Accredited Standards Committee* **X3S3.3/92-169**
X3, INFORMATION PROCESSING SYSTEMS **X3S3/92-063**

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To: X3S3

From: ASC-Accredited Task Group X3S3.3 (Network and Transport layer standards)

Subject: Proposed U.S. ballot comments to ISO/IEC DIS 10737-1, Transport Layer Management

Please find attached the U.S. proposed ballot comments related to the Transport Layer Management DIS 10737-1. There are six (6) Major Technical issues raised (four(4) of these are common comments against the DIS 10733 Ballot for the Network Layer Management).

The U.S. votes NO with comments to ISO/IEC DIS10737-1 - Information Technology - Telecommunications and Information Exchange Between Systems - Specification of the Elements of Management Information Relating to OSI Transport Layer Standards

1.0 General Concerns:

COMMENT #: 1.1

LOCATION: Clause 5.1.1

QUALIFIER: m

CHANGE: Add an inheritance tree with description.

RATIONALE: This will make the document much more readable and useful.

COMMENT #: 1.2

LOCATION: Clause 5.5, Page 13; Clause 5.6, Page 17:

QUALIFIER: m

CHANGE: Replace all occurrences of:
"Rec. X.721|ISO/IEC 10165-2:1992" : administrativeState GET,
with the following:
"Rec. X.721|ISO/IEC 10165-2:1992" : administrativeState GET-REPLACE,

RATIONALE: We suggest making administrativeState GET-REPLACE to reflect the intent of the attribute as defined in ISO/IEC 10164-2. This attribute is intended to allow control of the resource by management. All State Management should conform to 10164-2.

COMMENT #: 1.4

LOCATION: ANNEX C

QUALIFIER: M

CHANGE: Remove ANNEX C entirely, and redirect all references to the GMI:1992.

RATIONALE: The DIS version of the GMI: 10165-5:2/20/92 captures these definitions.

COMMENT #: 1.5

LOCATION: General Issue related to CREATE and DELETE for entities, and the DELETE for connections.

QUALIFIER: M

CHANGE: Please reconsider the usefulness of CREATE and DELETE for entities and the usefulness of DELETE for connections.

RATIONALE: Although we agree that these resources typically come into existence through non-management means, CREATE allows previously unmanaged Entities to be added to the management view. DELETE would allow management control over connections for fault or performance management. Without these operations, distributed management capabilities are severely diminished.

2.0 Clause 5.3 The Transport Subsystem MO:

COMMENT #: 2.1

LOCATION: Clause 5.3, Transport Subsystem Class, Page 8:

QUALIFIER: M

CHANGE: Allow multiple *transportSubsystem* MO's per transport layer subsystem by:

Change the "INITIAL VALUE" to a "DEFAULT VALUE" for the subsystemId attribute.

Change the Managed Object comment to allow multiple Subsystem Managed Objects.

RATIONALE: The *transportSubsystem* MO should not be restricted to a single instance per transport layer subsystem. Reference GMI (ISO 10165-5) which allows multiple subsystem MOs per OSI Basic Reference Model layer subsystem. The Transport Layer Management standard defined a subclass of GMI:subsystem and restricted its usage to a single *transportSubsystem* MO per transport layer subsystem. That restriction was stated both in the description of the *transportSubsystem* MO class and in the fact that its naming attribute has a fixed value ("transport subsystem").

DISCUSSION: There is a question of practicality for a manager to determine the non-default system id when used, the procedure may involve potentially extensive management dialogue.

Current acceptance is based upon:

1) It appears to be an acceptable management resource;
2) The requested change is easily accomplished by changing the attibute value from the currently defined: "Initial Value" to a "Default Value".
3) The given rationale based upon the GMI is sufficient reason.
4) If done in the Transport layer then it also MUST be done in the Network Layer and the Data Link layer. Inclusion in each of the upper layers is beyond the scope of this committee.

3.0 Clause 5.4 The Transport Entity MO:

COMMENT #: 3.1

LOCATION: Clause 5.4, new notifications, Page 9

QUALIFIER: M

CHANGE: Add the following notifications:
"Rec. X.721|ISO/IEC 10165-2: 1992":objectCreation,
"Rec. X.721|ISO/IEC 10165-2: 1992":objectDeletion,
"Rec. X.721|ISO/IEC 10165-2: 1992":attributeValueChange,
under NOTIFICATIONS in the transportEntity MANAGED OBJECT CLASS template.

