

ENSEMBLE SUCCESS STORY: Dr. Negrín Hospital

Ensemble Enables Rapid Implementation of EMR at Dr. Negrín Hospital

Largest hospital in Canary Islands uses SOA to provide patient records

Doctors and nurses at the Dr. Negrín Grand Canary University Hospital have a new tool that allows them to speed care to their patients. It is an electronic medical record (EMR) that provides complete and personalized reports of patient information, gathered from multiple departmental systems throughout the hospital, and presented via an easy-to-use Web portal. The portal solution, dubbed Tabaiba, was built and implemented using InterSystems Ensemble®.

“Tabaiba pulls data from diagnostics, procedures, analytics, reports, general clinical history, surgical history, and data evolved from analytical markers, as well as information about preventative patient appointments in the area, outpatient and emergency registrations, etc. The list goes on and on,” says Miguel Rey Mesa, Director, Information Services at Dr. Negrín Hospital. “All of this information is available but it is ensconced in a wide variety of applications. Our existing systems – each with their own user interface and password management – use many different technologies and operating systems, including Caché, SGBD, Unix, Linux, Windows, Multibase, and Oracle. The goal of the Tabaiba project is to, as needed, instantly access and combine all of this disparate information, presenting it via a secure Web interface.”

That is exactly what the Ensemble-based Tabaiba system does. In any given functional area of the hospital, Tabaiba presents doctors a list of active patients. When the appropriate patient is selected, Tabaiba accesses and queries all the other systems



within the hospital that contain records for that patient. It then combines all the information into a single, easy-to-read Web page that is displayed in the requesting doctor's browser. The integration is all accomplished by Ensemble in a service-oriented architecture (SOA) and using a number of technologies and protocols including JDBC, HL7, HTTP, and FTP. The user interface was developed using Caché Server Page technology.

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Octavio Jiménez

New Face For Old Applications

The hospital's existing systems remain unchanged. But Tabaiba is able to integrate and present information from all the main applications within Dr. Negrín Hospital, even those that do not offer information directly in Web-compatible format. It also stores clinical data from a few specialized functions that had previously not been automated at all.

To date, Tabaiba is being used by doctors in six major areas of the hospital: Dermatology, Urology, Neurology, General Surgery, Nephrology, and Internal Medicine. Plus, it has been extended to serve the needs of the nursing staff in those areas. Says Rey Mesa, “The integration of heterogeneous information sources, which Ensemble has enabled, allows our medical professionals and non-faculty health professionals to have a complete view of the majority of registered clinical information in the organization’s different information systems, presented in a friendly Web environment.”

Rapid Development Leads To Rapid Benefits

From a technical point of view, development of Tabaiba has been very fast and relatively simple. According to Rey Mesa, his developers only needed minimal Ensemble training in order to implement the connections, services, and business processes that are at the heart of the system. As Tabaiba was rolled out to various areas of the

hospital, requests for changes or new features were honored very quickly – often within a few days.

Dr. Negrín Hospital quickly realized benefits from Tabaiba. The system requires less hardware and less administration than is typically suggested for this type of solution. The hospital’s archiving service, which used to spend 40% of its time providing paper patient records to doctors, is saving significant amounts of time and money.

But the main benefits are in the areas of professional management and patient care. Says Octavio Jiménez, Medical Sub-Director at Dr. Negrín Hospital, “I believe project Tabaiba is a great advancement in the management of professional services. It helps me, in my role as Sub-Director of Medical Services, to have knowledge of the actual activity of the Emergency Services in order to quickly access diagnoses and reports. And when I’m in consultation, it helps me immediately retrieve a clear and personalized report.”

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