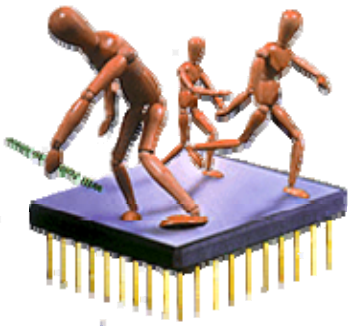
NOVO INNOVATIONS

Agent Grids in Healthcare

A revolution in healthcare information exchange and interoperability is occurring, brought on by a new generation of Internet technologies that will change the way we think about connecting, integrating, securing, and operating community health information networks.

Intelligent agent and **grid computing** technologies have been evolving in research, military and other industries for over a decade. They have proven particularly useful in addressing the challenges of managing the information exchange between disparate applications and databases across dynamic communities.

Agents are autonomous software programs that perform specific tasks without human intervention. They can be distributed to any location, interface to the local environment, and instructed to exchange information with other agents to meet particular goals.



Grid computing enables computers to lever the Internet to share resources like computing power, data storage, and information. Agents use an information grid to enable private, structured and secure "conversations".

In healthcare, the use of agent grids will be significant.

- Agents interfaced to hospital systems will distribute information over the grid to agents in physician offices, regional databases, and other locations, where it is inserted directly into an EHR without human intervention.
- Physicians will use agents to distribute information to community EHRs or databases, completely under their control and with the consent of the patient.
- Multiple agents will collaborate on specific patients or subjects like a clinical trial. New information obtained by one agent will be automatically shared with the other agents, working together in complex collaborations.
- Agents will automate workflows between EHRs and other systems. Today, staff resources process the paperwork manually– agents will soon do this type of menial work.
- Agents will map proprietary formats to standards-based semantics and ontologies without forcing vendors to upgrade commercial products to meet needs.
- Agents will collect and distribute information to aid in managing safety and quality initiatives like providing case managers up to the minute data on patients.
- Agents will reduce the time providers spend managing information and more time using the information to improve care and performance.

Despite the functional advantages, agent grids will be successful primarily because they can realize these benefits at a fraction of the time, cost and effort of any other approach.

Employing an agent grid to act as the "glue" between systems across the local healthcare community greatly enhances the value of electronic health information systems. This belief is not a theory – it is a proven fact that has now been adopted by some of the largest health systems in the US.

Over two years ago, Novo Innovations began piloting the first healthcare agent grid at Northside Hospital in Atlanta, GA. The goal was to automate the exchange of information like lab and radiology results, transcriptions, and discharge summaries to remote EMR's in physician offices, eliminating the need for office staff to scan and index faxes.

Since then, the system has been in live productive use processing millions of transactions with little disruption and no loss of information in hospitals across the nation. It has proven to significantly lower costs and increase the quality and timeliness of data.

Today, the Novo Grid offers significant features and functionality:

- Provides a private transport network that is highly secured, manageable, and remarkably inexpensive.
- Enables interoperability between hospital systems, physician EHR's and other applications in the community,
- Works with any vendor product and technology and does not require national identifiers or additional technology standards.

In the near future, the Novo Grid will introduce functionality in areas critical to 21st century healthcare communities:

- Enable workflow exchanges like referrals, consults, orders, results, and prescriptions between physicians, hospitals, pharmacies and others in the community.
- Continually update Personal Health Records and repositories with clinical information in near real time.
- De-personalize and report data in near real time to support public health initiatives.

Future agent grids will ensure that critical patient data, such as medications, allergies, and important health conditions are known to all providers treating the patient. Agents could also make information available to emergency departments by continually feeding information into repositories.

To find out more about this exciting new approach to building healthcare information exchange and interoperability systems, please contact Novo Innovations.

Novo Innovations, Inc.
888 325 NOVO
www.novoinnovations.com