

Residential Ethernet

Draft PAR
January 25, 2005

Title (4)

Draft: Information technology -- Telecommunications and information exchange between systems -- Local and metropolitan area networks -- specific requirements Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications Amendment: Enhancements for Digital Media Applications in Residential Networks

PAR Scope (13)

This project will provide time-sensitive delivery of data transmissions between synchronized end points over existing point-to-point full-duplex PHYS on a plug-and-play basis.

Support of such time-sensitive data transmissions may use admission control negotiations to guarantee bandwidth allocations with predictable latency, low-jitter delivery and clock synchronization.

PAR Scope (13)

Is the completion of this document contingent upon the completion of another document? Yes

This PAR includes work on independent capabilities, and some of the work is not contingent on another project. The complete capabilities and benefits envisioned in Ethernet networks through Residential Ethernet capabilities will include both 802.3 and 802.1 work. Serialization of the projects would unnecessarily delay market introduction of the capabilities.

PAR Purpose (14)

This project will allow Ethernet to support the requirements of consumer electronics devices in the transport of digital media.

PAR Reason (15)

“Residential Ethernet” networks represent a new and very broad application space for Ethernet. The digital networking port* on consumer electronics (96 billion USD in 2003) equipment has not yet been decided, and 802.3/Ethernet has a strong possibility of being the dominant, long-term solution of choice if it also provides isochronous services.

*The overall market for home networking semiconductors will grow 12% per year from 2004 to 2008, moving from \$1.34 billion in the beginning of the forecast to \$2.32 billion at the end of the forecast. This growth will come despite decreasing prices on a per unit basis, as the average price for a home networking IC will decline from \$8 in 2004 to \$5 in 2008. This increase in revenues despite downward pressure on pricing shows how the overall unit momentum throughout the forecast period will create a "rising tide" for the connected home silicon market (the market will go from 174 million ICs shipped in 2004 to 458 million in 2008). - Instat