

# Timing and Synchronization for Time-Sensitive Applications in Bridged Local Area Networks Version 2 Revision 1

Draft 5 Criteria  
March 9, 2011

**This revision incorporates comments from  
the January, 2011 IEEE 802.1 AVB meeting**

# Broad Market Potential

- **Broad set(s) of applicability**
  - The proposed amendment would apply to all 802 networks composed of full duplex IEEE 802.3, IEEE 802.11, IEEE 802.3 EPON, and other IEEE 802 networks identified in the scope, as a means of providing timing and synchronization for time-sensitive applications. The proposed amendment would also apply to Coordinated Shared Network (CSN).
- **Multiple vendors and numerous users**
  - Many vendors and users have continually expressed their support for the enhancements identified in the scope.
- **Balanced cost (LAN vs. attached stations)**
  - The functionality needed to provide enhancements identified in the scope at bridges and end stations is not significantly different. The cost of providing these enhancements at each type of device will not be significant, given the expected large volumes.

# Compatibility with IEEE Std. 802.1

**Conformance with 802 Overview and Architecture**

**Conformance with 802.1D, 802.1Q**

**Conformance with 802 Functional Requirements**

**The proposed amendment 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 the enhancements at bridges or end stations
- The proposed amendment will consist of a single set of specifications for the enhancements
- The proposed project will be formatted as an amendment to IEEE 802.1AS 2011. Each enhancement will be formatted as a set of distinct specifications.

# Technical Feasibility

**Demonstrated system feasibility; reports – working models**  
**Proven technology, reasonable testing**  
**Confidence in reliability**

- There are numerous existing solutions for the enhancements (e.g., IEEE 1588 specifies alternate time scales; these specifications can be incorporated into the PTP profile contained in IEEE 802.1AS)
- The proposed project may re-use existing specifications. Numerous implementations exist that provide the enhancements for time-sensitive applications.

# Economic Feasibility

**Known cost factors, reliable data**

**Reasonable cost for performance expected**

**Consideration of installation costs**

- The technology for the enhancements is well-known and available in the market today.
- Adding the enhancements will have a negligible impact on the cost of 802 networks.
- It will be possible for configuration related to the enhancements to be automatic and require no action by the user; therefore, there are no incremental installation costs for the provision of timing and synchronization.