

SkiData uses Equinox to Keep Crowds Moving



Around the world every day, millions of people use automated attendants to enter event venues such as sports stadiums, and to park their cars in unmanned lots. It's such a matter-of-fact occurrence that we barely give it a thought. But as with many technical conveniences that just work, this simplicity and reliability belie some very impressive engineering behind the scenes.

SkiData AG of Salzburg, Austria is a case in point. For over thirty years they have been providing such systems, first to the ski resort industry, and later to parking lot and venue operators. With over 500 employees across Europe, they are one of the largest such suppliers in the world.

SkiData deploys networks of devices that provide controlled access to a public location, known as gates, tied to a centralized Linux-based server that provides functions such as monitoring and reporting to upstream operators, who in turn use management software to configure and control the environment. Until 2004, SkiData built their server components from Microsoft technologies, but as global competition and time-to-market pressures have

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mounted and scalability has become more of an issue, they looked toward Service Oriented Architectures (SOA) and Hosted Services as key technology directions, and adopted a test-driven development approach to enhance agility and speed. They also found that under the old way of doing things each

implementation, from ski to event and parking applications, required parallel development, multiplying design, programming, QA and support costs. Each product also required its own workbench and settings.

Adding new features in this development environment was difficult and expensive.

Finding the Right Path

Being a Microsoft development house, their first attempt at a new architecture involved repurposing C# code developed under .Net on Linux, their operating system of choice, using Mono, the open source development platform based on .Net. But this approach never worked properly, and they made the decision to move from .Net and C# to a pure Java approach based on Equinox. As Thomas

Donhauser, team leader, software explains, “Java was an obvious choice for us because it made communicating between gates and servers trivial. Equinox gave us a solid framework for server component development.”

The Power of Partnering

While SkiData found Equinox to be a graceful environment, the move to a whole new development platform on a tight schedule was a challenge in itself. They were able to hire a professional development firm, MicroDoc GmbH of Munich, Germany, to provide Java, Equinox and Eclipse expertise while they focused their domain knowledge on business logic.

On top of Equinox they built a set of business-focused components that allows them to scale their customer solutions to very large requirements that support hundreds of gates on a single server. This approach gives them high cohesion and loose couplings, a combination that helps ensure that they can continue to adapt and innovate the product design as needs change in the future.

Having spent considerable time exploring .Net options, fast development became critical. “Being able to dip into a pool of Equinox expertise was vital to our success,” continues Donhauser. “MicroDoc did more than 50% of the development and together we completed more than five people-years of work in a few months.” The tight OSGi API and shared access to tools such as JUnit and Fitnesse for Java unit and acceptance testing were also critical to meeting their aggressive timelines. “Test-driven development was virtually unknown at SkiData before we adopted Equinox”

Donhauser continues. “Reliability has become much easier to guarantee.”

The out-of-the-box Equinox HTTP server, logging and servlet API all gave them an additional head-start on core functionality they would have otherwise needed to develop themselves.

Management Solutions for the Future

In the future, they plan to implement a device repository as a central tracking and update instance. New components and updates will be assembled in a configuration management system that allows gates to be configured and monitored individually. Monitoring of gate life-cycles and usage will allow them to increase reliability and service levels while also offering them a value-added option they can offer to their customers. “Needless to say” says Donhauser, “Equinox’s support for updating services and tracing runtime behavior will make this easy.”

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