

# SLOVENSKI STANDARD

## SIST EN IEC 61158-6-10:2023

01-november-2023

Nadomešča:

SIST EN IEC 61158-6-10:2019

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**Industrijska komunikacijska omrežja - Specifikacije za procesna vodila - 6-10. del: Specifikacija protokola na aplikacijski ravni - Elementi tipa 10 (IEC 61158-6-10:2023)**

Industrial communication networks - Fieldbus specifications - Part 6-10: Application layer protocol specification - Type 10 elements (IEC 61158-6-10:2023)

Industrielle Kommunikationsnetze - Feldbusse - Teil 6-10: Protokollspezifikation des Application Layer (Anwendungsschicht) - Typ 10-Elemente (IEC 61158-6-10:2023)

Réseaux de communication industriels - Spécifications des bus de terrain - Partie 6-10: Spécification du protocole de la couche liaison de données - Eléments de type 10 (IEC 61158-6-10:2023)

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**Ta slovenski standard je istoveten z: EN IEC 61158-6-10:2023**

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**ICS:**

25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control
35.100.70	Uporabniški sloj	Application layer
35.110	Omreževanje	Networking

**SIST EN IEC 61158-6-10:2023**

**en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN IEC 61158-6-10**

May 2023

ICS 25.040.40; 35.100.70; 35.110

Supersedes EN IEC 61158-6-10:2019

English Version

**Industrial communication networks - Fieldbus specifications -  
Part 6-10: Application layer protocol specification - Type 10  
elements  
(IEC 61158-6-10:2023)**

Réseaux de communication industriels - Spécifications des  
bus de terrain - Partie 6-10: Spécification du protocole de la  
couche liaison de données - Eléments de type 10  
(IEC 61158-6-10:2023)

Industrielle Kommunikationsnetze - Feldbusse - Teil 6-10:  
Protokollspezifikation des Application Layer  
(Anwendungsschicht) - Typ 10-Elemente  
(IEC 61158-6-10:2023)

This European Standard was approved by CENELEC on 2023-04-28. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN IEC 61158-6-10:2023 (E)****European foreword**

The text of document 65C/1204/FDIS, future edition 5 of IEC 61158-6-10, prepared by SC 65C "Industrial networks" of IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61158-6-10:2023.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2024-01-28 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2026-04-28 document have to be withdrawn

This document supersedes EN IEC 61158-6-10:2019 and all of its amendments and corrigenda (if any).

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**Endorsement notice**

The text of the International Standard IEC 61158-6-10:2023 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 60793-2-30	NOTE	Approved as EN 60793-2-30
IEC 60793-2-40	NOTE	Approved as EN IEC 60793-2-40
IEC 61158-1	NOTE	Approved as EN IEC 61158-1
IEC/IEEE 60802:— <sup>1</sup>	NOTE	Approved as EN IEC 60802:— <sup>2</sup>
IEC 61784-1 (series)	NOTE	Approved as EN IEC 61784-1 (series)
IEC 61784-2 (series)	NOTE	Approved as EN IEC 61784-2 (series)
IEC 61784-3-3	NOTE	Approved as EN IEC 61784-3-3

<sup>1</sup> Under preparation. Stage at the time of publication: IEC/IEEE CD 60802:2022.

<sup>2</sup> Under preparation. Stage at the time of publication: prEN IEC 60802:2020.

