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INCITS 509-2014

American National Standard

*for Information Technology –
Fibre Channel –
Backbone - 6 (FC-BB-6)*

Developed by



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INCITS 509-2014

American National Standard
for Information Technology –
**Fibre Channel –
Backbone - 6 (FC-BB-6)**

Secretariat

Information Technology Industry Council

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American National Standards Institute, Inc.

Abstract

This standard defines the functions and mappings for transporting Fibre Channel over various network technologies.

American National Standard

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Contents	Page
Foreword	x
Introduction	xiv
1 Scope	1
2 Normative References	5
2.1 Overview	5
2.2 Approved references	5
2.3 References under development	6
2.4 ITU-T references	6
2.5 IETF references	6
2.6 IEEE references	7
3 Definitions and conventions	8
3.1 Common definitions	8
3.2 FC-BB_IP definitions	10
3.3 FC-BB_GFPT definitions	12
3.4 FC-BB_PW definitions	13
3.5 FC-BB_E definitions	13
3.6 Editorial conventions	16
3.7 List of commonly used acronyms and abbreviations	17
3.7.1 General	17
3.7.2 FC-BB_IP	18
3.7.3 FC-BB_GFPT	18
3.7.4 FC-BB_PW	18
3.7.5 FC-BB_E	18
3.8 Symbols	19
3.9 Keywords	19
4 FC-BB-6 Structure and Concepts	20
4.1 FC-BB-6 backbone mappings	20
4.2 FC-BB-6 reference models	20
4.2.1 FC-BB-6 reference models overview	20
4.2.2 FC-BB_IP reference model	21
4.2.3 FC-BB_GFPT reference model	23
4.2.4 FC-BB_PW reference model	24
4.2.5 FC-BB_E reference models	25
4.2.5.1 FC-BB_E VN_Port to VF_Port reference model	25
4.2.5.2 FC-BB_E VE_Port to VE_Port reference model	25
4.2.5.3 FC-BB_E VN_Port to VN_Port reference model	26
4.2.5.4 FC-BB_E VA_Port to VA_Port reference model	27
4.3 FC-BB-6 models overview	27
4.3.1 FC-BB_IP	27
4.3.2 FC-BB_GFPT	28
4.3.3 FC-BB_PW	28
4.3.4 FC-BB_E	29
4.4 FC-BB-6 requirements	29
4.4.1 Fibre Channel Class support	29
4.4.2 Payload transparency	29
4.4.2.1 FC-BB_IP	29
4.4.2.2 Transparent FC-BB (FC-BB_GFPT and FC-BB_PW)	30

4.4.2.3	FC-BB_E	30
4.4.3	Latency delay and timeout value	30
4.4.4	QoS and bandwidth	31
4.4.5	In-order delivery	31
4.4.6	Flow control	31
4.5	FC-BB-6 SW_ILS codes	32
5	FC-BB_IP Structure and Concepts	33
5.1	Applicability	33
5.2	FC-BB_IP overview	33
5.3	VE_Port functional model	34
5.3.1	FC-BB_IP interface protocol layers	34
5.3.2	E_Port/F_Port FC interface	36
5.3.3	FC Switching Element (SE) with FC routing	36
5.3.4	FC-BB_IP protocol interface	36
5.3.4.1	Major components	36
5.3.4.2	FC and FCIP Entities	36
5.3.4.3	VE_Port Virtual ISL exchanges	39
5.3.4.4	Control and Service Module (CSM)	39
5.3.4.5	Platform Management Module (PMM)	39
5.3.5	IP network interface	42
5.4	B_Access functional model	42
5.4.1	FC-BB_IP interface protocol layers	42
5.4.2	B_Port FC interface	42
5.4.3	FC-BB_IP protocol interface	42
5.4.3.1	Major components	42
5.4.3.2	FC and FCIP Entities	43
5.4.3.3	B_Access Virtual ISL exchanges	45
5.4.3.4	B_Port Control and Service Module (CSM)	49
5.4.3.5	B_Port Platform Management Module (PMM)	49
5.4.4	IP Network Interface	49
5.5	FC-BB_IP network topologies	49
5.6	Mapping and message encapsulation using TCP/IP	51
5.6.1	Encapsulated frame structures	51
5.6.1.1	FC frame encapsulation structure	51
5.6.1.2	Encapsulated FCIP Special Frame (FSF) structure	52
5.6.2	TCP/IP encapsulation	53
5.7	FC-BB_IP protocol procedures	54
5.7.1	Overview	54
5.7.2	Procedures for platform management	54
5.7.2.1	Function	54
5.7.2.2	Procedures for discovery	54
5.7.2.3	Procedures for extending FC-SP-2 security	54
5.7.3	Procedures for connection management	56
5.7.3.1	Function	56
5.7.3.2	Procedures for link setup	57
5.7.3.3	Procedures for data transfer	57
5.7.3.4	Procedures for FCIP Link disconnection	58
5.7.3.5	Procedures for multiple connection management	58
5.7.4	Procedures for error detection recovery	58
5.7.4.1	Procedures for handling invalid FC frames	58
5.7.4.2	Procedures for error recovery	59
5.7.5	FC-BB_IP system parameters	59
5.7.5.1	FC timers	59

