Central Office against Illegal Narcotics Trafficking, part of the French Criminal Investigation Department of the Judicial Police

Central office against illegal narcotics trafficking rebuilds critical information data system using a Rich Internet Application powered by Adobe® Flex™ technology

The Central Office against Illegal Narcotics Trafficking (OCRTIS), the main department of the French Judicial Police (DCPJ), coordinates the fight against illegal narcotics trafficking throughout the French territory. The OCRTIS centralizes all the information relative to narcotics cases, brought by local police departments (SRPJ) and customs.

Since 1984, narcotics trafficking data has been centralized in one statistics file containing all the interrogation information on narcotics cases. In 1989, all of the narcotics trafficking data was stored in an outdated legacy solution called the national file of the authors of malpractice against the legislation on narcotics (FNAILS). "Created with resources available at the time, the system was basically only capable of cross referencing information by case name," says Police Commander Claude Maltese, who was the driving force behind the early computerization effort. The system provided information on illegal drug usage and trafficking published by OCRTIS, which was distributed annually to social welfare agencies, doctors, researchers, and other police departments.

After six successive upgrades, the old DOS system needed to be replaced. Constrained by maintenance and scalability issues, lack of usability and performance—the system had no documentation, a poor user interface, and unwieldy reporting capabilities. Also saddled with a heavy client, limited database capacity, and an obsolete operating system, the system was installed on a limited number of PCs and few people were trained to use it.

Moving to a reliable, rich, scalable solution

Concerned about what would happen when the old system failed completely, OCRTIS decided to upgrade to a new reliable, scalable system that would establish a development and deployment platform to keep up with the agency’s rapidly changing needs.

The new web-based application had to enable sharing of information among various police units and divisions, while being simple to use. OCRTIS turned to the consulting developers at AlligrA, who recommended building an Adobe Flex solution. "The specifications called for flexible case management tools—multi-criteria search and file creation functions—and coordination tools that would make it possible, for example, to identify needs in a certain geographical area," explains Stéphane Juigny, AlligrA’s director of business services. The solution needed to generate statistical reports on demand, perform graphical indicators, and easily facilitate data import and export functions. Finally, the Flex solution needed to have integrated access control and a comprehensive administration module.

After evaluating various options, AlligrA chose to adopt Adobe Flex, a complete, powerful development and deployment solution that enabled the team to rapidly create and deploy a multi-platform rich internet application (RIA). "The easy-to-use interface in Adobe Flex and its large component library including buttons, tabs, accordions, graphics, and forms saved us significant development time," says Juigny. "Thanks to Adobe Flex, we were able to design a powerful enterprise application in under six months."
Two key elements that OCRTIS’ new RIA provided are ease of use and greater user-side interactivity. Run on Adobe Flash technology, Adobe Flex applications present data to users in ways that HTML applications cannot. “We developed our first completely scalable control panel, which end users can customize with graphic elements such as transparencies, shading, or data views,” says Juvigny. “The graphic and functional results completely meet our expectations.” He adds that the application is as intuitive to use as it was to build, resulting in a successful user adoption and accelerated training curves.

Easy, universal, scalable deployment

Because many different departments were slated to use the new Flex solution, it had to be free of any hardware or software compatibility issues that would impede deployment. “All that was needed to roll out the new application was a web browser,” says Maltese. “With its light client requirements, the application universally deploys via Flash, which is already installed on nearly all computers worldwide connected to the Internet,” he adds. Additionally, updating an entire installed base of PCs, for example, to a new browser version does adversely impact the application’s performance—significantly reducing maintenance and upgrade requirements.

The solution’s architecture consists of a Tomcat 5.5.12 web application server, a MySQL 5.0.18 database, with a Java™ runtime environment using JRE 1.5.06, and an Adobe Flex 1.5 single processor. The framework can handle both small and major enterprise solutions that process large amounts of data. Adobe Flex solutions minimize dialogue with the server and therefore reduce server load while optimizing smooth scrolling management. Performance is drastically faster than standard Java applications as there are fewer requests to the server, resulting in smooth performance across a wide range of clients simultaneously, regardless of enterprise size.

Secure, easy to administer and maintain

With its integrated rights management module, Adobe Flex facilitates broad user authorization. Any user connected to the intranet with proper authorization can connect headache free. User names and passwords are easily set using the standard Flex administration feature.

The separation between Java backend and Flash presentation layer results in a clean and easily accessible, easy to maintain application. As Juvigny says, “Because Adobe Flex applications can be programmed using standard text editors, it is accessible to developers with a variety of skill sets. For this application, we used Flex Builder so we could get the most out of Adobe’s powerful scripting environment.”

Leveraging the import-export module in Flex, the solution automatically handles information from Customs departments and the Gendarmerie by importing files in text format. “These files arrive on our server via FTP in a folder configured in the database. The administrator can import this data into the application using an ad hoc feature in the administration module,” says Maltese.

Overall, the Flex application has transformed the way OCRTIS improves public safety within a larger government structure. The solution is hosted and maintained by the Directorate of Information Systems and Communications at the Ministry of the Interior.

To centrally manage illegal narcotics trafficking information across agencies, OCRTIS replaced its legacy database with a scalable, rich internet application built with Adobe Flex. The easy-to-use interface and component library saved significant development time, making it possible to design a powerful enterprise application in under six months. The user-friendly application, run on Adobe Flash technology, resulted in successful user adoption and accelerated training curves.

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www.adobe.com/products/flex/