Title: Comments on the Proposed PICS for DIS 10589 (in 91-51)

Source: IBM

Reference: X3S3.3/91-51

IBM supports the presentation style outlined in 91-51 for the DIS 10589 PICS, and prefers it over the format used in DIS 10589.

Based on our detailed review, we offer the following comments:

EDITORIAL COMMENTS

1. All of the entries under the ″Item″ column should consist only of alphanumeric characters (uppercase and lower case a-z, numerals 0-9) and the underscore (_) character. In particular, blanks are not permitted. For example, the item *System Management* could be either *System_Management* or *SystemManagement*.
2. The notation ″N/A″ in the header of the Support column is out of place. When needed as a response for a particular item, it should appear as an entry in the Support column, as a third check box along with ″Yes″ or ″No″.
3. The indicators ″M:″ and ″O:″ in the Support column are redundant with those in the Status column. They should be removed from one place or the other.
4. In cases where several values are allowed (for example, the length of the ID field), and they can be easily enumerated or described, this should be done so that it is clear which values are valid answers. Since, for example, the length of the ID field must be between 1 and 8, it would be preferable for the ″ID Field Length Item″ to provide separate check boxes for each of the 8 values in the Support column. Otherwise, there is no convenient way for the user of the PICS to flag invalid responses (such as an ID length of 15, for example).
5. The questions pertaining to LANs, PtPt, 8208, and Reverse Path Cache should be reworded in a way that makes it clear that a specific implementation is not required. We suggest the following wordings:
   a. Does this IS support the subnetwork dependent functions for broadcast subnetworks? (Change reference from 8.2 to 8.4.)
   b. Does this IS support the subnetwork dependent functions for point-to-point subnetworks?
   c. Does this IS support the subnetwork dependent functions for ISO 8208 subnetworks?
   d. Does this IS support the ISO 8208 reverse cache function on DA circuits?
6. For clarity, we suggest rewording the question on item ″jitter″ as follows: ″Is jitter introduced in all periodic timers whose expiration causes transmission of a PDU?″

TECHNICAL COMMENTS

1. **Protocol Summary**

   a. For the item ″PDU Authentication″, the references have missed many of the normative clauses that deal with this topic. The following references should be added:7.3.15.1-7.3.15-4, 7.3.7-7.3.10, 8.2.3, 8.2.4,.1, 8.4.1.1.

2. **Decision Process: General**

   a. Include the item ″Prefixes″ as it is currently written in DIS 10589, page 103.

   b. Add a new item: ″Route_Preference″; ″Is there an order of preference for the selection of routes?″; 7.2.12; Mandatory.

   c. Add a new item: ″Internal_Metrics″;″Are internal metrics supported for Prefix Neighbours?″: 7.2.2, 9.9; If <L2IS AND PREFIXES> then O, else X.

   d. Add a new item: ″External_Metrics″;″Are external metrics supported for Prefix Neighbours?″: 7.2.2, 9.9; If <L2IS AND PREFIXES> then O, else X.

3. **Protocol Summary: Level 1 Specific**

   a. Clause 12.2.5 makes it clear that separate system counts apply to level 1 ISs and level 2 ISs. Hence, the item ″L1 IS Count″ should be renamed for clarity to ″Area_IS_Count″ ; the question should become ″How many ISs can this system support within a single area″; and the clause reference should be changed to 12.2.5.

4. **Level 1 Update Process**

   a. The 5 items (L1 Circuit Database Change ... L1 IS Adjacency Change) refer the reader to clause 7.3.6, dealing with event-driven generation of LSPs. This clause is more general than these 5 items would indicate, since it requires an LSP to be generated whenever an event occurs ″which would cause the information content to change″. To reflect the wider scope of 7.3.6, the five individual items should be replaced with a single line item, as follows: ″EventDrivenL1LSP″; Does this implementation support event-driven generation of L1 LSPs?; clause 7.3.6; L1IS:M.

   b. The item ″L1 Checksum Verification″ should reference clause 7.3.14e.

   c. A new item ″L1ChecksumGeneration″ should be added: ″Does this IS support generation of L1 checksums?; clause 7.3.11, 7.3.17; Mandatory

   d. Move the item ″L1 Multiple LSP Recognition″ to the table for the Level 1 Decision Process, and reword the question: Does the Decision Process respond correctly to the absence of a valid LSP #0?; L1IS:M

   e. Rename item ″L1 Waiting State″ to ″L1Overload″; ″Does this IS handle a L1 LSP Database Overload correctly: 7.3.19.1-2: L1IS:M

5. **Protocol Summary: L2 Specific**

   a. Clause 12.2.5 makes it clear that separate system counts apply to level 1 ISs and level 2 ISs. Hence, a new item ″IS_Count″ should be added. Its question is ″What is the total number of ISs that this L2 IS can support?. Its status is ″If L2IS, then M, else --. Its clause reference is 12.2.5.

6. **Level 2 Update Process**

a. The 5 items (L2 Circuit Database Change ... L2 IS Adjacency Change) refer the reader to clause 7.3.6, dealing with event-driven generation of LSPs. This clause is more general than these 5 items would indicate, since it requires an LSP to be generated whenever an event occurs ″which would cause the information content to change″. To reflect the wider scope of 7.3.6, the five individual items should be replaced with a single line item, as follows: ″EventDrivenL2LSP″; Does this implementation support event-driven generation of L2 LSPs?; clause 7.3.6; L2IS:M.

b. The item ″L2 Checksum Verification″ should reference clause 7.3.14e.

c. A new item ″L2ChecksumGeneration″ should be added: ″Does this IS support generation of L2 checksums?; clause 7.3.11, 7.3.17; Mandatory

d. Move the item ″L2 Multiple LSP Recognition″ to the table for the Level 1 Decision Process, and reword the question: Does the Decision Process respond correctly to the absence of a valid LSP #0?; L2IS::M

e. Rename item ″L2 Waiting State″ to ″L2Overload″; ″Does this IS handle a L2 LSP Database Overload correctly: 7.3.19.1-2: L2IS:M

f. Add the item ″Partition Repair″, as it is written in the base text of DIS10589, page 103.

7. **Forwarding Processes**

a. Add a new table ″Forwarding Processes″, with the following entries:

1) ″MetricSelect″; ″Does this system select a forwarding database based the appropriate routeing metric?; 7.4.2; Mandatory

2) ″LevelSelect″; ″Does this system correctly select the L1 or L2 Forwarding Database?;7.4.3.1; Mandatory

3) ″Encapsulation:″Does this system correctly encapsulate PDUs used in the Partition Repair Process; If <L2IS and PartitionRepair> then M, else X.

4) ″PrefixMatch″; ″Does this system correctly match address prefixes and NSAP addresses?; <New clause>; L2IS:M