Title: Comments on ″Enhanced Transport Mechanisms Guidelines″

Source: IBM

Reference: SC6 N6887

IBM supports the general intent of the NP, but feels that its scope must be better defined before it can be approved. Upon acceptance of the new scope (defined below) IBM will recommend a vote of approval for the NP. Therefore, we offer the following comments:

1. Change the title of the project to ″High Performance Communications Functions for OSI Layers 1 through 4″. The existing title is guaranteed to lead to confusion, even with the current explanatory note that differentiates ″transport″ from ″Transport″. (For example, I recall that time-wasting discussions of ″transport″ versus ″Transport″ were the order of the day in last Spring′s X3S3 meetings. Look also at the title on the NP cover sheet: clearly, we mean to say ″Enhanced transport...″, but ″Transport (with an upper case ″T″) is what′s typed on the ballot sheet!)
2. If the project′s principal focus is to produce a type 3 TR, it is has very limited value. Therefore, IBM suggests emphasizing that the principal goal is coordination of protocol enhancements across OSI layers 1-4. To do this, IBM offers the following replacement text to define the project′s scope:

   Scope and Field of Application: This project will be administered under the JTC1 procedures for large projects. Therefore, a major portion of this work will entail defining a scope and field of application for follow-on NPs relating to individual OSI layers.

   This project will define guidelines and principles to be used in enhancing the communications performance of protocols in layers 1-4 of the OSI reference model. This framework will be used to coordinate development of a consistent set of technical amendments, addenda, or corrigenda to existing lower-layer standards, and to highlight those areas in which new standards need to be developed.

   The project will identify necessary functions, define their semantics, and assign them to the appropriate OSI layer. For example, it is anticipated that support for the following topics will be addressed by this project:

   - High throughput over high speed transmission facilities (e.g., at data rates of 20 Mbps to 10 Gbps)
   - Multicast operations in support of multipeer applications
   - Enhanced QOS functions, including methods for managing, guaranteeing, and selecting them
   - Out-of-band signalling and synchronization
   - Bandwidth management functions
   - Topology management
   - Selectable error recovery protocols
   - Congestion control
   - Avoidance of unwarranted duplication across layers
   - Efficient operation of proposed new mechanisms, both within and between the lower four layers of OSI
   - etc.

The work will proceed with due consideration to the interworking of new functions with already existing functions, and it will be documented in a Type 3 Technical Report, entitled ″Guidelines for Enhanced Communication Protocols in OSI Layers 1 through 4″.

3. IBM recommends that the existing ″Purpose and Justification″ section should be changed as follows:

   Purpose and Justification: Today, high speed communications technologies (such as fiber optic media) and high performance applications (such as multipeer applications that rely on multicast methodology) are beginning to emerge. To insure the continued growth and applicability of OSI protocols to such development, SC6 must consider the amendment of existing lower layer protocols, or the development of new ones, with a view towards efficient support of these newly emerging technologies.

4. Assuming acceptance of this project into SC6′s program of work, IBM will offer the services of C. Kunzinger as project editor.