Success Story

embarcadero®

ORGANIZATION

DiGiFORT®
IP Surveillance System

Digifort

APPLICATIONS

- IP-Based Video Surveillance
- Native multi-platform deployment
- High performance for real time data transfer

TOOLS USED

- Delphi

CHALLENGES

- Shift existing development teams to the production of mobile-based versions of products.
- Maintain competitive differentiation by meeting customer expectations for rapid changes to product feature sets.
- Quickly adapt multi-threaded code to take advantage of the newest iOS and Android multi-core processors.

RESULTS

- Digifort has consistently remained an industry leader in the video IP monitoring space.
- Maintained high compatibility with a wide variety of proprietary IP cameras and video surveillance systems.
- Rapidly introduced multi-platform mobile products without having to learn new programming environments or hire and train new programming staff.

Link to customer video of mobile application:
http://www.youtube.com/
watch?v=4lQGA8-sO9w

"We chose Delphi because we could utilize the same code in order to generate software for both iOS and Android. This eliminated the need to learn new languages and gave us a much faster time-to-market. We didn't have to hire more people, which reduced the cost to the company even more."

– Éric Fleming Bonilha, Director of Development, Digifort

Digifort is a leading innovator developing digital solutions for physical security and personal safety with customers in more than 85 countries in North and South America, Europe and Asia. Their products include TCP/IP-based video surveillance systems, biometric login solutions, video analytics tools, license plate reading tools, and mobile solutions that include access to video feeds as well as uplink of live images from the field with iOS and Android devices. The company began in 1995 as system integrator specializing in general network projects. In 2002, the owner of a large housing complex in Brazil asked for a custom networked video surveillance solution. Thus began a business transformation.

3 cameras on vertical orientation

CHALLENGE

Their Brazilian client asked for new technology—there were no existing networked video surveillance solutions. Initially, Digifort considered using traditional software development environments but the project presented significant technical hurdles.
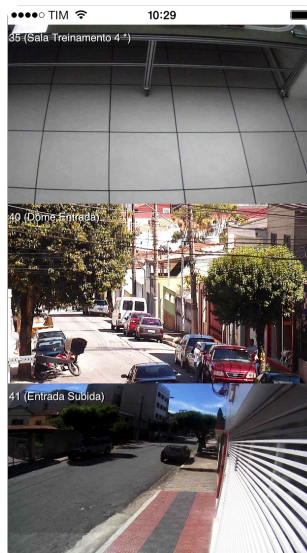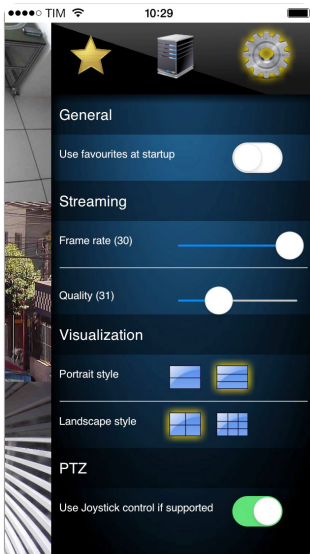
"We considered C++ as an option, however the ease, speed and productivity Delphi offered, made it the only choice," said Éric Fleming Bonilha, Director of Development at Digifort. That choice forever changed the path of Digifort. Delphi not only enabled Digifort to deliver the solution for the client, but also gave Digifort a product from which they have grown to become a leader in their space. "As soon as I got my hands on Delphi, I was amazed by everything I could do with it, and it's continued to offer the best development environment for our company over the past 12 years, especially as we move to mobile devices," Bonilha said.

SOLUTION

Delphi powered apps proved feature-rich and scalable enough to enable the company to grow faster than they ever imagined. For example, Digifort technology has become the standard for Brazilian city governments for monitoring their cameras, with deployments in more than 400 cities. Private sector projects are among the largest in the world, including a massive chain of department stores with more than 11,000 IP cameras in service that will soon reach a total of 20,000 cameras-all monitored by Digifort.

