

L&T AUTOMATION

PANORAMA - 2000 NxT

Complete software solution for advanced process automation

Control & Automation Division

LARSEN & TOUBRO LIMITED

INTRODUCTION



Panorama 2000 NxT lets you see your plant in action! Gives you instant access to the information you need. Allows you to make programming changes immediately and visually monitor the results.

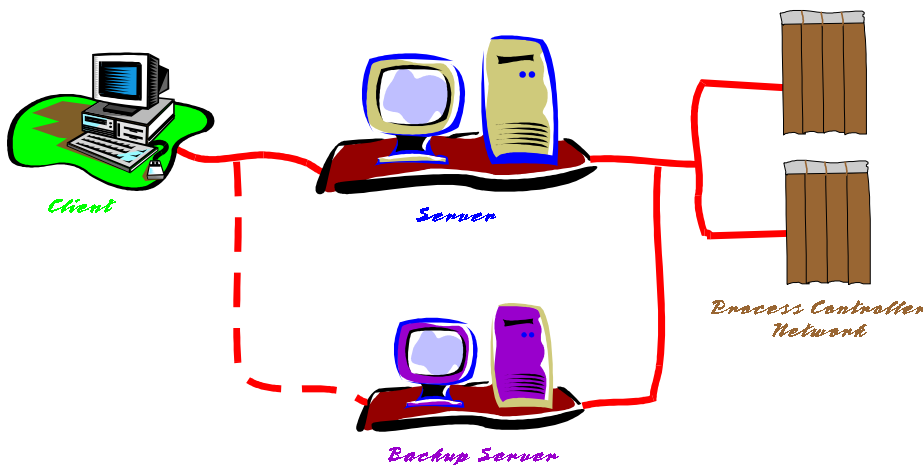
Panorama 2000 NxT combines real-time, easy-to-use animation with extensive alarming, data collection, logging and scripting capabilities.

With a host of features that grow with your needs, **Panorama 2000 NxT** is a powerful tool for HMI / SCADA applications.



32 Bit Client / Server Networking

Unlike conventional client/server systems, **Panorama 2000 NxT** offers one database to develop and one database to maintain. Of course this does not mean that there is only one database on the network. On the contrary, there can be many servers, and the client can roam at will (subject to authority) across the network.



Integrated hot-backup support for each network connection, the client can specify a primary and backup server. **Panorama 2000 NxT** can automatically switch between servers in the event of an error.



Built-in **pocket optimization** plus **event-driven-updates** endorse multithreaded architecture of Windows NT to boost network communication speeds to an amazing levels - that's what makes **Panorama 2000 NxT** so unique.

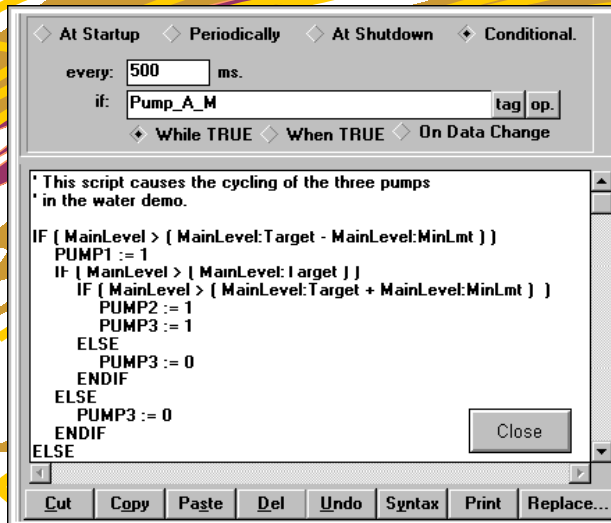
Panorama 2000 NxT built-in programming language - script puts the fun back into the programming.



Panorama 2000 NxT scripts give you the power to control your process!

Create enterprise wide automation system that performs exactly how you want it to.

