# **LabVIEW Tools for Building State Diagrams**

# NI LabVIEW State Diagram Toolkit

- Interactively create robust, maintainable LabVIEW code
- Quickly provide good frameworks for developing LabVIEW
- applications • Increase the type of applications that all LabVIEW developers are able to build

#### **Operating System**

• Windows 2000/XP, Mac OS X

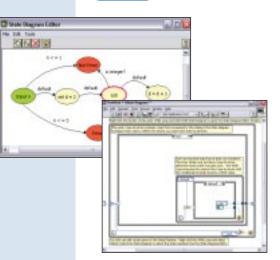
## **Required Software**

• LabVIEW Full or Professional Development System, LabVIEW 7.0 or later

#### System Requirements

- Windows 2000/XP, Mac OS X
- 600 MHz Pentium III processor,
- 600 MHz G4 • 256 MB RAM
- 800 X 600 screen resolution





# **Overview**

The new LabVIEW State Diagram Toolkit interactively creates LabVIEW code that functions as the framework for building robust, maintainable applications. The toolkit adds the State Diagram Editor to LabVIEW to visually draw the logic that defines an application. As you create the visual representation of the logic, the State Diagram Editor generates the LabVIEW code that functions as the framework for your application.

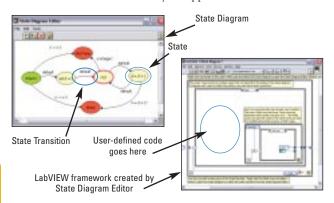


Figure 1. The State Diagram Editor is a visual editing space for drawing state machines to generate LabVIEW code.

# Interactively Create LabVIEW Code

When you place a State Diagram structure on the block diagram, LabVIEW opens the State Diagram Editor, a new tool for drawing state machine diagrams. As you add components such as states and transitions to the state machine diagram, LabVIEW generates code to match each change. The logic for state machines is represented in code by a series of While Loops and Case Structures. In addition to constructing this logical framework, the State Diagram Toolkit inserts comments in the resulting LabVIEW block diagram to indicate where your need to create/add code. Once you successfully describe the application in the state machine diagram, the LabVIEW code is complete. At any time, you can modify your application by launching the State Diagram Editor and making any changes or adding new features. LabVIEW will automatically make the resulting changes to your framework.

## Use State Machines to Build Better Applications

State machines are one of the most commonly used frameworks due to their ability to represent even the most complex task in simple visual terms, the relative ease with which these visual depictions are used to create code, and the robustness that the resulting code displays. Because LabVIEW is graphical in nature, it is an ideal environment to use for building state machine diagrams.

### **Ordering Information**

NI LabVIEW State Diagram Toolkit ......778741-03

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