ADvantageVI reduces the complexity of working with large, multi-model, multi-processor projects. Double-click a project file and ADvantageVI “attaches” to the appropriate simulation target(s) across the TCP/IP network, loads project files for each simulation model on the specified processor, validates each data dictionary against loaded binaries, and initializes model data in preparation to run.

Data Dictionary

The ADvantage Framework provides visibility into and interaction with the simulation project by using data dictionaries. The interface to each model and code module is specified using a data dictionary. Data dictionaries are automatically generated for auto-coded models such as Simulink and SystemBuild. These data dictionaries allow users to view and manipulate parameters and signals at any level of the model. Data dictionaries for code modules are created using the data dictionary editor.
Altia Panels

Altia comes standard with ADvantage Framework. Altia is an easy-to-use tool for drag-and-drop development of custom Man-Machine Interface panels. Panels are assembled from libraries of standard widgets. Custom graphics can also be added to give a professional look and feel. Altia is tightly integrated into ADvantageDE and ADvantageVI. Widgets are connected to simulation project variables with drag and drop of data dictionary entries. Altia panels are animated with streaming data from the data acquisition system (DAS). Communication complexities are automatically handled by ADvantageVI.

SIMplotter

SIMplotter comes standard with the ADvantage Framework. SIMplotter is a high-performance real-time plotting and analysis tool that can be launched from any PC on the network, connected to any simulation project, and plot any data. SIMplotter includes a configurable multi-window, multi-pane, multi-trace plotting architecture. SIMplotter plot configurations can be created interactively and saved to a setup file. Plot configurations can be loaded manually or launched directly from ADvantageVI. SIMplotter also includes Python scripting for complete application control.

Data Acquisition System

The ADvantage Framework includes a high-performance data streaming backbone called the Data Acquisition System (DAS). DAS uses a TCP/IP socket architecture enabling applications such as ADvantageVI, SIMplotter, and Altia to connect and receive real-time streaming simulation data from any PC on the network. DAS can also be used to drive out-of-the-window displays, virtual integration lab animation, and user-developed visualization tools.
Test Automation & Extensibility
ADvantage was developed in lock-step with many of today’s most advanced system integration facilities. In order to meet the demands of these programs, ADvantage was designed with a range of test automation and system extensibility features including integrated scripting, and application programmer interfaces.

Working with Fixed Point Data
The ADvantage Framework includes integrated support for fixed point data types. When working with fixed point data, the resolution and offset are defined in the data dictionary for each element. Users can optionally display and manipulate data using the scaled representation or the raw data type.

Number Format
ADvantage VI includes fully-configurable numeric display formatting. Variables can be displayed in binary, hexadecimal, and other numeric formats. In addition, when manipulating parameter values with the “put” command or from the Data Browser, various numeric formats may be applied.
About ADI
A pioneer in the development, manufacture, and use of simulation and control systems technology for nearly fifty years, Applied Dynamics’ products and expertise are used in leading simulation laboratories around the world. Applied Dynamics is a supplier of advanced real-time simulation and simulation-based test tools for the aerospace, defense, automotive, electronics, and other related industries. Headquartered in Ann Arbor, Michigan, Applied Dynamics has international offices in the United Kingdom, installations in 23 countries, and representatives throughout the world.

World Headquarters
www.adi.com
3800 Stone School Road
Ann Arbor, MI 48108-2499
734.973.1300 fax: 734.668.0012

European Headquarters
1450 Montagu Court
Kettering Venture Park, Kettering
Northamptonshire NN15 6XR
United Kingdom
44.(0).1536.410077
Facsimile: 44.(0).1536.410019