

# The Sammi<sup>®</sup> Application Development Kit

A High Performance Graphical Framework for Developing and Deploying Distributed Visualization & Control Applications

## THE CHALLENGE

Today's high-technology companies are faced with the perpetual task of integrating, updating and adapting a wide array of complex software systems to support their ever-changing operational requirements and specifications. Yet, as with most high-end applications, making changes to a custom graphical user interface (GUI) application can be prohibitive—requiring precious development time, time to deployment, and long-term maintenance capital.

## THE SAMMI SOLUTION

The advanced COTS components offered in the Sammi Application Development Kit (ADK) are perfectly suited to help integrators meet these challenges, offering simple and efficient development, testing, and maintenance of graphical applications for real-time, business-critical systems.

A Rapid Application Development (RAD) tool for client/server and Web-based environments, Sammi reduces the overall time to deployment. Traditionally, user interface code is embedded in the application's code, preventing developers from changing the graphical displays without re-compiling the application code. Sammi cleanly separates the user interface from the application so they can be developed concurrently and thus more quickly.

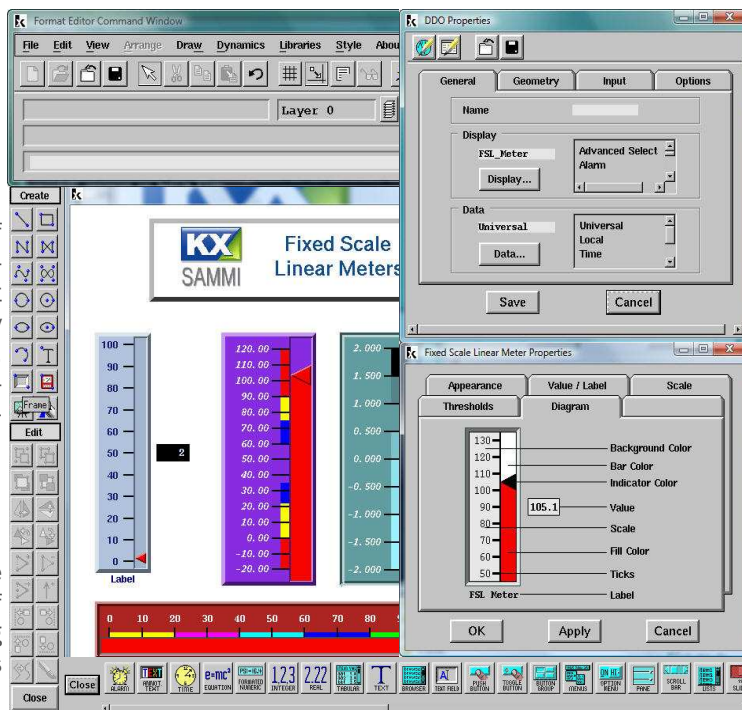
Its true cross-platform portability enables users to integrate applications distributed throughout a network of mixed operating systems, such as those from DEC, Microsoft, Sun, SGI, HP and Linux. Data can even be graphically displayed in a Java-enabled Web browser.

Since 1990, Sammi has been field-proven by some of the world's leading technology companies where the graphical presentation and management of multiple sources of data are critical. There are over 17,000 Sammi licenses operating in 25 countries in a host of industries and applications, including aerospace & defense, satellite and spacecraft command & control, process control, factory automation, SCADA and distributed control, utilities, air traffic control, intelligent transportation, telecommunications, network monitoring, bio-technology, simulation and training.