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cencenelec.eu](http://www.cencenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61131-9	-	Programmable controllers - Part 9: Single-drop digital communication interface for small sensors and actuators (SDCI)	EN IEC 61131-9	-
IEC 61158-2	2023	Industrial communication networks - Fieldbus specifications - Part 2: Physical layer specification and service definition	EN IEC 61158-2	2023
IEC 61158-5-10	2023	Industrial communication networks - Fieldbus specifications - Part 5-10: Application layer service definition - Type 10 elements	-	-
IEC 61158-6-3	2019	Industrial communication networks - Fieldbus specifications - Part 6-3: Application layer protocol specification - Type 3 elements	EN IEC 61158-6-3	2019
IEC 61158-6-10	2010	Industrial communication networks - Fieldbus specifications - Part 6-10: Application layer protocol specification - Type 10 elements	-	-
IEC 62439-2	2021	Industrial communication networks - High availability automation networks - Part 2: Media Redundancy Protocol (MRP)	EN IEC 62439-2	2022
IEC/TS 60079-47	2021	Explosive atmospheres - Part 47: Equipment protection by 2-Wire Intrinsically Safe Ethernet concept (2-WISE)	CLC IEC/TS 60079-47	2021
ISO/IEC 646	1991	Information technology - ISO 7-bit coded character set for information interchange	-	-
ISO/IEC 7498-1	-	Information technology - Open Systems Interconnection - Basic reference model: The basic model	-	-
ISO/IEC 8822	1994	Information technology - Open Systems Interconnection - Presentation service definition	-	-
ISO/IEC 8824-1	-	Information technology - Abstract Syntax Notation One (ASN.1) - Part 1: Specification of basic notation	-	-

**EN IEC 61158-6-10:2023 (E)**

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO/IEC 9545	-	Information technology - Open Systems Interconnection - Application layer structure	-	-
ISO/IEC 9834-8	-	Information technology - Procedures for the operation of object identifier registration authorities - Part 8: Generation of universally unique identifiers (UUIDs) and their use in object identifiers	-	-
ISO/IEC 10646	-	Information technology - Universal coded character set (UCS)	-	-
ISO/IEC 10731	-	Information technology - Open Systems Interconnection - Basic Reference Model - Conventions for the definition of OSI services	-	-
ISO/IEC/IEEE 60559	2020	Information technology - Microprocessor Systems - Floating-Point arithmetic	-	-
ISO 8601-1	2019	Date and time - Representations for information interchange - Part 1: Basic rules	-	-
IEEE Std 802	2014	IEEE Standard for Local and metropolitan area networks: Overview and Architecture	-	-
IEEE Std 802.1AB	2016	IEEE Standard for Local and metropolitan area networks: Station and Media Access Control Connectivity Discovery	-	-
IEEE 802.1AC	2016	IEEE Standard for Local and metropolitan area networks - Media Access Control (MAC) Service Definition	-	-
IEEE 802.1AS	2020	IEEE Standard for Local and Metropolitan Area Networks - Timing and Synchronization for Time-Sensitive Applications	-	-
IEEE 802.1CB	2017	IEEE Standard for Local and metropolitan area networks - Frame Replication and Elimination for Reliability	-	-
IEEE 802.1Q	2018	IEEE Standard for Local and Metropolitan Area Networks; Bridges and Bridged Networks	-	-
IEEE 802.3	2018	IEEE Standard for Ethernet	-	-
IEEE 802.11	2020	IEEE Standard for Information Technology - Telecommunications and Information Exchange between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications	-	-
IEEE 802.15.1	2005	IEEE Standard for Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements - Part 15.1: Wireless medium access control (MAC) and physical layer (PHY) specifications for wireless personal area networks (WPANs)	-	-
IETF RFC 768	-	User Datagram Protocol	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IETF RFC 791	-	Internet Protocol Darpa Internet Program Protocol Specification	-	-
IETF RFC 792	-	Internet Control Message Protocol	-	-
IETF RFC 826	-	Ethernet Address Resolution Protocol: Or Converting Network Protocol Addresses to 48.bit Ethernet Address for Transmission on Ethernet Hardware	-	-
IETF RFC 1034	-	Domain names - concepts and facilities	-	-
IETF RFC 1213	-	Management Information Base for Network Management of TCP/IP-based Internets: MIB-II	-	-
IETF RFC 2131	-	Dynamic Host Configuration Protocol	-	-
IETF RFC 2132	-	DHCP Options and BOOTP Vendor Extensions	-	-
IETF RFC 2236	-	Internet Group Management Protocol, Version 2	-	-
IETF RFC 2365	-	Administratively Scoped IP Multicast	-	-
IETF RFC 2474	-	Definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers	-	-
IETF RFC 2475	-	An Architecture for Differentiated Services	-	-
IETF RFC 2674	-	Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering and Virtual LAN Extensions	-	-
IETF RFC 2863	-	The Interfaces Group MIB	-	-
IETF RFC 3418	-	Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)	-	-
IETF RFC 3535	-	Overview of the 2002 IAB Network Management Workshop	-	-
IETF RFC 3621	-	Power Ethernet MIB	-	-
IETF RFC 4361	-	Node-specific Client Identifiers for Dynamic Host Configuration Protocol Version Four (DHCPv4)	-	-
IETF RFC 4363	-	Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and Virtual LAN Extensions	-	-
IETF RFC 4604	-	Using Internet Group Management Protocol Version 3 (IGMPv3) and Multicast Listener Discovery Protocol Version 2 (MLDv2) for Source-Specific Multicast	-	-
IETF RFC 4632	-	Classless Inter-domain Routing (CIDR): The Internet Address Assignment and Aggregation Plan	-	-
IETF RFC 4836	-	Definitions of Managed Objects for IEEE 802.3 Medium Attachment Units (MAUs)	-	-
IETF RFC 4944	-	Transmission of IPv6 Packets over IEEE 802.15.4 Networks	-	-