Unleash the power of Programming

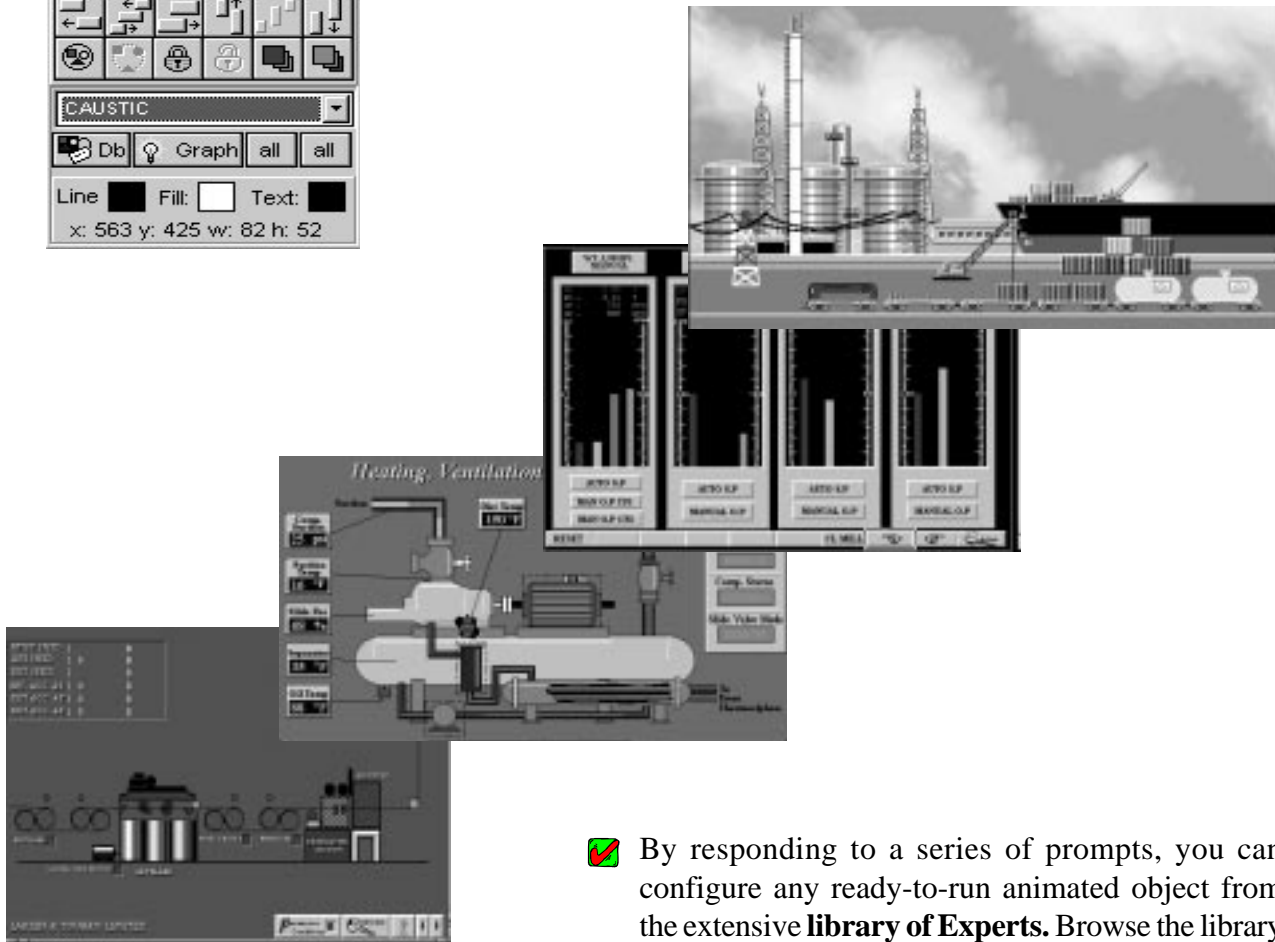


- ✓ Want to respond automatically when something occurs in your manufacturing process?
- ✓ Handle an alarm with a special response? Backup your data files hourly?
- ✓ Perform calculations when a data value changes?
- ✓ Produce a report automatically at the end of a process?
- ✓ Perform Statical Process Control (SPC) analysis on your data.
- ✓ Manage the security access levels to your S C A D A / H M I application.
- ✓ Or respond to your operators actions? and many more.

Panorama 2000 NxT is the only SCADA/HMI that includes a script debugger to test your logic before final implementation.



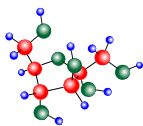
Panorama 2000 NxT allows you to look right into your plant. (No more site unseen!) Animate your process elements. Visualize your entire plant and each process. See exactly what's happening at any given time.



