

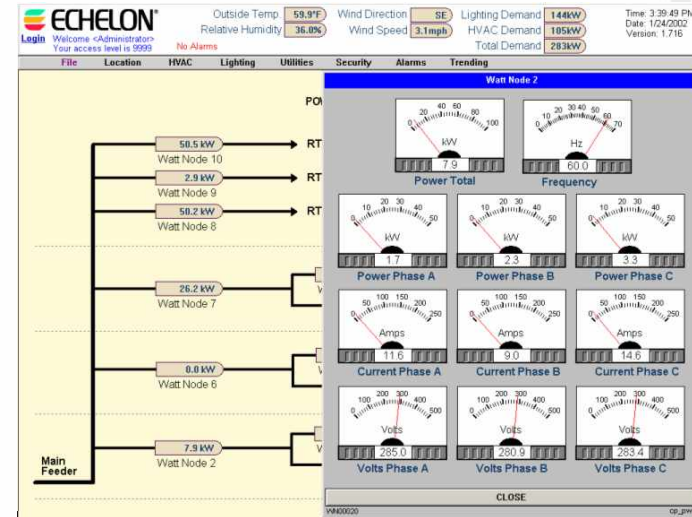
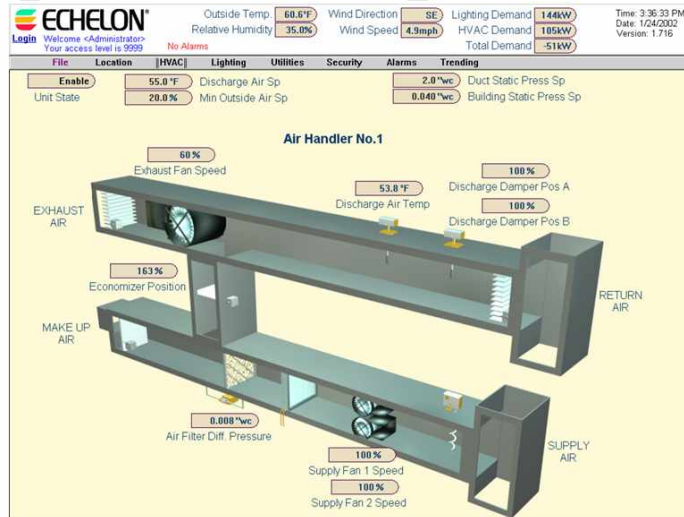


LNS[®] DDE Server 2.1 Overview

Rich Blomseth

August 2004

LNS DDE Server Benefits

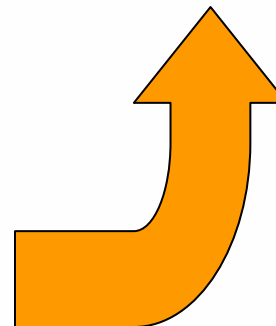


- Provides the best way to interface LONWORKS® networks to popular HMIs
- Includes LNS 3 for the highest available performance
- Supports over 3000 bound updates per second on LONWORKS/IP
- Provides complete support for LONMARK® devices
- Provides access to any point anywhere in a LONWORKS network