**EN IEC 61158-6-10:2023 (E)**

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IETF RFC 5227	-	IPv4 Address Conflict Detection	-	-
IETF RFC 5277	-	NETCONF Event Notifications	-	-
IETF RFC 5539	-	NETCONF over Transport Layer Security (TLS)	-	-
IETF RFC 5890	-	Internationalized Domain Names for Applications (IDNA): Definitions and Document Framework	-	-
IETF RFC 5905	-	Network Time Protocol Version_4: Protocol and Algorithms Specification	-	-
IETF RFC 6020	-	A Data Modeling Language for the Network Configuration Protocol (NETCONF)	-	-
IETF RFC 6021	-	Common YANG Data Types	-	-
IETF RFC 6087	-	Guidelines for Authors and Reviewers of YANG Data Model Documents	-	-
IETF RFC 6110	-	Mapping YANG to Document Schema Definition Languages and Validating NETCONF Content	-	-
IETF RFC 6151	-	Updated Security Considerations for the MD5 MessageDigest and the HMAC-MD5 Algorithms	-	-
IETF RFC 6241	-	Network Configuration Protocol (NETCONF)	-	-
IETF RFC 6243	-	With-defaults Capability for NETCONF	-	-
IETF RFC 6244	-	An Architecture for Network Management Using NETCONF and YANG	-	-
IETF RFC 6470	-	Network Configuration Protocol (NETCONF) Base Notifications	-	-
IETF RFC 6536	-	Network Configuration Protocol (NETCONF) Access Control Model	-	-
IETF RFC 6890	-	Special-Purpose IP Address Registries	-	-
IETF RFC 6918	-	Formally Deprecating Some ICMPv4 Message Types	-	-
IETF RFC 8342	-	Network Management Datastore Architecture (NMDA)	-	-
ITU-T G.781	-	Synchronization layer functions for frequency synchronization based on the physical layer	-	-
The Open Group, Publication C706	-	Technical standard DCE1.1: Remote Procedure Call	-	-
Metro Ethernet Forum - MEF 10.4	2018	Subscriber Ethernet Service Attributes	-	-
NIST FIPS PUB 180-4	2015	Federal Information Processing Standards Publication, Secure Standard (SHS)	-	-
NIST FIPS PUB 186-4	2013	Federal Information Processing Standards Publication, Digital Signature Standard (DSS),	-	-





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# INTERNATIONAL STANDARD



**Industrial communication networks – Fieldbus specifications –  
Part 6-10: Application layer protocol specification – Type 10 elements**