5.7.5.2	TCP timers	59
5.7.5.3	Maximum number of attempts to complete an encapsulated FC frame transmission	59
5.7.5.4	Maximum number of outstanding encapsulated FC frames	60
5.8	FC-BB_IP service considerations	60
5.8.1	Latency delay	60
5.8.2	Throughput	60
5.8.2.1	How timeouts affect throughput	60
5.8.2.2	How loss affects throughput	60
5.8.2.3	Other factors that affect throughput	60
5.8.3	Reliability	61
5.8.3.1	Loss of connectivity	61
5.8.3.2	Loss of synchronization	61
5.8.3.3	Loss or corruption of TCP segments	61
5.8.3.4	Loss or corruption of FC frames	61
5.8.3.5	FCIP error reporting	61
5.8.4	Quality of Service (QoS)	62
5.8.5	Delivery order	62
5.8.6	IP multicast and broadcast	62
5.8.7	Security and authentication	62
6	Transparent FC-BB (FC-BB_GFPT and FC-BB_PW) Structure and Concepts	64
6.1	Applicability	64
6.2	FC-BB_GFPT overview	64
6.3	FC-BB_PW overview	65
6.4	Transparent FC-BB functional model	66
6.4.1	Transparent FC-BB initialization	66
6.4.2	Transparent FC-BB initialization state machine	66
6.4.2.1	Initialization state machine keywords	66
6.4.2.2	Initialization state machine	66
6.4.3	Login Exchange Monitors	71
6.4.4	Port initialization parameter observation and modification	75
6.4.5	Handling of BB_SCs, BB_SCr, and R_RDY Primitive Signals and BB_Credit initialization	76
6.4.6	Transparent FC-BB Primitive Signals	77
6.4.7	Transparent FC-BB flow control	78
6.4.7.1	Overview	78
6.4.7.2	FC-BB_GFPT Alternate Simple Flow Control (ASFC)	78
6.4.7.3	FC-BB_PW Alternate Simple Flow Control (ASFC)	78
6.4.7.4	PING and PING_ACK signals	79
6.4.8	Adaptation of FC information for Transparent FC-BB	81
6.4.8.1	Adaptation of FC information for GFPT transport in FC-BB_GFPT	81
6.4.8.2	Adaptation of FC information for PW transport in FC-BB_PW	83
6.4.9	WAN Holdoff Timeout Value (WAN_HOLDOFF_TOV)	85
6.4.10	Transparent FC-BB frame compression encoding	85
6.4.10.1	FC-BB_GFPT FC frame compression	85
6.4.10.2	FC-BB_PW FC frame compression	86
6.4.10.3	LZS compression algorithm	86
7	FC-BB_E Structure and Concepts	87
7.1	Applicability	87
7.2	FC-BB_E overview	87
7.3	ENode functional model	93
7.4	VN2VN ENode functional model	94

