GARP-based Stream Reservation Protocol (GSRP)

Draft 5 Criteria

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Broad Market Potential

- **Broad set(s) of applicability**
- **Multiple vendors and numerous users**
- **Balanced cost (LAN vs. attached stations)**
  - Carrying time-sensitive streaming applications with guaranteed QoS represent a new and very broad application space for IEEE 802 technologies. This requires a protocol to manage the resource reservation along the end-to-end paths of streams.
  - Many vendors and users that participate in the ResE Study Group have expressed their support for a means of end-to-end stream resource reservation to facilitate the use of bridged LANs for time-sensitive applications
  - As a control protocol, GSRP makes no new demands on a bridge or station's data forwarding capabilities. It does not upset the IEEE 802 model for balanced costs.

Compatibility with IEEE Std. 802.1

Conformance with 802 Overview and Architecture
Conformance with 802.1D, 802.1Q, and 802.1F
Conformance with 802 Functional Requirements

The proposed standard will conform to the aforementioned documents.

Distinct Identity

Substantially different from other IEEE 802 standards
Unique solution for problem (not two alternatives / problem)
Easy for document reader to select relevant spec.

- There is no existing 802 standard or approved project that provides end-to-end stream registration
- The proposed standard will consist of a single set of GARP application specifications to provide end-to-end stream reservation functions
- The proposed standard will be a supplement to the existing 802.1d standard and will be formatted as a new clause(s), making it easy for the reader to select the relevant specification

Technical Feasibility

Demonstrated system feasibility; reports – working models

Proven technology, reasonable testing

Confidence in reliability

- The proposed GSRP will be based on the well established GARP specification. It is defined as a new application of GARP, like GMRP/GVRP which already have proven implementations.
- The proposals submitted to Residential Ethernet study group to date have been found sound by the group members.

Economic Feasibility

Known cost factors, reliable data
Reasonable cost for performance expected
Consideration of installation costs

- Other GARP applications (GMRP/GVRP) are well-known and available in the market today.
- Developing and adding another GARP application will reuse the techniques during GMRP/GVRP development and will have a negligible impact on the current cost of Ethernet equipment.
- There are no installation costs for the provision of GSRP. Configuration will be automatic and require no action by the user. GSRP receives service requests from upper layer and performs them automatically.