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Document Preview**

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## CONTENTS

FOREWORD.....	46
INTRODUCTION.....	48
1 Scope.....	49
1.1 General.....	49
1.2 Specifications .....	49
1.3 Conformance .....	50
2 Normative references .....	50
3 Terms, definitions, abbreviated terms, symbols, and conventions .....	54
3.1 Referenced terms and definitions.....	54
3.1.1 ISO/IEC 7498-1 terms.....	54
3.1.2 ISO/IEC 8822 terms.....	55
3.1.3 ISO/IEC 8824-1 terms.....	55
3.1.4 ISO/IEC 9545 terms.....	55
3.2 Terms and definitions.....	55
3.3 Abbreviated terms and symbols .....	64
3.3.1 Abbreviated terms and symbols for services .....	64
3.3.2 Abbreviated terms and symbols for distributed I/O .....	64
3.3.3 Abbreviated terms and symbols for IEC 62439-2 .....	68
3.3.4 Abbreviated terms and symbols for IEC/IEEE 60802.....	68
3.3.5 Abbreviated terms and symbols for IEEE Std 802.1CB .....	68
3.3.6 Abbreviated terms and symbols for IEEE Std 802.1Q .....	68
3.3.7 Abbreviated terms and symbols for IEEE Std 802.3 .....	69
3.3.8 Abbreviated terms and symbols for IETF RFC 2474.....	69
3.3.9 Abbreviated terms and symbols for IETF RFC 4291.....	69
3.4 Conventions.....	69
3.4.1 General concept .....	69
3.4.2 Conventions for distributed I/O .....	70
3.4.3 Conventions used in state machines.....	78
4 Application layer protocol specification for common protocols.....	83
4.1 FAL syntax description.....	83
4.1.1 DLPDU abstract syntax reference .....	83
4.1.2 Data types .....	85
4.2 Transfer syntax.....	87
4.2.1 Coding of basic data types .....	87
4.2.2 Coding section related to common basic fields .....	95
4.3 Discovery and basic configuration.....	109
4.3.1 DCP syntax description .....	109
4.3.2 DCP protocol state machines.....	143
4.3.3 DLL Mapping Protocol Machines.....	162
4.4 Precision transparent clock protocol .....	162
4.4.1 FAL syntax description .....	162
4.4.2 AP-Context state machine .....	173
4.4.3 FAL Service Protocol Machines .....	173
4.4.4 Application Relationship Protocol Machines.....	173
4.4.5 DLL Mapping Protocol Machines.....	238
4.5 Time synchronization .....	238
4.5.1 General .....	238

4.5.2	GlobalTime .....	241
4.5.3	WorkingClock .....	242
4.6	Media redundancy .....	246
4.6.1	Media redundancy and loop prevention.....	246
4.6.2	Seamless media redundancy .....	249
4.7	Real time cyclic.....	249
4.7.1	FAL syntax description .....	249
4.7.2	FAL transfer syntax .....	250
4.7.3	FAL Service Protocol Machines .....	260
4.7.4	Application Relationship Protocol Machines.....	260
4.7.5	DLL Mapping Protocol Machines.....	282
4.8	Real time acyclic.....	282
4.8.1	RTA syntax description.....	282
4.8.2	RTA transfer syntax.....	284
4.8.3	FAL Service Protocol Machines .....	294
4.8.4	Application Relationship Protocol Machines.....	294
4.8.5	DLL Mapping Protocol Machines.....	339
4.9	Fragmentation.....	340
4.9.1	General .....	340
4.9.2	FRAG syntax description .....	343
4.9.3	FRAG transfer syntax .....	344
4.9.4	FAL Service Protocol Machines .....	346
4.9.5	Application Relationship Protocol Machines.....	346
4.9.6	DLL Mapping Protocol Machines.....	346
4.10	Remote procedure call .....	356
4.10.1	General .....	356
4.10.2	RPC syntax description .....	356
4.10.3	RPC Transfer syntax .....	358
4.10.4	FAL Service Protocol Machines .....	374
4.10.5	Application Relationship Protocol Machines.....	374
4.10.6	DLL Mapping Protocol Machines.....	375
4.11	Link layer discovery .....	375
4.11.1	General .....	375
4.11.2	FAL common syntax description .....	376
4.11.3	LLDP transfer syntax .....	378
4.11.4	FAL Service Protocol Machines .....	388
4.11.5	Application Relation Protocol Machines .....	388
4.11.6	DLL Mapping Protocol Machines.....	388
4.12	End stations and bridges.....	388
4.12.1	General .....	388
4.12.2	Traffic classes .....	390
4.12.3	End station .....	393
4.12.4	Bridge.....	416
4.12.5	Bridged end station.....	461
4.12.6	Q port state machine .....	470
4.12.7	Pruning port state machine .....	476
4.12.8	Bridge extensions .....	478
4.12.9	FAL Service Protocol Machines .....	479
4.12.10	Application Relation Protocol Machines .....	479

