SDL Cell formats and Meta Signalling

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9th March 1994

1 Introduction

This document is a preliminary specification for the Meta Signalling to be used for setting up MSNL connections using AAL5 and standard headers. For this reason it is not fully complete. This instance of MSDL is known as SDL (Standard Data Link).

2 Cell format

The cell header used is the standard CCITT one, either in NNI or UNI as appropriate. This is shown in table 1 for ease of reference.

Octet	7	6	5	4	3	2	1	0	
0	GFC				VPI 7–4				UNI
0	VPI 11–4								NNI
1	VPI 3–0				VCI 15..12				
2	VCI 11–4								
3	VCI 3–0				PT			CLP	

Table 1: Standard Cell Header

3 Meta Signalling

Like FDL where Meta Signalling has two variants, SDL can have three variants. These are UNI, NNI and internal to a Fairisle switch. Also, since the Meta Signalling may be present on the same wire as FDL Meta Signalling, it must be defined in a way that it can be distinguished from defined or experimental variants of FDL.

3.1 Header of Meta Signalling

The exact VPI and VCI used for SDL Meta Signalling cells is yet to be chosen. This is because it is not yet clear what values we should use to avoid complications with the standards process.

3.2 SDL Meta Signalling data format

The format adopted for SDL Meta Signalling information is displayed in table 2.

Octet	Field	Description
0	Variant	1 is NNI, 2 is Fairisle intra-switch, 3 is UNI
1	Reserved	
2	SDL Control	The value 3 (to distinguish from FDL)
3	MSCommand	Connection request reply etc.
4 – 7	OrigHeader	VPI / VCI fields of header chosen by originator
8, 9	OrigRoute	Two route octets of originator (variant 2 only)
10, 11	RespRoute	Two route octets of responder (variant 2 only)
12 – 15	RespHeader	VPI / VCI fields of header chosen by responder
16 – 19	OrigAddr	Four octets of the originator's local address
20 – 23	OrigPort	Four octets of the originator's port
24 – 27	RespAddr	Four octets of the responder's local address
28 – 31	RespPort	Four octets of the responder's port
32 – 39	Argument	Appropriate argument to the MSCommand eg. QoS
40 – 48	AAL5Trail	A standard AAL5 trailer for this single cell block

Table 2: SDL Meta Signalling Cell format

For connection management commands it is important to note that the only fields of this structure which are sent end to end are the OrigAddr, OrigPort, RespAddr, RespPort and appropriate parts of the argument. This structure is *only* sent on networks which use SDL.

3.3 Meta Signalling Commands

The meta signalling commands used on SDL are identical to those used by all other instances of MSDL. They are therefore described in that generic document.