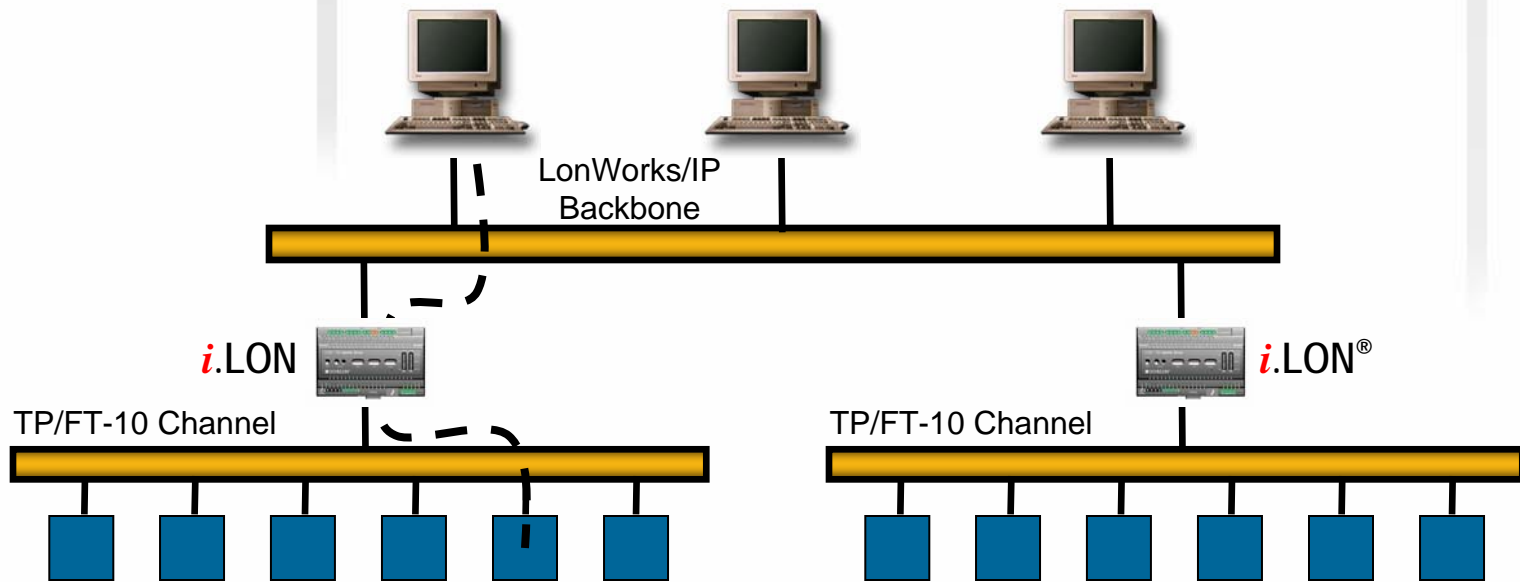
High-Performance LNS 3 Runtime

	< LNS 3	LNS 3
Address table entries	15	32,768
Simultaneous outgoing transactions	1	1000
Simultaneous incoming transactions	16	1000
LONWORKS/IP channels	0	1

- Any driver not based on LNS 3 will get pre-LNS 3 performance!