4.12.11	DLL Mapping Protocol Machines.....	479
4.13	IP suite .....	516
4.13.1	Overview .....	516
4.13.2	IP/UDP syntax description .....	516
4.13.3	IP/UDP transfer syntax .....	517
4.13.4	ARP.....	520
4.14	Domain name system.....	522
4.14.1	General .....	522
4.14.2	Primitive definitions .....	523
4.14.3	DNS state transition diagram .....	523
4.14.4	State machine description .....	523
4.14.5	DNS state table .....	523
4.14.6	Functions, Macros, Timers and Variables .....	523
4.15	Dynamic host configuration .....	524
4.15.1	General .....	524
4.15.2	Primitive definitions .....	524
4.15.3	DHCP state transition diagram.....	524
4.15.4	State machine description .....	525
4.15.5	DHCP state table.....	525
4.15.6	Functions, Macros, Timers and Variables .....	526
4.16	Simple network management .....	526
4.16.1	General .....	526
4.16.2	MIB overview.....	527
4.16.3	MIB access.....	527
4.16.4	IETF RFC 1213-MIB .....	527
4.16.5	Enterprise number for PNIO MIB .....	528
4.16.6	MIB cross reference .....	528
4.16.7	Behavior in case of modular built bridges .....	529
4.16.8	LLDP EXT MIB .....	529
4.17	Network configuration .....	529
4.17.1	Overview .....	529
4.17.2	NETCONF .....	530
4.17.3	YANG .....	531
4.18	Common DLL Mapping Protocol Machines .....	532
4.18.1	Overview .....	532
4.18.2	Data Link Layer Mapping Protocol Machine .....	533
4.19	Void.....	540
4.20	Additional information .....	540
5	Application layer protocol specification for distributed I/O .....	540
5.1	FAL syntax description.....	540
5.1.1	DLPDU abstract syntax reference .....	540
5.1.2	APDU abstract syntax.....	540
5.2	Transfer syntax.....	567
5.2.1	Coding section related to BlockHeader specific fields .....	567
5.2.2	Coding section related to RTA-SDU specific fields .....	586
5.2.3	Coding section related to common address fields .....	591
5.2.4	Coding section related to AL services .....	613
5.2.5	Coding section related to ARVendorBlock.....	652
5.2.6	Coding section related to PNIOStatus.....	653