RATIONALE: Object Creation/Deletion and AttributeValueChange notifications should be included in the Transport Layer Entity object. This is needed to support the functions of ISO/IEC 10164 parts 1, 2, and 4. Without these notifications and attributes, management will not know when entities are created, deleted, or changed.

COMMENT #: 3.2

LOCATION: Clause 5.4, Page 9, Clause 5.6, Page 18

QUALIFIER: M

CHANGE: Add the following notification:
"Rec. X.721|ISO/IEC 10165-2: 1992":communicationsAlarm,
under NOTIFICATIONS in the comodePM MANAGED OBJECT CLASS template, and delete from the transportEntity MANAGED OBJECT CLASS template.

RATIONALE: It is not clear why communicationAlarm is emitted by the Transport Entity MO. It is mentioned in entityas being generated by the protocol machine, but it is not in the comodePM object definition. Suggest deleting this alarm from the entity, and adding to to comodePM, if it is really intended that the protocol machine generate the alarm.

4.0 Clause 5.6 The Connection-Oriented Transport Protocol Machine MO:

COMMENT #: 4.1

LOCATION: Clause 5.6, *openConnections* attribute, Page 19

QUALIFIER: m

CHANGE: Clarify the semantics of "open" by providing examples such as: the definition should be tied to the usage state (e.g., "a connection is open when the usage state is active").

RATIONALE: The current text in the openConnections ATTRIBUTE template definition should be clarified and be made more precise with respect to the semantics of "open".

COMMENT #: 4.2

LOCATION: Clause 5.6, DMI attribute substitution, Page 17

QUALIFIER: M

CHANGE: Substitute the following ATTRIBUTES in the comodePM MANAGED OBJECT CLASS template:

Existing Attribute:	Replace by:
localSuccessfulConnections	DMI outgoingConnectRequests
remoteSuccessfulConnections	DMI incomingConnectRequests
localUnsuccessfulConnections	DMI outgoingConnectRejects
remoteUnsuccessfulConnections	DMI incomingConnectRejects
localErrorDisconnects	DMI outgoingDisconnectErrors
remoteErrorDisconnects	DMI incomingDisconnectErrors

RATIONALE: Why are the DMI attributes incoming/outgoingConnectRequests, incoming/outgoingConnectRejects, incoming/outgoingDisconnectErrors, and incoming/outgoingDisconnects not used (instead of local/remoteSuccessfulConnects, local/remoteUnsuccessfulConnects, and local/remoteErrorDisconnects) ?

The DMI approach more closely represents the raw management information. If DMI is unusable, the behavior description should indicate why this alternative is necessary.

5.0 Clause 5.8 The Transport Connection Managed Object and IVMO

COMMENT #: 5.1

LOCATION: Clause 5.8, new attribute, Page 25

QUALIFIER: m

CHANGE: Add the following attributes:

protocolErrors GET,

under ATTRIBUTES and ATTRIBUTE GROUPS in the transportConnection MANAGED OBJECT CLASS template.

RATIONALE: The protocolErrors counter should be counted on both an entityand a per connection basis. The entity counter provides a high level view of the problem, but a connection level counter is needed to identify the offending connection (the source of the problem).

COMMENT #: 5.2

LOCATION: Clause 5.8, new notifications, Pages 25-26

QUALIFIER: m

CHANGE: Add the following notification:

"Rec. X.721|ISO/IEC 10165-2: 1992":attributeValueChange,

under NOTIFICATIONS in the transportConnection MANAGED OBJECT CLASS template.

Add appropriate behaviour text indicating which attributes cause these notifications to be generated.

RATIONALE: Suggest including attributeValueChange notification for Transport Connection as well as Entity. This is needed to support the functions 10164 parts 1 and 4. Without this notification management will not know when the non-counter attribute values are changed.

COMMENT #: 5.3

LOCATION: Clause 5.8, new attribute, Page 34

QUALIFIER: m

CHANGE: Add the new attribute: "inactivityDuration, GET" with the attribute definition as follows:

```
inactivitiyDuration ATTRIBUTE
    WITH ATTRIBUTE SYNTAX TLM.Integer
    MATCHES FOR EQUALITY
    BEHAHIOUR inactivityDuration-B BEHAVIOUR
        DEFINED AS the amount of time you have been sitting inactive;;
REGISTERED AS { TLM.aoi inactivityDuration (?)};
```

RATIONALE: This attribute is no burden on the system since the timer value (inactivityTime) must be kept track of in order to make useof the configuration parameter (inactivityTimeOut). This addition would provide useful management information.