



G2 - INTELLIGENT EXPERT SYSTEM SOFTWARE PLATFORM

At the heart of the recent industry wide focus on enterprise intelligence is Gensym's G2® software platform. A proven workhorse for mission critical applications, you too can take advantage of the reasoning power of G2. Join with D2K Technologies and become an expert builder of expert systems and experience the power of G2!

Gensym's powerful Real-time Expert System development environment, G2 allows you to design, implement, adapt, test, and validate real-time reasoning solutions that that automate decision making in telecommunications, finance, government, military, manufacturing, utilities, transportation, and many more. G2 is proven in the world's largest enterprises that require 24x7 uptime in true mission-critical production installations. With G2, builders of rule-driven, mission-critical applications work more productively, minimize their project delivery risks, and increase their success in building long-lasting systems.

G2 transforms real-time operations data into automated decisions and actions, all in real time. Solutions built on top of G2 work in concert with existing operational systems, including enterprise management systems, DBMS, SCADA, automation systems, data historians, network management systems, and telemetry systems. D2K can help you:

- Increase Business Agility and Performance
- Improve Asset and Service Availability
- Rapidly Build and Deploy Business Critical Applications
- Preserve, Enhance and Leverage Operations Knowledge





D2K Helping to Build Your Application With G2®

Real Time Reasoning for Time-Critical Decisions

G2 is designed at its core for real-time reasoning and execution. All of its technologies work together in real time to drive decisions and actions. With G2, application builders have a comprehensive infrastructure of capabilities for working with the time-based requirements of their applications.

A few of G2's real-time capabilities include:

- Processing tens of thousands of rules per second for high performance
- Data histories kept locally for high-performance time-based reasoning
- Timestamping of data to support time-based reasoning
- Getting the best answer within a fixed time (reasoning within a deadline)
- Reasoning when data is missing (default reasoning)
- Built-in expressions for reasoning about time-based events and histories

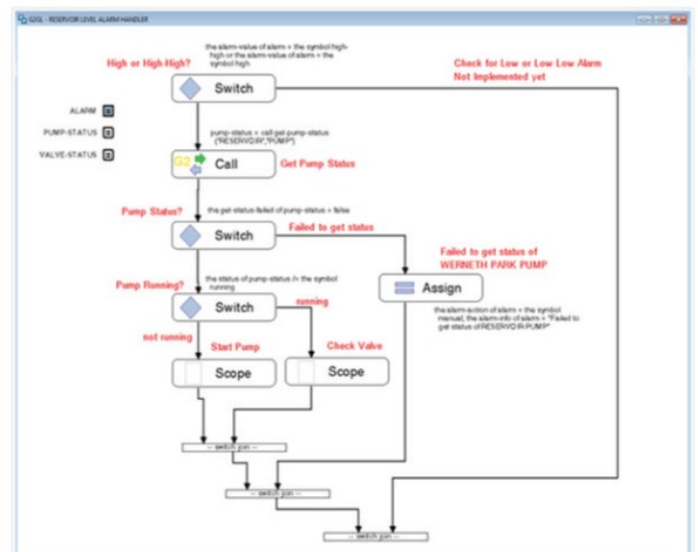
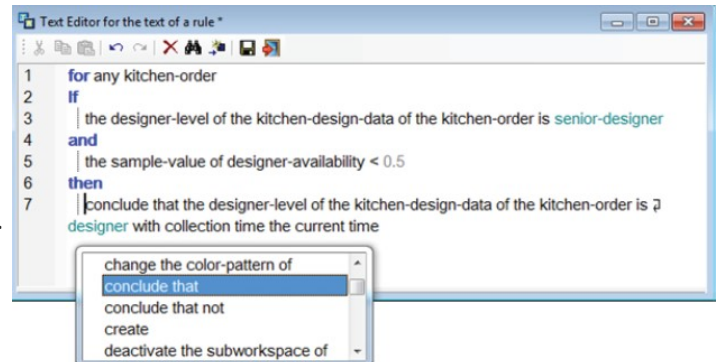
Natural Language Rule Definition

G2 rules, which are in the form of “if...then” statements, reach conclusions and drive decisions, in real time. Rules reach conclusions from historical trends, predict problems, determine what actions to take to avoid or minimize loss, and provide guidance to increase performance. G2 represents rules in a natural language form, enabling domain experts to be directly part of rule creation and maintenance.