5.2.7	Coding section related to I&M Records .....	670
5.2.8	Coding section related to Alarm and Diagnosis Data .....	677
5.2.9	Coding section related to upload and retrieval .....	701
5.2.10	Coding section related to iParameter .....	701
5.2.11	Coding section related to NME .....	702
5.2.12	Coding section related to CIM .....	711
5.2.13	Coding section related to Physical Sync Data .....	776
5.2.14	Coding section related to Physical Time Data .....	781
5.2.15	Coding section related to Isochrone Mode Data .....	786
5.2.16	Coding section related to fast startup .....	788
5.2.17	Coding section related to DFP .....	791
5.2.18	Coding section related to MRPD .....	795
5.2.19	Coding section related to controller to controller communication .....	796
5.2.20	Coding section related to system redundancy .....	797
5.2.21	Coding section related to energy saving .....	800
5.2.22	Coding section related to asset management .....	800
5.2.23	Coding section related to reporting system .....	805
5.2.24	Coding section related to logbook .....	811
5.2.25	Coding section related to Time .....	812
5.2.26	Coding section related to Channel Related Process Alarm Reason .....	812
5.2.27	Void .....	815
5.3	FAL protocol state machines .....	816
5.3.1	Overall structure .....	816
5.4	AP-Context state machine .....	817
5.5	FAL Service Protocol Machines .....	817
5.5.1	Overview .....	817
5.5.2	FAL Service Protocol Machine Power-On .....	817
5.5.3	FAL Service Protocol Machine Device .....	818
5.5.4	FAL Service Protocol Machine Controller .....	828
5.5.5	FAL Service Protocol Machine Network Management Entity .....	839
5.6	Application Relationship Protocol Machines .....	840
5.6.1	Alarm Protocol Machine Initiator .....	840
5.6.2	Alarm Protocol Machine Responder .....	844
5.6.3	Device .....	848
5.6.4	Controller .....	934
5.6.5	Network Management Entity .....	1013
5.7	DLL Mapping Protocol Machines .....	1047
5.8	Checking rules .....	1048
5.8.1	General .....	1048
5.8.2	IODConnectReq .....	1048
5.8.3	IODConnectRes .....	1061
5.8.4	IODControlReq .....	1066
5.8.5	IODControlRes .....	1068
5.8.6	IOXControlReq .....	1072
5.8.7	IOXControlRes .....	1073
5.8.8	IODReleaseReq .....	1075
5.8.9	IODReleaseRes .....	1076
5.8.10	IODWriteReq .....	1077
5.8.11	IODWriteRes .....	1079

5.8.12	IODWriteMultipleReq .....	1081
5.8.13	IODWriteMultipleRes .....	1082
5.8.14	IODReadReq .....	1084
5.8.15	IODReadRes .....	1086
Annex A	(normative) Unified establishing of an AR for all RT classes .....	1089
A.1	General.....	1089
A.2	AR establishing.....	1090
A.3	Startup of Alarm transmitter and receiver .....	1097
A.4	Time-aware systems path establishment.....	1099
A.5	Void.....	1100
A.6	Void.....	1100
Annex B	(normative) Compatible establishing of an AR.....	1101
Annex C	(informative) Establishing of a device access AR.....	1104
Annex D	(informative) Establishing of an AR (accelerated procedure).....	1106
Annex E	(informative) Establishing of an AR (fast startup procedure).....	1109
Annex F	(informative) Example of the upload, storage and retrieval procedure .....	1111
Annex G	(informative) Implementation of send list control.....	1113
G.1	General.....	1113
G.2	Implementation model.....	1114
G.3	Constraints .....	1116
Annex H	(informative) Overview of the IO controller and the IO device state machines ....	1117
Annex I	(informative) Overview of the PTCP synchronization master hierarchy .....	1119
Annex J	(informative) Optimization of bandwidth usage for Time Aware Shaping .....	1121
Annex K	(informative) Time constraints for RT_CLASS_3 bandwidth allocation .....	1123
Annex L	(informative) Time constraints for the forwarding of a frame .....	1125
L.1	Principle .....	1125
L.2	Forwarding.....	1125
Annex M	(informative) Principle of dynamic frame packing.....	1127
Annex N	(informative) Principle of Fragmentation .....	1131
Annex O	(informative) MRPD – Principle of seamless media redundancy.....	1133
Annex P	(normative) Principle of a RED_RELAY without forwarding information in PDIRFrameData .....	1135
Annex Q	(informative) Constraints for Auto-negotiation.....	1138
Q.1	Optimization for fast startup without auto-negotiation .....	1138
Q.2	Gigabit PHYs, 2 pair Ethernet cables, and auto-negotiation .....	1140
Annex R	(informative) Example of a PrmBegin, PrmEnd and ApplRdy sequence.....	1141
Annex S	(informative) List of supported MIBs.....	1142
Annex T	(informative) Structure and content of BLOB .....	1143
Annex U	(normative) Management information bases .....	1144
U.1	Void.....	1144
U.2	LLDP EXT MIB.....	1144
Annex V	(normative) Cross reference to IEC 62439-2 .....	1167
V.1	Cross reference to IEC 62439-2.....	1167
V.1.1	General .....	1167
V.1.2	Ring .....	1167
V.1.3	Interconnection.....	1168