7.5	FCF functional model	96
7.6	Controlling FCF functional model	99
7.7	FDF functional model	101
7.8	FCoE Virtual Links	103
7.9	VN_Port MAC addresses	108
7.10	FCoE frame format	108
7.11	FC-BB_E device initialization	109
7.11.1	FCoE Initialization Protocol (FIP) overview	109
7.11.2	FIP VLAN discovery protocol	110
7.11.2.1	Overview	110
7.11.2.2	ENode/FCF VLAN discovery	110
7.11.2.3	FCF/FCF VLAN discovery	112
7.11.2.4	VN2VN ENode VLAN discovery	112
7.11.2.5	ENode/FDF VLAN discovery	115
7.11.2.6	FDF/Controlling FCF VLAN discovery	115
7.11.3	FIP discovery protocol	115
7.11.3.1	Overview	115
7.11.3.2	ENode/FCF discovery	115
7.11.3.3	FCF/FCF discovery	118
7.11.3.4	FDF/Controlling FCF discovery	120
7.11.4	FCoE Virtual Link instantiation protocol	121
7.11.4.1	VN_Port to VF_Port Virtual Links	121
7.11.4.2	VE_Port to VE_Port Virtual Links	121
7.11.4.3	VN_Port to VN_Port Virtual Links	122
7.11.4.4	VA_Port to VA_Port Virtual Links	122
7.11.5	FCoE Virtual Link maintenance protocol	123
7.11.5.1	Virtual Link maintenance protocol overview	123
7.11.5.2	VN_Port to VF_Port Virtual Link maintenance protocol	123
7.11.5.3	VE_Port to VE_Port Virtual Link maintenance protocol	126
7.11.5.4	VN_Port to VN_Port Virtual Link and VN2VN Neighbor Set maintenance protocol	126
7.11.5.5	VA_Port to VA_Port Virtual Link maintenance protocol	127
7.11.6	Locally Unique N_Port_IDs	127
7.11.6.1	Overview	127
7.11.6.2	Multi-node operation	128
7.11.6.3	Point-to-point operation	130
7.11.6.4	Persistence of Locally Unique N_Port_IDs	131
7.11.7	FIP frames	132
7.11.7.1	FIP frame format	132
7.11.7.2	Encapsulated FIP operation	132
7.11.7.3	FIP descriptors	136
7.11.8	FIP operations	146
7.11.8.1	FIP operations overview	146
7.11.8.2	FIP Discovery Solicitation	150
7.11.8.3	FIP Discovery Advertisements	152
7.11.8.4	FIP Virtual Link Instantiation requests and replies	152
7.11.8.5	FIP Keep Alive	156
7.11.8.6	FIP Clear Virtual Links	156
7.11.8.7	FIP VLAN Request	157
7.11.8.8	FIP VLAN Notification	158
7.11.8.9	FIP VN2VN VLAN Notification	158
7.11.8.10	FIP Vendor Specific frames	158
7.11.8.11	N_Port_ID Probe Request	158
7.11.8.12	N_Port_ID Probe Reply	159

7.11.8.13 N_Port_ID Claim Notification	159
7.11.8.14 N_Port_ID Claim Response	159
7.11.8.15 N_Port_ID Beacon	160
7.12 Timers and constants	160
7.13 FC-BB_E Link Error Status Block (LESB) definition	162
7.14 Link incidents definition	163
7.15 Distributed FCF operations	164
Annex A: FC-BB_GFPT Interoperability Guidelines (Informative)	165
A.1 GFPT-specific interoperability guidelines	165
Annex B: FCoE and FIP Frame Examples (Informative)	166
B.1 Overview	166
Annex C: Increasing FC-BB_E Robustness Using Access Control Lists (Informative)	167
C.1 Overview	167
C.2 Access Control Lists	168
C.2.1 ACL overview	168
C.2.2 ACL nomenclature	169
C.3 Perimeter ACL construction	169
C.3.1 Perimeter ACL construction overview	169
C.3.2 FIP frame transmission	170
C.3.3 Prevention of the transmission of frames using an FCF-MAC address for the source address	170
C.3.4 Prevention of frames using FCoE Type or FCoE source addresses prior to successful completion of FIP FLOGI	170
C.3.5 Enabling traffic after successful completion of FIP FLOGI or FIP NPV FDISC	170
C.3.6 Prevention of duplicate VN_Port MAC addresses	170
C.3.7 ACL summary	171
C.4 Security in depth	171
C.4.1 Overview	171
C.4.2 Bridge-to-bridge link receiving ENode frames destined to FCF(s)	172
C.4.3 Bridge-to-bridge link receiving FCF frames destined to ENode(s)	172
C.4.4 Bridge-to-bridge link receiving both FCF and ENode frames	173
C.4.5 Additional FCF protection	173
C.5 Prevention of FCoE related traffic	173
C.6 Automatic configuration of ACLs	174
C.7 Ethernet bridge learning considerations	174
C.8 VLAN considerations	175
C.9 Access Control Lists in a Locally Unique N_Port_ID configuration	175
C.9.1 Overview	175
C.9.2 Prevention of FCoE traffic	175
C.9.3 FCoE perimeter ACL	175
C.9.4 Graceful handling of network joins	176
Annex D: FCoE Security Recommendations (Informative)	178
D.1 Overview	178
D.2 Considerations	178
D.3 General deployment recommendations	178
D.4 Bridge recommendations	178
D.5 ENode and FCF recommendations	180
D.6 Additional threat isolation using FPMAs	182
Annex E: FCoE MIB Definition (Normative)	184
E.1 FCoE MIB definition	184