The rules and associated logic can be organized in several ways to facilitate their management, including via tables, tree diagrams, and hierarchical workspaces. Rule logic can also be represented in graphical structures to illustrate sequencing, relationships, and integration with process models.

Graphical Coordination of Business Processes and Workflows

For real-time coordination of business and workflow processes, G2 incorporates a high-performance graphical language, G2GL, directly into the platform that is based on the Business Process Execution Language for Web Services (BPEL) standard. With G2GL, users graphically model and execute parallel and sequential flow logic in real time for a wide variety of business and workflow processes.



Updating In Run Mode to Immediately Adapt Logic

G2's ability to update modeling or logic changes during runtime, Application development, and maintenance without stopping to recompile and reload, is a major advantage for business agility, development productivity, and application maintenance. – there is no need to stop the application and reload the compiled code or the loaded operational data.

Mission-Critical Reliability

G2 delivers mission-critical reliability because :

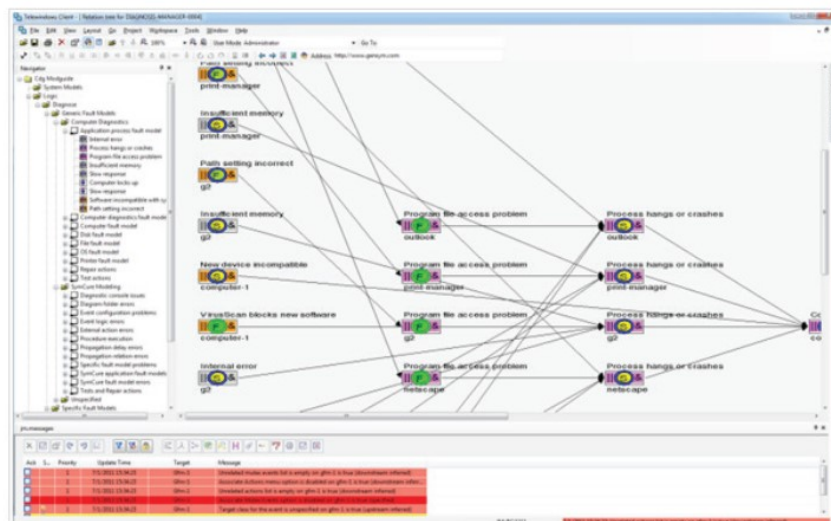
- G2 is mature. It has been tested with many millions of hours of deployment in the most demanding installations. Through the experiences of these types of deployments, G2's engineering team has continuously enhanced the platform's design to ensure high levels of platform reliability.
- Nonstop execution is a fundamental capability of G2. Many applications have been operating continuously around the clock for years, except during power failures. In one deployment, for one of the world's largest mutual fund companies, G2 has run non-stop for over eight years with zero downtime.

Object Modeling for Understandability and Reusability

G2's object-oriented modeling offers highly reusable code and an application structure that is much more intuitive than those built with conventional programming tools. G2 objects graphically represent the properties and behaviors of items of interest and their relationships – such as physical items like a tank, pump, or instrument or abstract items like an event, task, decision, order, message, or logical connection. Essentially everything in a G2 application is a type of G2 object.

Other important G2 object modeling advantages include:

- Inheritance – Single and multiple hierarchical inheritances provide high levels of modeling productivity.
- Properties – Representable as real-time data, simulated data, text or logical variables, or even as another object.
- Methods – Represent object behaviors in real time as procedural code.
- Relationships – Intuitive creation of relationships via graphical connections and flexible definitions.
- Animation – Object icons have programmable animation layers to enhance human-to-machine interactions.
- Organization – Placement of objects and knowledge on graphical and programmable, hierarchical workspaces simplifies application organization and maintenance.