## PRODUCT COMPONENTS

### Format Editor (FE)

With Sammi's Format Editor, users bypass the most time-consuming and expensive phase of developing enterprise solutions: programming of the user interface. Interface design is as simple as "drag and drop"; users choose from over 40 pre-built dynamic display objects (DDOs) such as meters, gauges, graphs, scales, menus and buttons, or create drawings with graphical primitives. Vector graphics can even be transformed into dynamic objects that



The Sammi Format Editor provides users with sophisticated design tools in an intuitive point and click interface

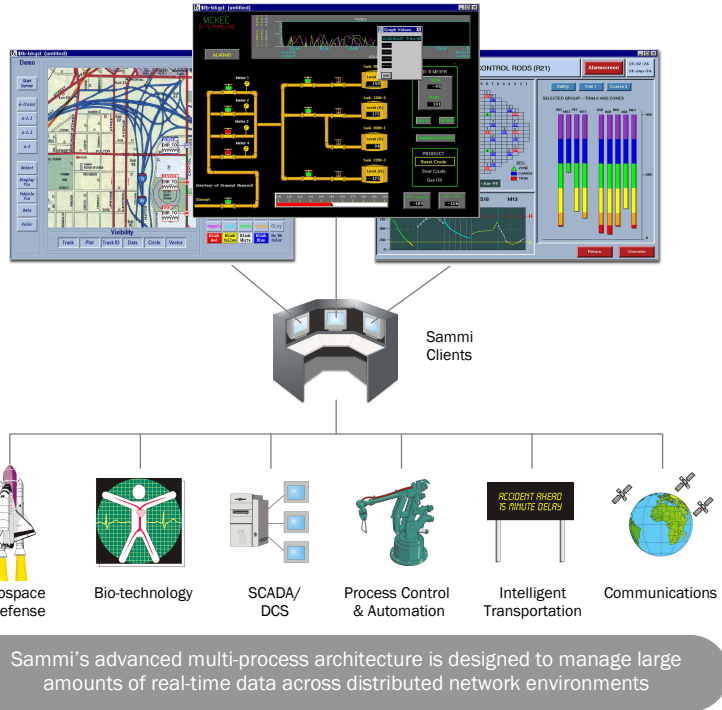
Vector graphics can even be transformed into dynamic objects that

blink, move or change color in reaction to incoming data.

These platform-independent components are saved as binary images that do not require re-compiling or re-linking to be displayed. So users that have no programming experience can modify displays quickly and easily without affecting the application. Simply open the display file, specify the changes through simple dialogs, and re-save the display.

### Runtime Environment (RTE)

The real value of Sammi is its Runtime Environment. During runtime, Sammi manages all commands, events and data between the users, the GUIs created in the Format Editor, and peer-to-peer or client/server applications. The result is a live graphical display that is updated in real-time. Sammi's Runtime



Environment is based on a multi-process architecture. This means each process is concerned with only one task which speeds up response time to the end user because the system does not have to wait for previous processing to finish. For example, a user can continue to input data while other processes are handling screen updates and network communications. This is not possible with traditional application architecture! Sammi's design also allows for "failover" capabilities; if a data server fails, connection to a secondary or backup server will occur automatically.

- ### Key Features

  - Drag and drop display editing
  - Over 40 pre-built dynamic display objects
  - Import bitmaps and DXF drawings
  - Rapid prototyping
  - No graphics code to maintain
  - Import 3<sup>rd</sup> party widgets
  - Layers/pan/zoom
  - Multi-process architecture
  - Automatic failover/redundancy
  - Alarms
  - Task scheduler
  - Hardcopy features/reports
  - Multiple security levels
  - Multiple CRTs
  - Cross-platform portability
  - Built-in networking
  - Asynchronous API
  - API with fewer than 70 function calls
  - ODBC driver

### Applications Programming Interface (API)

Developing a distributed application with a standard GUI is often a difficult problem. Before data can be graphically displayed, it must reside on the graphics workstation. Ordinarily, users must manage the acquisition or distribution of the data across the network, necessitating network communication protocols. Sammi solves this problem by providing built-in networking capabilities through an API.

The API manages all network connectivity and communications between a distributed application code and a GUI. Using TCP/IP and Remote Procedure Calls (RPCs) to handle data transmission and conversion, Sammi's API eliminates the need to write network interface code, implement peer or server protocols, manage address name spaces, or deal with machine-dependent, data type issues.

For more information about Sammi®, call Kinesix at (800) 953-5330.

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