Seamless Integration of Systems and Applications

FARGOS/VISTA™ enables the construction of secure, transparently distributed systems that operate across a variety of platforms.. Its emphasis on security, from its use of Rijndael (FIPS 197) for all on-the-wire communication and mandatory access control as fine as per user/per object/per method, prevents unauthorized access and manipulation of data and services.

FARGOS/SolidState™ implements Byzantine fault-tolerant transaction support, providing unprecedented reliability and protecting applications from arbitrary failures caused by unexpected sources such as incorrect CPU computations, bad memory, corrupted disk sectors and actual compromise of a server by a hostile entity.

From the PDA to the Mainframe, FARGOS/VISTA can create a seamless transparently distributed environment, allowing access to information from anywhere.

The *Powered By FARGOS/VISTA* logo indicates an application built using the transparently distributed, object-oriented, architecture-neutral, multithreaded, peer-to-peer FARGOS/VISTA technology suite created by FARGOS Development, LLC.

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Privacy-Aware Distributed Records Management using FARGOS/VISTA™

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Healthcare professionals should take care of people, not fill out forms.

While the primary job of healthcare providers is to help people, the process of delivering healthcare unfortunately carries with it a significant administrative burden, which is most visible in the form of documentation and records that must be prepared, exchanged and maintained. The kinds of interrelated information collected include patient identification (e.g., name, address), test results, physician's notes/orders as well as common business-related record keeping, such as inventory and accounts receivable and payable.

Title II of the Healthcare Insurance Portability and Accountability Act (HIPAA) of 1996 requires significant steps to be taken before April 14, 2003 to prevent unauthorized and unneeded disclosure of patient-related information. Organizations that need to comply with HIPAA-specified rules regarding privacy protection, electronic information interchange and other fraud-reduction mechanisms have a compelling reason to avoid the generation and archival storage of paper records. Consequently, many healthcare providers need to retrofit their existing systems and all need to ensure applications developed and deployed in the future prevent inadvertent information disclosure.

Compared to paper, computerized records are easier to access, reduce duplication costs and take up less space.

A Seamless and Secure Architecture

FARGOS/VISTA™ implements a transparently distributed, architecture-neutral, object-oriented, peer-to-peer environment that operates across a variety of hardware and software platforms. Fine-grained access control is enforced against every object to prevent unauthorized access and manipulation of data and services. All communication between peer systems is encrypted using Rijndael (FIPS 197), which means that insecure wireless LANs or the public Internet can be used for communication. With

appropriate privileges, any object is transparently accessible from any of the interconnected peer systems, whether it be on a tablet PC or a mainframe, Modern computerized testing equipment like blood analyzers can be securely integrated into the distributed environment. Such integration allows the deployment of event-driven systems that notify a healthcare provider's PDA of the availability of result and enables the subsequent retrieval of the data for review.

Immediate availability of lab results means diagnosis and determination of treatment can be done without delay.

Reduced Paperwork, Safer Medicine

Healthcare professionals have more than enough work to perform in an often stressful environment. Electronic records management provides many opportunities for the elimination of the entry of redundant information (reducing workload), protection from the accidental application of obsolete treatment plans (more effective risk management), and the ability to retrieve information from anywhere, be it at the patient's bedside, the physician's office or the ER (new capabilities).

Audit trails come in a variety of forms, such as patient vital signs, drug prescriptions, room reservations, meal orders, etc. When records are in electronic form, it is trivial to enable automatic routings for required approvals (e.g., JCAHO standard TX.3.5.2) and it creates an opportunity

for additional automated validation, such as checking for unfortunate drug interactions, known allergies or inaccurate dosage amounts that are outside the boundaries considered safe. Other examples include enforcing the dietary restrictions of a patient scheduled for surgery, etc.

The opportunity for fraud or pilfering is greatly reduced when such disparate audit trails are correlated. The transparently distributed environment provided by FARGOS/VISTA enables applications like these (and others) to obtain real-time information from a wide range of sources without regard to physical location or computer architecture.

When all systems can cooperate in a seamless environment, unproductive activities and delays in information delivery are removed, which enables healthcare professionals to focus on their fundamental business: safely delivering personalized care to people. The integration of previously separate systems can create a non-intrusive, always active and vigilant system that works to reduce the risk of unwanted incidents.

More information (including papers, documentation and downloadable demonstrations), which illustrates the novel capabilities and benefits of the FARGOS/VISTA suite of technologies and the affiliated FARGOS/SolidState Byzantine fault-tolerant transaction monitor, can be obtained by visiting **http://www.fargos.net**.