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JTC 1

Information technology — Telecommunications and information exchange between systems — High-level data link control (HDLC) procedures — General purpose XID frame information field content and format

AMENDMENT 3: Definition of a private parameter data link layer subfield

Technologies de l'information — Télécommunications et échange d'information entre systèmes — Procédures de commande de liaison de données à haut niveau (HDLC) — Format et contenu du champ d'information de XID pour application générale

AMENDEMENT 3: Définition d'un sous-champ à paramètres privés de la couche liaison de données

Reference number
ISO/IEC 8885 : 1991/Amd.3 : 1992 (E)

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Amendment 3 to International Standard ISO/IEC 8885 : 1991 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

Introduction

This Amendment to ISO/IEC 8885:1991 indicates additional changes that have been agreed since the approval of ISO/IEC 8885.

Information technology — Telecommunications and information exchange between systems — High-level data link control (HDLC) procedures — General purpose XID frame information field content and format

AMENDMENT 3: Definition of a private parameter data link layer subfield

1 Scope

This Amendment to ISO/IEC 8885:1991 adds provisions for negotiation of private parameters, which include implementation-specific data link layer parameters supported by users, manufacturers, or standards committees desiring to use single-XID-exchange negotiation procedures to unambiguously negotiate private parameters.

2 Specific changes to ISO/IEC 8885

a) In **1 Scope** insert the following after the second paragraph:

"This International Standard defines encoding for information related to the basic HDLC standards only. Mechanisms are provided to permit the general-purpose XID frame information field to be used to negotiate private parameters in a single XID exchange simultaneously with negotiation of the defined basic parameters.".

b) In **2 Normative references,** insert the following item after "ISO 2382/9:1984--":

"ISO/IEC 3309:1991 *Information technology — Telecommunications and information exchange between systems — High-level data link control (HDLC) procedures — Frame structure.*"

c) Renumber existing subclauses 3.2 through 3.8 as, respectively, 3.3, 3.4, 3.5, 3.7, 3.9, 3.10 and 3.11.

d) Add the following new subclauses:

"**3.2 basic HDLC standards:** ISO/IEC 3309, ISO/IEC 4335, ISO 7478, ISO/IEC 7809, and ISO 8471, defining respectively the frame structure, elements of procedures, multilink procedures, and classes of procedures of HDLC, and the address resolution procedures for switched connections.

3.6 HDLC-based protocol: A protocol which is a subset of the elements and classes of procedure and optional functions defined in the basic HDLC standards, and adopted as a standard by ISO or a recognized international standards body (e.g., CCITT).

3.8 private parameter: An implementation-specific data link layer parameter not defined in the basic HDLC standards.".

e) In subclause **4.2 Data link layer subfields,** in the fourth paragraph, change the second sentence to read:

"Four data link layer subfield identifiers are defined:

Address resolution,

Parameter negotiation,

Multilink parameter negotiation, and

Private parameter negotiation.".

f) In **Figure 7 – Data link layer subfield encodings,** add the following:

"00001111 Private parameter negotiation identifier."

g) Change the first sentence of NOTE 1 under figure 7 to read as follows:

"The parameter negotiation data link layer subfield and the private parameter negotiation data link layer subfield may each appear more than once in a XID information field."

h) In subclause **5.2.3 Parameter field encoding,** third paragraph, change the second sentence to read:

"A Parameter field containing a PI that is not specified in this International Standard is defined as invalid and shall be ignored (except within the private parameter negotiation subfield, in which PIs other than PI=0 may be defined by a prior agreement between the stations).".

i) In clause **6 Definition and encoding of data link layer subfield parameter fields,** change the first sentence to read:

"The following is a list of parameter field elements that are defined for the address resolution, parameter negotiation, multilink parameter negotiation, and private parameter negotiation data link layer subfields.".

j) In clause **6 Definition and encoding of data link layer subfield parameter fields,** change the last sentence to read:

"The following legend explains the symbols used in tables 1, 2, 3, 4, and 5.".

k) Add a fourth unit under clause 6 table 1 as follows:

Private parameter negotiation (GI=00001111)

PI	Parameter field element
0	Parameter set identification

l) Add the following as table 5, after table 4:

Table 5 - Private parameter negotiation data link layer subfield parameter field elements

Name	PI	PL	Parameter field element	Code type	Bit No.	Value
Identifier	0	N	Parameter set identification	NA	NA	(See Note)
(Implementor-defined)	1 to 255	N	(Implementor-defined)	NA	NA	NA

NOTE: Parameter set identification may be from 1 to 255 octets in length. The value is implementation dependent.

m) Add the following new subclause:

7.2.4 Private parameter negotiation

Every private parameter negotiation subfield must contain one and only one parameter set identification parameter, and it must be the first parameter within the subfield.

Parameter set identification values (PV of PI=0) are by prior agreement between data link layer entities, and are not a subject of this International Standard. It is the responsibility of the stations selecting parameter set identification values to insure that the values are unique within the scope of the intended application.

A station decoding a private parameter negotiation subfield containing an unrecognized parameter set identification value shall ignore that entire subfield. Likewise if a station does not support private parameter negotiation at all, subfields with Group Identifiers of 00001111 shall be ignored.

Multiple private parameter negotiation subfields with different parameter set identification values are permitted and are to be treated independently of one another by the station. Handling of multiple private parameter negotiation subfields with identical parameter set identification values is to be determined by the stations agreeing to use the given parameter set identification value. For example, it may be designated that only one of those private parameter negotiation subfields with identical parameter set identification values may be returned in an XID response (selection from a menu).

The interpretation of parameter set identifier values other than PI=0 is determined by prior agreement between the stations. However, private parameter negotiation is not to be used for conveyance of parameters or information for the use of higher layer entities (the user data subfield should be used for this purpose). Neither may private parameter negotiation be used to negotiate parameters which are defined in the basic HDLC standards (the standard mechanisms defined elsewhere in this International Standard should be used for this purpose).