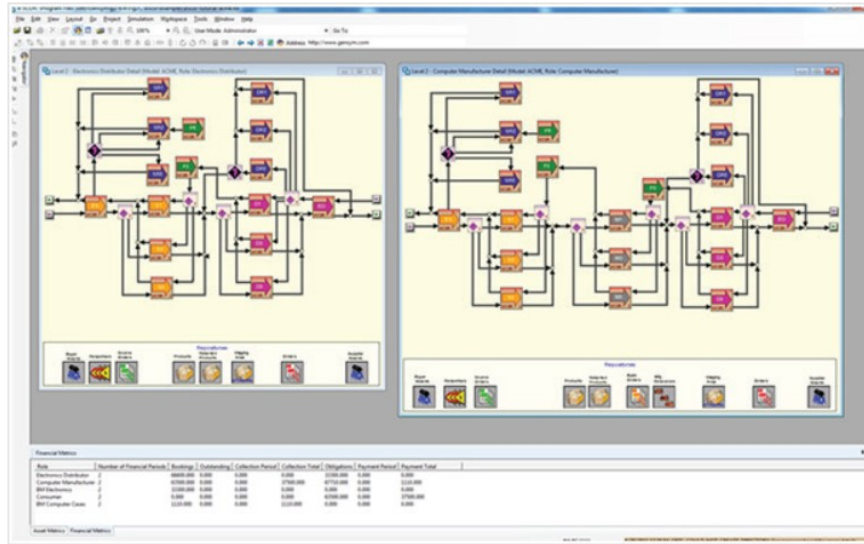


Rapid Prototyping to Involve and Engage End Users

G2's capabilities for runtime edits, intuitive graphical representation of object models, and intuitive natural language representation of rules and procedures provide a highly rapid prototyping and development environment - Enabling close involvement with end users to help ensure that application functionality meets business requirements.

Unified Modeling, Simulation, and Deployment Platform for Greater Productivity

Unlike other rule engines, G2 unifies object modeling, simulation, rules, procedures, and deployment in one comprehensive and holistic real-time environment. - A tremendous benefit for efficiently managing an application's lifecycle from prototyping to development to deployment to ongoing maintenance.



Task Priority Scheduling

G2's real-time processing begins with its internal scheduling engine for concurrently executing rules, models, and other tasks. Typically, many threads of reasoning, models, and other activities are occurring concurrently. The scheduler cycles according to a clock "tick" that can be specified at the millisecond level. Everything has a priority, so critical items can take action first. G2 takes care of the scheduling of tasks for the user based on simple configuration choices

Linking Your G2 Applications with External Systems and Sources

Experience has shown that accelerated innovation is enabled by depth of platform focus, not breadth. For that reason, D2K & Gensym's focus is consistent innovation of G2 on a targeted set of stable and powerful platforms:

- ODBC, JDBC, Oracle SQL, Sybase SQL for relational Databases
- JMS for enterprise information systems
- JMail for network email communication
- HTML for browser messaging
- JASON for STEM learning
- REST - Representational State Transfer

- HP OpenView for telecommunication systems
- SNMP for telecommunications messages
- G2 Sockets for network socket connections
- ActiveX/COM for PC applications and .NET programmers
- G2 Gateway Standard Interface for C/C++ programmers
- G2 JavaLink for Java programmers

Gensym G2 Standard and Enterprise Editions Features

The Gensym G2 Platform is available in both Standard and Enterprise Editions. The following table provides the differences between these editions.

FEATURE	G2 STANDARD EDITION	G2 ENTERPRISE EDITION
Real Time Reasoning Engine	✓	✓
Natural Language Rule Definition	✓	✓
Graphical Design of Business Processes	✓	✓
Mission-Critical Reliability	✓	✓
Object Modeling	✓	✓
Rapid Prototyping	✓	✓
Unified Modeling & Simulation	✓	✓
Task Priority Scheduling	✓	✓
Support for 64-Bit Environments		✓
Unlimited Deployment Instance Licensees		✓
Mobile Solution Consulting Services		✓
Cloud Development Solution Services		✓
Include Licenses For Development, Test, High Availability and Disaster Recovery Environments		✓

Running Your G2 Applications

Experience has shown us that accelerated innovation is enabled by depth of platform focus, not breadth. For that reason, Gensym's focus is consistent innovation of G2 on a targeted set of stable and powerful platforms:

G2 Standard Enterprise	Windows	Windows Server	Linux Distributions
G2 Server STD	Yes	Yes	LSB (Linux Standard Base) 4.0 Compliant 32 bit only
G2 Server ENT	Yes	Yes	RHEL 5.6, RHEL 6.4, RHEL 7.1, SuSE Linux Enterprise 11, Ubuntu 8.04, 9.04 and others.
G2 Telewindows	Yes	Yes	Contact info@d2ktech.com for more information

For more information or to discuss our G2 enhancing software toolkits and layered products
Contact us!



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