteristics and functional specification of Asynchronous Transfer Mode (ATM) Part 1: B-ISDN ATM functional specification".

3 Abbreviations

For the purposes of this ETS, the following abbreviations apply:

ATM	Asynchronous Transfer Mode
CLP	Cell Loss Priority
GFC	Generic Flow Control
HEC	Header Error Control
MSB	Most Significant Bit
NNI	Network Node Interface
OAM	Operation And Maintenance
PT	Payload Type
PTI	Payload Type Identifier
UNI	User-Network Interface
VCI	Virtual Channel Identifier
VPI	Virtual Path Identifier

4 Cell structure coding

Two different coding schemes have been adopted; the User-Network Interface (UNI) format, and the Network Node Interface (NNI) format. They are described in subclauses 4.2 and 4.3.

4.1 Cell structure

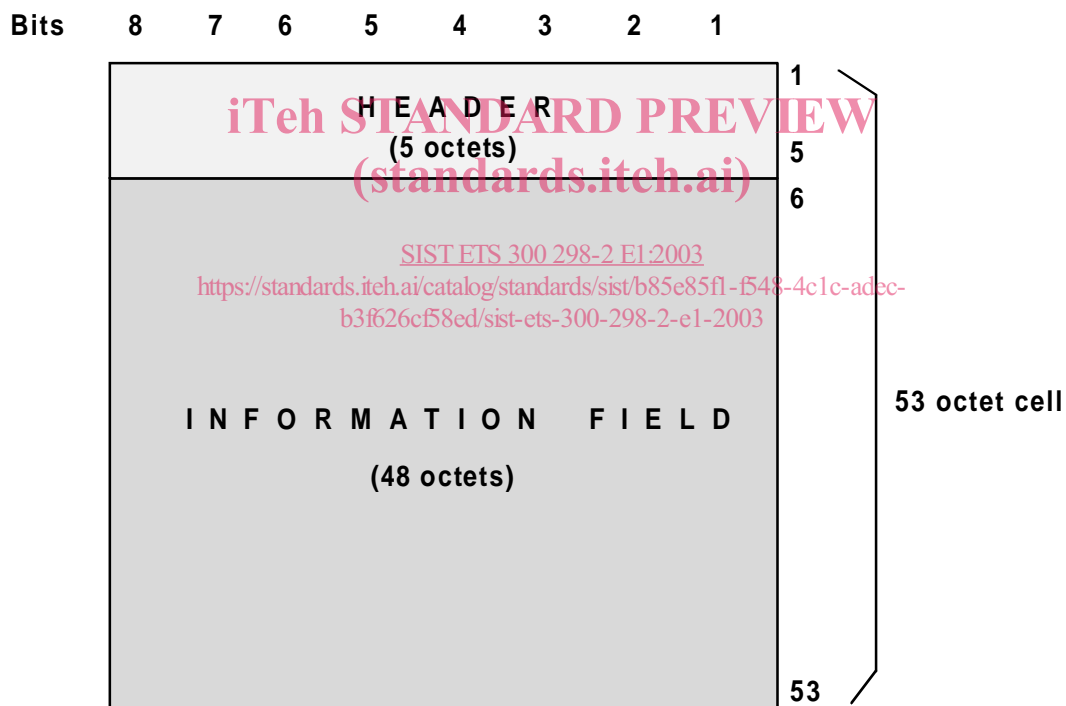
The cell consists of a 5 octet header and a 48 octet information field as shown in figure 1.

When a field within the header is contained within a single octet, the lowest bit number of the field represents the lowest order value.

When a field spans more than one octet, the order of bit values within each octet progressively decreases as the octet number increases. The lowest bit number associated with the field represents the lowest order value.

This leads to the following conventions:

- bits within an octet are sent in decreasing order, starting with bit 8;
- octets are sent in increasing order, starting with octet 1;
- for all fields, the first bit sent is the Most Significant Bit (MSB).



NOTE: The header will be sent first, followed by the information field.

Figure 1: Cell structure at the UNI/NNI

4.2 Cell header format and coding at UNI

The structure of the header is shown in figure 2. The fields contained in the header and their encoding are described in subclauses 4.2.1 to 4.2.6.

8	7	6	5	4	3	2	1	Bit Octet
GFC				VPI				1
VPI				VCI				2
VCI								3
VCI				PT		CLP		4
HEC								5

VCI: Virtual Channel Identifier.

VPI: Virtual Path Identifier.

GFC: Generic Flow Control.

PT: Payload Type.

CLP: Cell Loss Priority.

HEC: Header Error Control.

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Figure 2: Header structure at UNI.
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