Annex F: Locally Unique N_Port_ID (Informative)	205
Annex G: Options for Handling FCoE and FIP Traffic (Informative)	211

Tables	Page
Table 1 – FC-BB-6 organization	1
Table 2 – Reference models and resident FC_Port types	21
Table 3 – FC-BB-6 SW_ILS codes	32
Table 4 – FC-BB-6 ELS codes	32
Table 5 – EBP request payload.	46
Table 6 – EBP accept payload	46
Table 7 – EBP reject reason code explanation	47
Table 8 – TCP/IP Segment structure carrying encapsulated FC frame	51
Table 9 – Encapsulated FC frame structure	51
Table 10 – TCP/IP Segment structure carrying encapsulated FSF	52
Table 11 – Encapsulated FSF structure	52
Table 12 – ASF request payload.	56
Table 13 – ASF accept response payload	56
Table 14 – Transparent FC-BB initialization state machine keywords	66
Table 15 – Login Exchange Monitor (LEM) state machine	74
Table 16 – Values of FC-BB_GFPT ASFC_PAUSE and ASFC_RESUME Primitive Signals.	78
Table 17 – FC-BB_PW ASFC_PAUSE and ASFC_RESUME control frame payload values.	79
Table 18 – FC-BB_GFPT PING and PING_ACK Primitive Signal values.	80
Table 19 – FC-BB_GFPT PING and PING_ACK CCC bit field values	80
Table 20 – FC-BB_PW PING and PING_ACK control frame payload values.	81
Table 21 – FC-BB_PW error indication control frame payload values	85
Table 22 – FCoE PDU format	108
Table 23 – FCoE SOF field	109
Table 24 – FCoE EOF field	109
Table 25 – FIP PDU format.	132
Table 26 – Encapsulated FIP operation format.	132
Table 27 – FIP Protocol Code and FIP Subcode field values	133
Table 28 – Fabric Provided bit and Server Provided bit setting	134
Table 29 – FIP descriptor type value ranges.	136
Table 30 – FIP descriptor types	137
Table 31 – FIP Priority descriptor format.	138
Table 32 – FIP MAC address descriptor format	138
Table 33 – FIP FC-MAP descriptor format	138
Table 34 – FIP Name_Identifier descriptor format	139
Table 35 – FIP Fabric descriptor format	139
Table 36 – FIP Max FCoE Size descriptor format.	139
Table 37 – FIP FLOGI descriptor format.	140
Table 38 – FIP NPIV FDISC descriptor format	140
Table 39 – FIP LOGO descriptor format	141
Table 40 – FIP ELP descriptor format.	141
Table 41 – FIP Vx_Port Identification descriptor format	141
Table 42 – FIP FKA_ADV_Period descriptor format.	142
Table 43 – FIP Vendor_ID descriptor format.	143
Table 44 – FIP VLAN descriptor format	143
Table 45 – FIP Vendor Specific descriptor format.	143
Table 46 – FIP VN2VN Attributes descriptor format	144
Table 47 – FIP Clear Virtual Links Reason Code descriptor format	144
Table 48 – FIP Clear Virtual Links Reason Codes	145
Table 49 – FIP Clear Virtual Links Reason Code Explanations	145
Table 50 – FIP Clear Virtual Links Reason Code descriptor examples	146
Table 51 – FIP operation descriptors and order	147
Table 52 – FIP Fabric login rejections.	154

Table 53 – FC-BB_E timers and constants	160
Table 54 – FC-BB_E Link Error Status Block format	162
Table 55 – FC-BB_E Link Incidents	164
Table B.1 – FCoE frame format example	166
Table B.2 – FIP frame format example	166
Table F.1 – FNV-1a Parameters	208
Table G.1 – Options for handling FCoE and FIP traffic	211