Successful Digifort products created even more demands for security monitoring functionality, and Delphi proved extensible enough to enable Digifort to rapidly prototype and validate new products that control a broader array of security features including security doors and controlled access, driving years of growth.

Their new product, Digifort Evidence, allows rapid dissemination of security events. When a security event is detected by the system, for example a break-in, fire or other situation that requires rapid response, Digifort Evidence automatically packages the video and allows the

human operator to perform the appropriate action. Digifort Evidence also supports the administrative tasks associated with follow-up on any security event, saving the client time and money.

Settings screen

The Drive to Mobile

The greatest challenge to the company emerged with the rapid adoption of mobile devices and increased customer expectations that existing products be available on mobile platforms. Security events happen in the field and not always in convenient places. The vendor that adapts to that fact is going to be the winner. This challenge led Digifort to develop their most innovative product to date.

Digifort Mobile Camera

This new software brings the functionality of IP-based video monitoring systems to mobile devices. "This software is capable of transforming your iPhone or Android device into a remote camera! With it, you can record and visualize the images generated by the cell phone via your Digifort software," said Bonilha.

Digifort Mobile Camera allows users to capture images via camera phone or tablet anytime, and send them directly to the Digifort server. Working together with Digifort Mobile, the user can also see live broadcast images on any smartphone or tablet.

For the development of the recent Digifort Mobile and Digifort Mobile Camera, Digifort chose Delphi rather than Objective-C for several reasons, including increased productivity and reduced maintenance with a single Delphi codebase.

"If we were using C++ we wouldn't have half the products we now offer with the current size of our team. We would need dozens more developers to do the same thing. Luckily we started with Delphi twelve years ago."

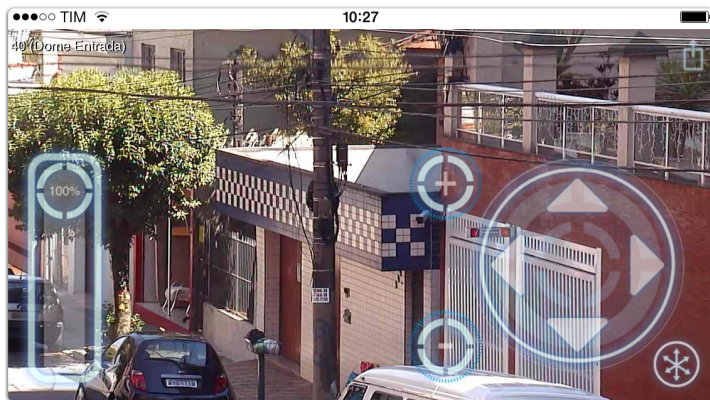– Éric Fleming Bonilha, Director of Development, Digifort

"Delphi was the right choice because we could utilize the same code in order to generate software for both iOS and Android, and we could develop in a language that the entire team knew very well. This eliminated the need to learn new languages that would have taken time we didn't have, and gave us a much faster time-to-market. We didn't have to hire more people which reduced the cost to the company even more," Bonilha said. He added, "Delphi is the cross platform tool I've always dreamed of – there's nothing that can beat it.

Real-time upload and downstream processing of video from the field creates huge performance and reliability challenges. Lives and property are at stake, time matters, and every solution must be 100% reliable. "The main concern we had with our system was performance, which is guaranteed with the native Delphi compiler. The compiler optimized and generated code with excellent performance," he said. In addition, Digifort used Delphi user interface tools to their advantage. They designed an easy-to-use application without investing in additional design resources.

RESULTS

Digifort stunned competitors by developing this new mobile product in less than one month. "We were able to move fast. Delphi was much faster for the team than learning Java or Objective C. In one month we would not even be able to learn the Java framework itself to make the product," according to Bonilha. Previous Java applications took over six months to create. With Delphi, Bonilha says, they can develop new applications four times faster, typically in a month or less.

Years later, Digifort has grown the original custom solution into a family of ten innovative product lines. Bonilha added, "Delphi has enabled us to create robust and proven solutions that have been under continuous development for eleven years. Once we standardized on Delphi, we never looked back."

This is one type of PTZ control (Controlling moveable cameras)

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