



Superior Court of
California, County of
Alameda

"The SoftSol team is very professional and very competent. The team is always prepared. They seem to really know what they are doing. Their strategies are clear and sensible."

- CIO, SCCA

SoftSol Implements Modernized Superior Court of California, County of Alameda's Judicial Applications (Civil, Juvenile, Restraining & Protective Orders System)

Background

Superior court of California, County Of Alameda (SCCA) consists of multiple court houses located in Oakland, Berkeley, San Leandro, Hayward, Fremont & Pleasanton. These court houses handle the full range of legal proceedings, including Civil, Juvenile, Traffic and Criminal cases.

Several custom software applications form the backbone of the court operations. These are designed to adhere to legal regulations; support and standardize the court procedure; automate and streamline the workflow; maintain an electronic case record; and collect and report statistics as required both for court management and state-wide overview (through the Administrative Office of the Courts).

The following are the specific applications that carry out these objectives:

DOMAIN

This is an integrated case-management and decision-support system for SCCA. All variations of civil cases are processed in DOMAIN, including General Civil, Small Claims, Family Law, Probate, Adoptions and Mental Health.

DOMAIN-WEB

This is a web interface used by the general public to access non-confidential civil cases handled by DOMAIN.

RPO (Restraining & Protective Orders System)

This is the central repository for all Criminal and Civil Restraining and Protective Orders. It interfaces with criminal division, law enforcement agencies and Department of Justice.

JCMS (Juvenile Case Management System)

This application handles all the cases related to minors. The application contains multiple security levels permitting role-based access for users. These strict security measures are due to privacy laws that protect the any information about minors.

Challenge

All the critical applications noted above were built using a Sun Microsystems technology platform that the company decided to no longer support. It was essential for SCCA to modernize all of the systems into one standard, consistent and future-proof technology which would ensure the stability of these systems.

The biggest challenge was to preserve the complex business rules related to California and Federal law as well as the unique court procedures of Alameda County. To recapture all of this information would be an unmanageable burden on the limited IT staff, so an efficient means was required to automatically migrate over 2 million lines of code. Also, while the migration was in progress, ongoing changes to the original applications required by mandatory judicial regulations would have to be incorporated in the new application (even though the changes would occur during what would normally be a code freeze period).

The other challenge was to ensure that the performance and the look & feel of the application were not compromised since all of these applications support hundreds of users all over the county.

Finally, the third-party libraries used to interface with other software applications like MSWord, MSOutlook, Adobe Acrobat, Tiff Image files would need to be replaced with a Java compliant library supporting the OLE feature. This added another risk and challenge to the project.

SoftSol Solution

SoftSol used its tailored automated migration solution which effectively translated the legacy 4GL code to the target JAVA/J2EE platform. The iterative approach, which involves fine tuning of the tool after each migration cycle, ensured that nearly 100% of the legacy 4GL code was accurately migrated to the JAVA/J2EE technology. Also the graphic user interfaces were translated with minimal manual development.

SoftSol's automated migration tool successfully extracted the business rules and incorporated the new enhancements made to original applications. SoftSol's comprehensive testing methodology verified the accuracy of the functionality against the original application.

The automation tool also generated the standard EJB3 compliant code which could be deployed under any industry standard J2EE application servers.

Application Highlights:

- More than 2 million lines of Code
- Supports 300+ concurrent users
- Produces more than 10,000 documents daily
- As many as 50,000 users access DOMAIN WEB in a single day

SoftSol effectively made use of Java-based open source libraries to develop the APIs in the target application to interface with other software applications. The use of open source technology reduced the licensing cost of the software used.

To facilitate communication and streamline delivery of the builds during the project, SoftSol placed a small onsite team of 3-4 members headed by project manager and a bigger offshore development team. SoftSol's onsite and offshore teams participated in the online knowledge transfer sessions to understand the business functionality of the different applications, enabling effectively testing of the application at SoftSol's development center in Hyderabad India.

Results

SoftSol fully modernized all the legacy applications and successfully deployed them to production. The new system retained all of the complex business rules and GUI features of the original applications and performance is on par with the original application. The system can support more than 300 concurrent users and generate 10,000 plus documents and images a day.

The new application is approximately 3 million lines of java code, containing 500+ user windows having complex GUI functionalities. The SoftSol team accomplished the accurate migration despite that minimal business rules documentation existed for the original system.

SoftSol achieved this large-scale modernization with no changes to the database or data and only very minor changes to the user interface, due primarily to technology differences. This result was significant to SCCA because there was no impact to user experience even after the underlying technology had changed.



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