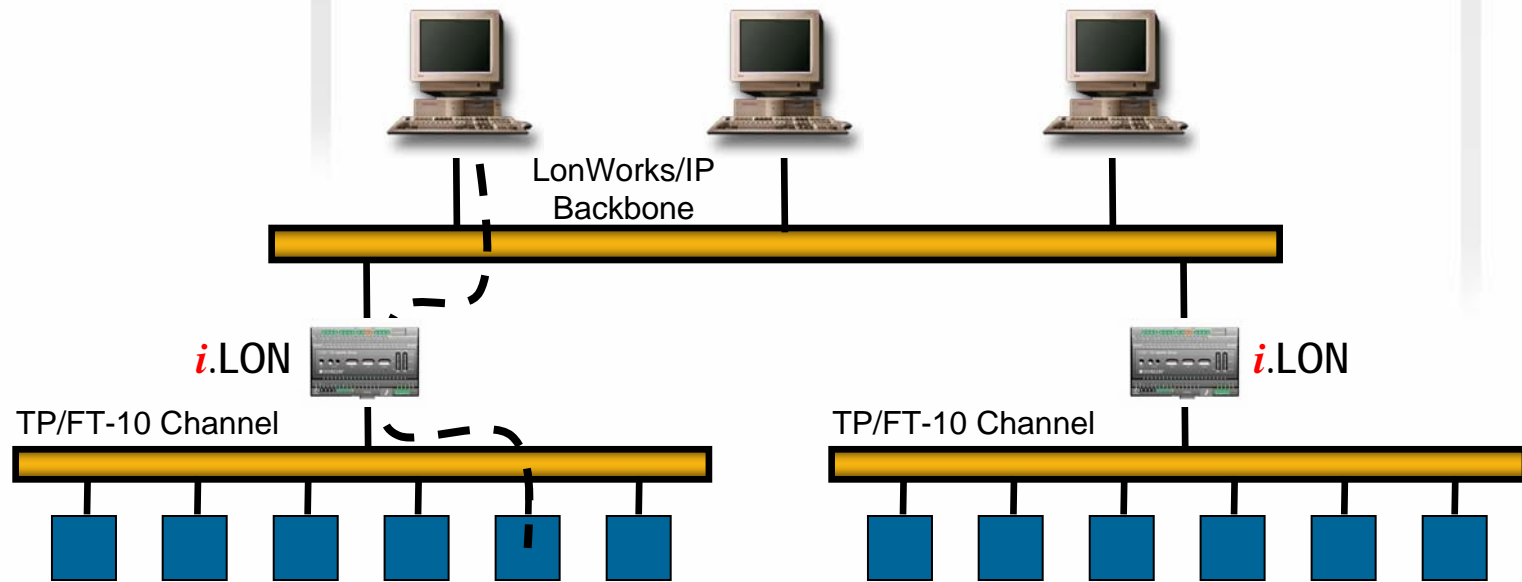


IP Connectivity With LNS DDE Server 2.1



- The bottleneck is gone
 - Only one Neuron[®] Chip is involved in the above poll—and it is not in the critical path
 - The speed of the PC is now the limiting factor to performance
 - The result: >1700 polls per second!
 - Testing done a 3GHz Pentium 4 with 1GB RAM

Bound Updates With LNS DDE Server 2.1



- New tests have demonstrated over 3000 bound updates/second!
 - The speed of the PC is the limiting factor to performance
 - Used a 3GHz Pentium 4 with 1GB dual-channel DDR RAM
 - PC was running at 85% CPU load
 - Test used 56 devices on 7 TP/XF-1250 channels with 7 *i.LON* 1000s

What About OPC?

- OPC without LNS 3 will be slow
- OPC with LNS 3 may be slightly faster, but...
 - OPC servers typically do not provide access to critical data
 - Configuration properties—required to set critical inputs like setpoints
 - Functional block status—required to enable/disable functions
 - Device status—required to report failed devices to HMI users
 - Network variable fields—simplifies HMI development
 - OPC will not be faster with InTouch—the LNS DDE Server is a native driver for InTouch and does not use DDE with InTouch
- Buyer beware—conduct performance and functional testing before selecting an I/O server

Two Editions – One Low Price

- **Standard Edition**
 - Try before you buy
 - Install on any number of PCs
 - When ready, purchase an application key for each PC
- **OEM Edition**
 - Requires a purchase order in advance
 - May be easily transferred or sold
 - Prepaid application key for one PC included
 - May be installed in demo mode on additional PCs, additional keys may be purchased at any time
- **Free upgrade to Release 2.1 for licensed copies of 2.01**
 - Either download or order a free CD at www.echelon.com/lonmaker

Summary—DDE is FAST!

- Provides the best way to interface LONWORKS networks to popular HMIs
 - Including Wonderware InTouch using SuiteLink protocol
 - Also Intellution Fix, or National Instruments LabView and BridgeView
- Includes LNS 3 for the highest available performance
 - Automatically supports fan-in connections for large systems
 - Much better performance than non-LNS drivers
 - No need to recreate the network database for systems installed with LNS tools such as the LonMaker™ Integration Tool
 - Remains synchronized with the network, even as the network changes
- Supports over 3000 bound updates per second on LONWORKS/IP
- Provides complete support for LONMARK devices
 - Including support for functional blocks, configuration properties, and resource files
- Provides access to any point anywhere in a LONWORKS network