Version 13-033v0 - Changes to 12-455v0:

- Removed leading indefinite articles and definite articles from the definitions.
- Put definition titles onto a separate line per ISO rules.
- Added the definition for “fabric” per Emulex comment 101 in 12-321v4.
- Miscellaneous comments from the FC-SB-5 meeting 12/04/12.

3 Definitions and Conventions

3.1 Overview

For FC-SB-5, the following definitions and conventions apply.

3.2 Definitions

3.2.1
channel
entity, typically of a host computer, which consists of one N_Port and elements which perform the functions specified by SB-5 to provide access to I/O devices by means of control units or emulated control units

3.2.2
channel-command word (CCW)
a) control block which contains a request to perform an I/O operation in command mode; or b) structure of a specific system architecture which specifies the command to be executed along with parameters

3.2.3
CCW channel program
single channel-command word or ~~a~~ sequence of channel-command words executed sequentially that control a specific sequence of channel operations

3.2.4
CCW I/O operation
decoding, accepting, and executing a CCW by an I/O device

3.2.5
channel image
single ULP instance of a channel having the logical appearance of a channel

3.2.6
channel-path identifier (CHPID*)*
system-unique 8-bit value assigned to each installed channel path of a system

3.2.7
channel program
a) single channel-command word (CCW) or sequence of channel-command words executed sequentially that control a specific sequence of channel operations; or b) single transport-command word (TCW)

3.2.8
channel-to-channel connection
association between two channels, one of which provides an emulated control unit, which allows those two channels to exchange IUs on an exchange pair

3.2.9
command mode

mode of operation that is used to perform SB-5 device-level functions that are performed using an exchange pair and to perform all SB-5 link-control functions

3.2.10
connection
association between a channel and control unit established: a) after the successful transfer of IUs that constitute an exchange pair resulting in two open exchanges, one inbound and the other outbound, and both occurring between the channel and the control unit in command modem; or b) after transfer of an IU by a channel to a control unit that opens an exchange in transport mode

3.2.11
control unit
physical or emulated entity, consisting of at least one N_Port and elements which adapt the characteristics of one or more I/O devices to allow their attachment to the N_Port of a channel

3.2.12
control-unit image
single ULP instance of a control unit having the logical appearance of a control unit

3.2.13
CRC Offset Block
list of 1-word values identifying the byte offset of each intermediate CRC word in the write transport data

3.2.14
device
equipment such as a printer, magnetic tape unit or direct-access-storage device (DASD) that is accessed by means of a control unit to allow attachment to a channel

3.2.15
device-command word (DCW)
a) control block which contains a device I/O command; or b) structure of a specific system architecture which specifies an I/O command to be executed along with parameters

3.2.16
device-level functions
protocols and functions used to perform and manage I/O operations

3.2.17
device information block (DIB)
data block present in all device-level FC-SB-5 command-mode IUs except IUs used to perform I/O operations in transport mode

3.2.18
disconnection
removal of a connection by closing one or both exchanges of an exchange pair or by closing a transport exchange

3.2.19
exchange pair
two FC-FS-3 exchanges between a channel and a control unit with sequence initiative in opposite directions that are linked together by the SB-5 ULP

3.2.20
fabric

entity that interconnects Nx_Ports attached to it and is capable of routing frames by using the D_ID information in a Frame_Header (see FC-FS-3)

3.2.21
image
group of related processes behind a single N_Port (e.g. a single system or a single logical partition of a system)

3.2.22
inbound exchange
exchange of an exchange pair which originates from a control unit and that carries information to the channel

3.2.23
initiation IU
first IU of an exchange

3.2.24
I/O operation
execution of an operation specified by a CCW or a TCW

3.2.25
link-level functions
FC-FS-4 link-control mechanisms and basic link services (BLS), FC-LS-3 extended link services (ELS), and SB-5 link-control functions used to make operational and manage the physical and logical link between an entity acting as a channel and an entity acting as a control unit

3.2.26
mode of operation
identifies the protocols and functions, either command mode or transport mode, used by a channel and control unit to perform device-level functions.

3.2.27
N_Port
see FC-FS-4

3.2.28
N_Port_ID
see FC-FS-4

3.2.29
outbound exchange
exchange of an exchange pair which originates from a channel and that carries information from the channel to the control unit

3.2.30
persistent IU pacing
method for allowing an FC-SB-5 channel to retain a pacing credit for use at the start of execution of a channel program

3.2.31
SB-5 offline condition
condition recognized when a receiver transitions from the FC-FS-4 active state to the FC-FS-4 OLS receive state

3.2.32

transport command control block (TCCB)
variable length data structure that contains device-command words (DCWs) and associated control information that is sent from a channel to a control unit

3.2.33
transport command Word (TCW)
a) control block which contains a request to perform an I/O operation in transport mode; or b) structure of a specific system architecture which specifies a TCCB to be sent from the channel to the CU

3.2.34
TCW channel program
single transport command word

3.2.35
TCW I/O operation
decoding, accepting, and executing a TCCB by an I/O device

3.2.36
transport exchange
single bi-directional exchange that carries the communication required between a channel and control unit to perform a device-level function

3.2.37
transport mode
mode of operation that is used to perform SB-5 device-level functions using transport exchanges

3.2.38
transport status block (TSB)
variable length data structure that contains status for a TCW I/O operation

3.2.39
ULP process
function executing within a channel or control unit which conforms to the Upper Level Protocol (ULP) immediately above the SB-5 service interface