Figures	Page
Figure 1 – Scope and components of FC-BB_IP model	2
Figure 2 – Scope and components of FC-BB_GFPT model	3
Figure 3 – Scope and components of FC-BB_PW model	4
Figure 4 – Scope and components of FC-BB_E model	4
Figure 5 – FC-BB_IP reference model	22
Figure 6 – FC-BB_GFPT reference model	23
Figure 7 – FC-BB_PW reference model	24
Figure 8 – FC-BB_E VN_Port to VF_Port reference model	25
Figure 9 – FC-BB_E VE_Port to VE_Port reference model	25
Figure 10 – FC-BB_E VN_Port to VN_Port reference model	26
Figure 11 – FC-BB_E VA_Port to VA_Port reference model	27
Figure 12 – FC-BB_IP network configuration	33
Figure 13 – FC-BB_IP VE_Port functional model	35
Figure 14 – FC-BB_IP Protocol Layers	37
Figure 15 – Scope of VE_Port Virtual ISL	39
Figure 16 – Security layers	41
Figure 17 – FC-BB_IP B_Access functional model	44
Figure 18 – Scope of B_Access Virtual ISL	45
Figure 19 – B_Access initialization state machine	48
Figure 20 – FC-BB_IP network topologies	50
Figure 21 – TCP/IP encapsulation of an encapsulated FC frame	53
Figure 22 – FC-BB_GFPT protocol levels and layers	64
Figure 23 – FC-BB_PW protocol levels and layers	65
Figure 24 – Transparent FC-BB initialization state machine	67
Figure 25 – Example port initialization process	77
Figure 26 – FC-BB_PW error indication control frame format	79
Figure 27 – FC-BB_PW PING and PING_ACK control frame format	81
Figure 28 – FC-BB_PW error indication control frame format	85
Figure 29 – FC-BB_E mapping	87
Figure 30 – FC-BB_E protocol levels and layers	88
Figure 31 – FCoE VN_Port to VF_Port network configuration example	89
Figure 32 – FCoE VE_Port to VE_Port network configuration example	89
Figure 33 – FCoE multi-node VN_Port to VN_Port network configuration example	90
Figure 34 – FCoE mixed network configuration example	91
Figure 35 – FCoE point-to-point VN_Port to VN_Port network configuration example	91
Figure 36 – FCoE VA_Port to VA_Port network configuration example	92
Figure 37 – ENode functional model	93
Figure 38 – VN2VN ENode functional model	95
Figure 39 – FCF functional model	97
Figure 40 – Controlling FCF functional model	100
Figure 41 – FDF functional model	102
Figure 42 – VE_Port to VE_Port Virtual Links example	104
Figure 43 – VN_Port to VF_Port Virtual Links example	104
Figure 44 – VN_Port to VN_Port Virtual Links multi-node example	105
Figure 45 – VN_Port to VN_Port and VN_Port to VF_Port Virtual Links example	106
Figure 46 – VN_Port to VN_Port Virtual Link point-to-point example	107
Figure 47 – VA_Port to VA_Port Virtual Link example	107
Figure 48 – VLAN discovery processing example in an ENode MAC (informative)	111
Figure 49 – VLAN discovery processing in a VN2VN ENode MAC	114
Figure C.1 – Bridge port to ACE cross reference	168

Foreword (This foreword is not part of American National Standard INCITS 509-2014.)

This standard defines the functions and mappings for transporting Fibre Channel over various network technologies.

This standard was developed by Task Group T11.3 of Accredited Standards Organization INCITS during 2009-2013. The standards approval process started in 2012. This document includes annexes that are informative and are not considered part of the standard.

This standard includes seven annexes. Annex E is normative and is considered part of the standard. All of the other annexes are informative and are not considered part of the standard.

Requests for interpretation, suggestions for improvements or addenda, or defect reports are welcome. They should be sent to the INCITS Secretariat, Information Technology Industry Council, 1101 K Street, NW Suite 610, Washington, DC 20005.