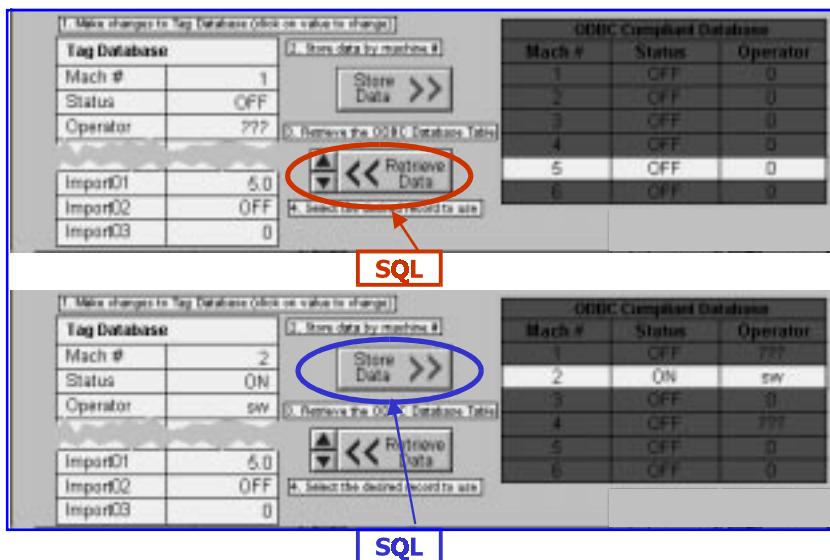
✓ By responding to a series of prompts, you can configure any ready-to-run animated object from the extensive **library of Experts**. Browse the library to find the expert you need. Or, create your own - no special tools required!

✓ Increase plant floor productivity and process visibility! Associated display attributes with animation expressions using a wide range of variables, including object position, size, visibility, set point, value and color. Draw as many views of your process as needed and use animation to highlight each dynamic. **Real time animation!**

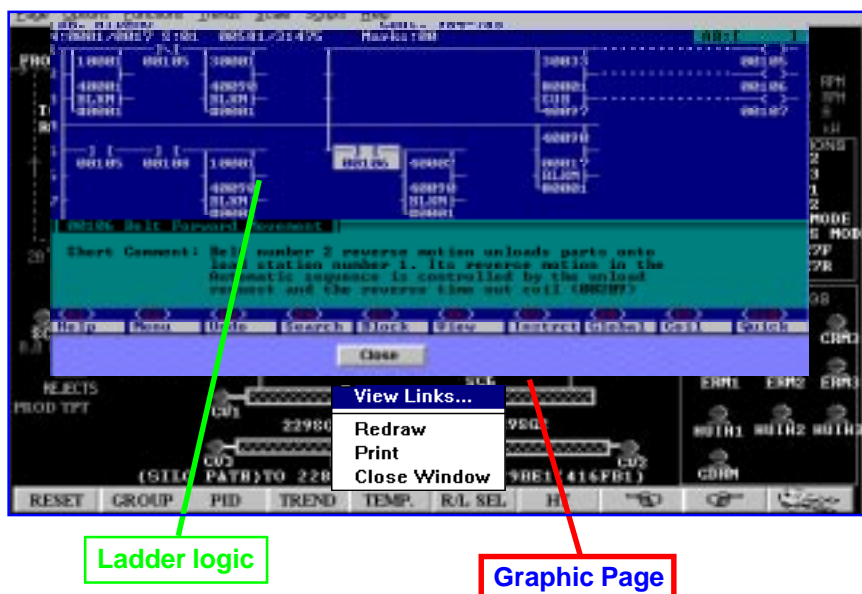
CONNECTIVITY



The **Panorama 2000 NxT** permits the easy linking of many different islands of process automation across the factory floor and from the factory floor to manufacturing execution systems (MESs) and enterprise resource planing systems (ERPs)..



- ✔ **Relational Database Support**- share data with Oracle, Sybase, SQL Server, Ingres, Access, and more. Our real-time SQL interface uses Microsoft's ODBC (Open Database Connectivity) to provide two-way enterprise wide information sharing.



- ✔ Link graphic images with ladder logic and other programming tools running in process controller **in real time**. That's what makes **Panorama 2000 NxT** so unique - enhancing faster diagnostics, troubleshooting and debugging.



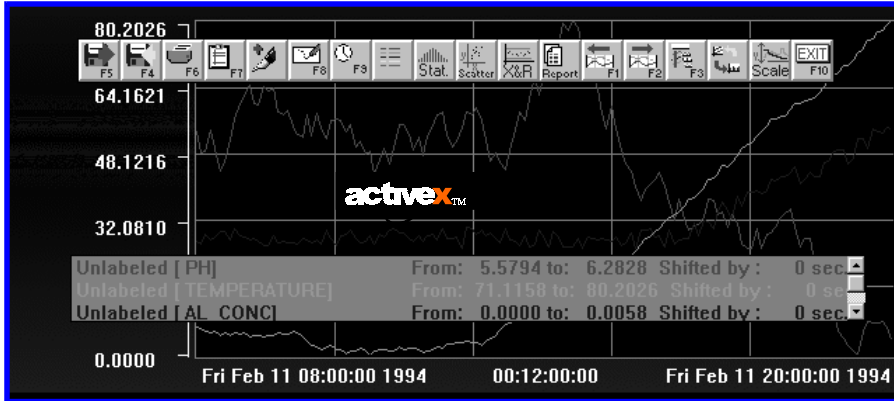
- ✔ **Panorama 2000 NxT** supports *de facto*, industry standard communication drivers like Modbus (Point to point), Modbus Plus (Plantwide), Ethernet (Enterprisewide) and others.

