

**Toledo IEEE Computer/Control Society Chapter**

**High-Speed Internet Access: Past, Present and Future**

**Dr. Gary Border  
President**

**Digital Automation Associates, Inc.**

**Abstract**

As the everyday importance of Internet connectivity increases, so does interest in high-speed Internet access. Various forms of relatively fast Internet access exist, ranging from V.90 and V.92 modems, ISDN (Integrated Services Digital Network), xDSL, cable modems and satellite access. These systems allow modern Internet Service Providers to deploy relatively inexpensive high-speed digital networks to serve a geographically-dispersed user base.

This presentation will focus on the practical problems and technical challenges facing the ISP, with emphasis on the technologies critical to high-speed Internet access, including V.90, V.92, ISDN and ADSL. The implementation of T1/E1 circuits will be discussed, and the operation of Frame Relay and ATM networks in modern ADSL systems will be detailed. Examples of popular ADSL implementations will be presented. WCNet's Bowling Telephone Exchange ADSL deployment will be used as a case study.

**Speaker**

Gary Border is President of Digital Automation Associates, Inc., a 32-year-old firm specializing in laboratory data acquisition and industrial process control. Dr. Border is a speaker and author of numerous papers in the field of data acquisition, digital computing and process control. He is also Chairman of the Board of WCNet and TurboSurf, Internet Service Providers covering 2 million acres of northwest Ohio and southern Michigan. In 1998, Gary led the WCNet lab group that teamed with GTE to deliver the first commercial ADSL service in the state of Ohio. Under his leadership, in 2000 WCNet commissioned a fiber optic network connecting key Bowling Green businesses and institutions to the Internet. This past year, Dr. Border was elected to the Board of Directors of Interex, the Hewlett-Packard computer users group.

**Time and Place**

Thursday, March 28, 2002

6:00 - 6:30 PM .....Cash Bar  
6:30 - 7:00 .....Dinner  
7:00 - 8:30 .....Speaker Presentation

Stone Ridge Golf Club  
1553 Muirfield Drive  
Bowling Green, OH 43402-5230

See a map on our Web pages at:  
<http://www.ieee.org/toledo/>

Reservations by 5:00 PM, March 25<sup>th</sup> at 419.893.3562 or use our on-line form. Specify your entree choice and wish to arrange an afternoon golf round when making reservations.

Donald Ewing  
608 Pierce St.  
Maumee, OH 43537-3624

Payment by check payable to IEEE-Toledo Section.

**Non Members are welcome to attend.**

**Menu Selections**

Chicken Marsala ..... \$17.00  
Steak Filet ..... \$19.00

**Meeting Extras!**

Everyone attending will receive a certificate for four (4) months of unlimited, free 56K/64K Internet dialup (optionally, 2 months of free 128Kbps ISDN service or 768Kbps ADSL service) with WCNet, whose service area covers most of northwest Ohio and much of southern Michigan. WCNet values these certificates at \$39 but, in AOL Country, for example, they're worth \$112.

March 28th is the Thursday before Easter Weekend, and many people will have Friday off. If you'd like to start the weekend a little earlier, Monty (the Club Pro) would be happy to set up some 1PM tee times for people at a "reasonable rate." Please visit our on-line registration form to communicate your interest. Stone Ridge is managed by Arnold Palmer Golf. For more information visit: <http://www.palmergolf.com/>

**March 2002 Meeting**