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LSI Corporation	Adam Healey John Lohmeyer (Alt.) Harvey Newman (Alt.)
Luxtera.....	Tom Palkert
Molex, Inc.	Jay Neer Mark Bugg (Alt.)
NetApp.....	Frederick Knight Denise Ridolfo (Alt.) Heather Lanigan (Alt.)
Oracle	Roger Dickerson Matt Gaffney (Alt.) Michael Roy (Alt.)
Panduit Corporation.....	Robert Elliott Jose Castro (Alt.) Steve Skest (Alt.) Robert Reid (Alt.)
QLogic Corporation	Craig W. Carlson Skip Jones (Alt.) Alan Spalding (Alt.) Dean Wallace (Alt.) Ed McGlaughlin (Alt.)
TE Connectivity	Nathan Tracy Andrew Nowak (Alt.) Melissa Knox (Alt.)

Task Group T11.3 on Interconnection Schemes, which developed and reviewed this standard, has the following members:

Craig W. Carlson, Chair
 Lou Ricci, Vice-Chair
 Landon Curt Noll, Secretary

<i>Organization Represented</i>	<i>Name of Representative</i>
Broadcom.....	Pat Thaler
Brocade.....	David Peterson Steven L. Wilson (Alt.) John Crandall (Alt.)
Cisco Systems	Claudio DeSanti Landon Noll (Alt.) Fabio Maino (Alt.) Joe Pelissier (Alt.)
Dell.....	Joseph White Gaurav Chawla (Alt.) Manish Patil (Alt.) Jeff Young (Alt.)
EMC	Gary S. Robinson David Black (Alt.) Erik Smith (Alt.) Louis Ricci (Alt.)
Emulex	Gautam Shiroom David Baldwin (Alt.) Hossein Hashemi (Alt.)
Fujitsu	Sandy Wilson Eugene Owens (Alt.) Jim DeCaires (Alt.) Mark Malcolm (Alt.) Kun Katsumata (Alt.)
Hewlett Packard.....	Barry Maskas Krishna Babu Puttagunta (Alt.) Nadaraha Navaruparajah (Alt.) Rupin Mohan (Alt.) Siamack Ayandeh (Alt.)
IBM.....	Roger Hathorn Patty Driever (Alt.) Henry May (Alt.)
Intel	Mark Wunderlich
JDS Uniphase Corporation	Jason Rusch Scott Baxter (Alt.) Paul Gentieu (Alt.) George Bullis (Alt.)
LSI Corporation.....	John Lohmeyer Adam Healey (Alt.) Harvey Newman (Alt.)
NetApp	Frederick Knight Denise Ridolfo (Alt.)
Oracle	Roger Dickerson Matt Gaffney (Alt.) Ajoy Siddabathuni (Alt.) Hyon Kim (Alt.) Michael Roy (Alt.) Doug Meyers (Alt.)
QLogic.....	Craig W. Carlson Ed McLaughlin (Alt.)

Introduction

FC-BB-6 defines mappings for transporting Fibre Channel over different network technologies. FC-BB-6 defines four distinct Fibre Channel mappings:

- a) FC over TCP/IP;
- b) FC over GFPT;
- c) FC over MPLS; and
- d) FC over Ethernet.

The FC over ATM and FC over SONET backbone mappings are not specified in FC-BB-6. As such, FC-BB-6 is not a complete replacement of FC-BB-3 (i.e., see FC-BB-3 for the specification of the FC over ATM and FC over SONET backbone mappings).

American National Standard
for Information Technology —

Fibre Channel —
Backbone - 6 (FC-BB-6)

1 Scope

This standard consists of distinct Fibre Channel mappings resulting in the following models:

- FC-BB_IP (FC over TCP/IP backbone network)
- Transparent FC-BB consisting of:
 - FC-BB_GFPT (FC over SONET/SDH/OTN/PDH backbone network using GFPT adaptation)
 - FC-BB_PW (FC over MPLS network using PW adaptation)
- FC-BB_E (FC over Ethernet)

Figure 1, figure 2, figure 3, and figure 4 illustrate the scope and the major components of the FC-BB-6 models and its relationship to the IETF, ITU-T, and IEEE standards. Table 1 shows the organization of this standard. FC-BB_IP, Transparent FC-BB, and FC-BB_E do not interoperate in any manner and are independent models.

Table 1 – FC-BB-6 organization

Model Type	Applicable Clauses and Annexes
FC-BB_IP, FC-BB_GFPT, FC-BB_PW, FC-BB_E	1, 2, 3, 4
FC-BB_IP	5
Transparent FC-BB	
FC-BB_GFPT	6, Annex A
FC-BB_PW	6
FC-BB_E	7, Annex B, Annex C, Annex D, Annex E, Annex F, Annex G