

What's New in NI MATRIXx™

Version 8.0

This document contains information about the new and changed features for MATRIXx 8.0. The *MATRIXx Getting Started Guide*, available by selecting **Help»MATRIXx Bookshelf**, contains tutorials that guide you through using these new features.

For a list of known issues and other information specific to each MATRIXx release, refer to the *MATRIXx Release Notes*, available by selecting **Help»Quick Start Window**.

Contents

MATRIXx Integrated Development Environment	2
Projects and Solutions	2
SystemBuild	2
SystemBuild Editor Window	2
Models and Projects	3
Accessing DataStores and UserTypes	3
Showing SuperBlock Dependencies	3
Showing the Contents of a SuperBlock	3
Comparing Two Models	3
Searching SuperBlocks	3
Xmath	4
Displaying Partition and Variable Information	4
Creating and Editing Scripts	4
Setting Options	4
MATRIXx Help System	4

MATRIXx Integrated Development Environment

MATRIXx 8.0 introduces the Integrated Development Environment (IDE). The IDE is a single window that consists of several views. You use views to customize the information that the IDE displays.

This IDE supports standard Microsoft Windows behavior. For example, you can undo many operations by pressing <Ctrl-Z>, and you can right-click many items to access common operations for that item.

Projects and Solutions

MATRIXx 8.0 introduces projects and solutions. A project is a collection of files, such as Xmath scripts, SuperBlocks, state transition diagrams (STDs), DataStores, Microsoft Word documents, HTML files, and so on. If you have more than one project, you can use a solution to manage multiple projects at once.

You use the **Solution Explorer** view to manage project and solutions. This view, which replaces the Catalog Browser, is available by selecting **View»Solution Explorer**. Within this view, you can select one of three panes to customize how MATRIXx displays the solution information.

SystemBuild

The project environment changes the way you create and manage SystemBuild models and SuperBlocks. The following sections provide information about some of the changes to SystemBuild.



Note For more information about SystemBuild, refer to the *SystemBuild User Guide*.

SystemBuild Editor Window

You open the Editor window by double-clicking a SuperBlock or STD in the **Solution Explorer** view. You can right-click and double-click blocks and SuperBlocks to access options for these items. You can resize blocks by dragging their boundaries. You can rearrange connection wires and other items manually.

Instead of the Palette Browser, you use the **Blocks** view, available by selecting **View»Blocks**, to place blocks on the block diagram. Similarly, to place bubbles on an STD, you use the **Bubbles** view. You can also right-click the block diagram to access a shortcut menu, which contains options for placing blocks or bubbles on the block diagram.

Models and Projects

The Editor window is always associated with a project. If you open a model without creating a project, MATRIXx automatically creates an unconfigured project.

Each project has a **Diagrams** folder. All SuperBlocks and STDs reside in this folder or subfolders. When you configure a project, you choose how you want MATRIXx to save the SuperBlocks and STDs in the **Diagrams** folder. You can also configure each subfolder separately.

Accessing DataStores and UserTypes

Access DataStores and UserTypes from the data dictionary, which MATRIXx uses to store these objects. To access the data dictionary, load a project and then click the **Data Dictionaries** pane in the **Solution Explorer** view.

Showing SuperBlock Dependencies

To see the SuperBlocks and DataStores that a particular SuperBlock references, right-click a SuperBlock in the **Solution Explorer** view and select **Dependency Graph**.

Showing the Contents of a SuperBlock

SuperBlocks might consist of more blocks than the Editor window can display at one time. To view a manageable list of the blocks within a SuperBlock, open the SuperBlock and select **View»Outline**. Then, navigate the SuperBlock by clicking a block in this view.

Comparing Two Models

MATRIXx includes a tool for comparing two SystemBuild models. Typically, you use this tool to see the differences between two versions of the same model. You can compare models currently open in an Editor window, models in the current solution, and/or models saved on disk.

To launch this tool, select **Tools»ModelCompare Tool**.

Searching SuperBlocks

MATRIXx provides a search tool you can use to find information within one or more SuperBlocks. For example, you can use this tool to find all SuperBlocks that have Gain blocks with a value between 200 and 205.

To launch this tool, right-click a SuperBlock, project, or folder in the **Solution Explorer** view and select **Search**.

Xmath

The **Xmath Commands** window provides new interactive ways of configuring Xmath options and displaying Xmath information. In addition, you can open more than one Xmath window at a time. Each window corresponds to a different project and has separate partitions, variables, and namespaces.

The following sections provide information about some of the changes to Xmath.



Note For more information about Xmath, refer to the *Xmath User Guide*.

Displaying Partition and Variable Information

The **Xmath Commands** window includes the **Xmath Information** view, which you use to display Xmath data such as including partitions and variables. This view also shows a history of commands entered during the current session.

Creating and Editing Scripts

Xmath includes an integrated MathScript editor, which you can access by selecting **File»New Script** from the **Xmath Commands** window.

Setting Options

The Xmath environment options are available from the **Xmath Environment Settings** dialog box. Access this dialog box by selecting **Settings»Environment** from the **Xmath Commands** window.

MATRIXx Help System

The *MATRIXx Help*, available by selecting **Help»MATRIXx Help**, includes a **Search** tab that you can use to perform a full-text search of the help.

The *MATRIXx Bookshelf*, available by selecting **Help»MATRIXx Bookshelf**, has been updated to support Adobe Reader 7.0.