

WGNA

Wideband Gigabit Networking Alliance

The Wideband Gigabit Networking Alliance (WGNA) is an association whose purposes are to support users of high speed networking technology, support standards, and encourage interoperability across a broad spectrum of hardware platforms, operating systems, and applications. Networking technology covers a large spectrum of bandwidths, physical layers, and communication networking protocols and standards. The most popular networking standard is Gigabit Ethernet.

Research

WGNA has an ongoing research effort in Gigabit networking technology, particularly addressing the needs of users. WGNA was instrumental in developing the first Gigabit networking products that were capable of utilizing standard Category 5 network cables. Additionally, it was instrumental in evolving a new standard in the distribution of streaming media across networks.

Ethernet switches and NICs generate substantial error rates as the network cable length approaches 100 meters causing a substantial decrease in network performance. This is most noticeable when lower quality cable is used. Some manufacturer's products work properly no matter which certified cable is utilized. By utilizing higher quality equipment the performance of many networks can be improved without replacing the cable.

Standards

Through WGNA's research and testing program, holes and deficiencies in the existing networking standards have been found. One of the purposes of WGNA is to support the standards process and to propose new standards that address these needs. WGNA has developed standards for cable testing, networking products, and communication protocols.

Video distribution has always been a difficult task for networking systems using current networking standards. By utilizing WGNA's standard for "channels", a single network is able to transmit hundreds of high quality video transmissions without losing data and the video becoming jerky. WGNA's "channels" allow devices to be directly connected to the network using a single chip interface. This makes it affordable to connect hundreds of devices directly to a network without the expense of computers controlling the devices.

Testing & Product Certification

WGNA has found that users of Gigabit networking equipment periodically run into difficulties that are hard to troubleshoot and solve. Many of these problems are associated with equipment interoperability issues, deficits in the standards and reduced product performance.

WGNA investigates problems reported by its members and has implemented testing procedures that identify specific product deficiencies and reduction in performance. As a result of these testing procedures, enhancements to various Gigabit standards have been proposed, accepted and published.

To support users of Ethernet, a functional test specification has been developed by WGNA. A collection of 94 different types of Category 5 cables have been collected and are used to test the functional performance of various brands of Ethernet products. Through this testing program, members are able to select products that will function properly over all types of Category 5 cables.

Another testing program uses a functional test to certify networking cables. Cables supplied by manufacturers are tested in a stressed environment which enables researchers to identify which cables will perform best in actual installations.

Through WGNA's testing and certification program, equipment that meets the WGNA standards may be certified and may display the WGNA certification logo. By selecting equipment that passes certification, users are assured that the networking equipment they purchase will perform to specifications using standard network cabling.

Training & Certification

WGNA has developed an extensive training program for Gigabit Networking technology. This training program has been given at dozens of Universities throughout the U.S. and includes information about Gigabit networking technology not found within other courses. The subject matter is chosen to be a significant benefit to users and implementers of the high performance networking technology. This course is also offered online at a significant cost savings.

One of the primary focuses of WGNA is to help its members have successful networking experiences. The testing, research, certification, and training programs of WGNA insure that all members have access to the information that they need to make the best possible networking designs and product decisions.

WGNA is seeking individuals and companies that would benefit from its testing, research, certification and training programs. Membership in WGNA is open to all individuals and organizations.