A fully documented Driver Development Kit (DDK) is available for custom driver development on proprietary hardware based on OPC standards.

T R E N D I N G



Panorama 2000 NxT supports real time trending capabilities built on ActiveX platform.



✔ Display data in a variety of formats, including line graphs, bar graphs, histograms, X&R charts and scatter graphs.

✔ Export and/or print charts and store configurations for later recall and use.

✔ Access historical files to identify areas for process improvement and analyze process data

A L A R M I N G

ALARM SUMMARY				
TIME	TYPE	TAGNAME	VALUE	GROUP
14:54:02	LO	Override	0	*
14:54:02	MAJ%	Alarm01	0	*
14:54:02	LOLO	Alarm01	0	*

ALARM HISTORY				
TIME	TYPE	TAGNAME	VALUE	GROUP
14:55:01	LO	DiscreteAlarmTag01	FALSE	*
14:55:00	LO	DiscreteAlarmTag02	FALSE	*
14:54:40	NRML	DiscreteAlarmTag01	TRUE	*
14:54:14	LO	DiscreteAlarmTag01	FALSE	*

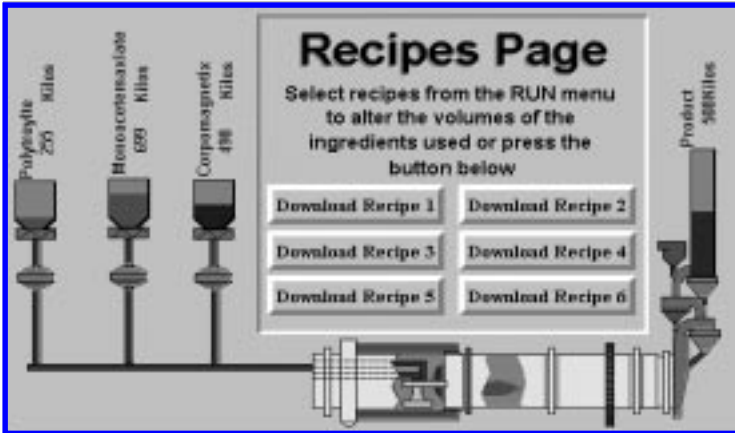
✔ Detect potential problems and react quickly before significant losses occur!

✔ Invaluable for alarm management: Monitor limit, deviation and rate of change alarms. Create one or multiple alarm windows, associate alarm groups within each window and view, acknowledge or clear alarms easily and quickly. Display fields, color coding and sorting priorities are easy to configure. Full alarm information logging allows easy process history auditing.

✔ **Network Alarming** - You can use remote alarm groups (i.e., \Alias\GroupName).

This includes viewing, printing and acknowledging alarms in alarm windows and using them in alarm script functions.

R ECIPE EDITOR



- ✔ Reduce data entry error and increase set-up speed! Create recipes - file-based collections of process settings - which can be uploaded automatically or on demand. Use templates to create fully validated recipes and watchdogs for unattended downloading.

R E P O R T

- ✔ 'Report Generator' provides formatted reports in real-time-shiftwise, daily and/or weekly.
- ✔ 'ASCII Data Logger' periodically stores data into a CSV text file for use with popular database or spreadsheet programs.

<input type="radio"/>	<i>Parameter</i>	<i>Units</i>	<i>Shift-A</i>	<i>Shift-B</i>	<i>Shift-C</i>	<i>Days</i>	<i>Weeks</i>	<input type="radio"/>
<input type="radio"/>	Kiln-1 Feed	Tons	325	358	177	860	860	<input type="radio"/>
<input type="radio"/>	Coal Consumed	Tons	29	20	19	68	68	<input type="radio"/>
<input type="radio"/>	Kiln-1 running	Hrs	7.7	7.7	3.6	19	19	<input type="radio"/>
<input type="radio"/>	ESP F-1 running	Hrs	7	6.9	2.6	16.5	16.5	<input type="radio"/>
<input type="radio"/>	ESP F-2 running	Hrs	8	8	8	24	24	<input type="radio"/>
<input type="radio"/>	ESP F-3 running	Hrs	8	8	8	24	24	<input type="radio"/>
<input type="radio"/>	Power consumed	Kwh	5	5	3	13	13	<input type="radio"/>

S E C U R I T Y



- ✔ Secure your application from unauthorized data changes.
- ✔ Show/hide objects based on security level.
- ✔ Provide more than 999 configurable user access levels.



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