

Aepona and the Telecom Web Services Platform™

“Although our competitors are the industry giants in enterprise SOA, OSGi technology has given us a leg up on the big guys when it comes to telecommunications products.”
—Damian O’Neill, Product Manager, Aepona

Background

Headquartered in the United Kingdom and with regional offices worldwide, Aepona has helped lead the evolution towards better, more service-rich communications networks. Aepona's products and solutions allow telecommunications firms to transform their businesses by offering hundreds of new services that combine Web and telco capabilities to create new composite applications, or “mash-ups.” Aepona chose to begin using OSGi technology in its product offerings over three years ago, far in advance of its competitors.

Aepona is a customer of OSGi Alliance member Progress Software (formerly IONA Technologies) and employs Eclipse Equinox and Spring Source’s Spring Dynamic Modules for OSGi in many of its product offerings. Spring Dynamic Modules for OSGi makes it easy to build Spring applications that run in an OSGi framework.

Challenge

Aepona often finds itself facing major contenders when it comes to requests for proposals, including traditional IT providers like BEA, Oracle, IBM and JBoss, as well as network equipment providers like Alcatel, Telcordia and Ericsson.

Aepona’s OSGi technology-based solution

Aepona’s Telecom Web Services Platform (TWS) is currently in production for a growing number of clients, including many of the world’s leading telecommunications firms. The TWS enables telecommunications providers to easily offer new products and services to better capitalize on their network assets. By providing a unified approach to exposing network capabilities as Web services as well as comprehensive support of a broad set of IT and telecom network interfaces and protocols, integration with customer networks and service delivery platforms is fast and easy.

The TWS offers a portal-based front end and is highly scalable, deployed across multiple processes and nodes, and capable of handling thousands of transactions per second.

TWS and Sprint

For example, Aepona's TWS is a key component of an enterprise product offered by one of the world's premiere telecommunications providers, Sprint. TWS provides secure and reliable access to Sprint's core network services via Sprint's Business Mobility Framework (BMF). The services are exposed as part of BMF to Sprint's customers and developers, enabling them to create new applications as well as leverage their existing CRM and ERP systems.

Why OSGi?

"Initially, OSGi technology was chosen purely to help solve a business problem. We needed a technology that could support hot deploys and enable continuous uptime. The decision to use OSGi technology was purely a technical one, not a marketing decision. But it has absolutely proven to be the best decision in terms of our market as well."

—Damian O'Neill, Aepona

Other than the portal, the entire TWS system is built on OSGi technology. Aepona initially chose the OSGi Service Platform because of its ability to hot deploy. However, it very quickly realized that OSGi technology would bring other major technical advantages:

- **Improved design quality:** With the OSGi programming model, development emphasis has been placed on addressing inter-module dependency issues up front in the design process, a key benefit when working on one large project source. OSGi technology's strict visibility rules also mean that developers work on small, cohesive bundles of modularity and see only the things they need to see.
- **Ease of tackling large-scale projects:** The workspace hierarchy for most of Aepona's customers consists of several hundred projects — and continues to grow. However, because OSGi technology allows each service to be deployed and managed as a separate process, individual stacks are small. Developers know exactly what is installed and what versions of a class or bundle are being used. Thus runtime as well as code-time benefits are realized.
- **Customization:** Fragments have helped Aepona to introduce variability for different customers.
- **Robustness and Scalability:** With an OSGi technology-powered platform facilitating lightweight stacks with associated runtime benefits, increased options are provided with regard to robustness and scalability. This is critical given system requirements of continuous uptime.

Results

Aepona's adoption of OSGi technology to meet the needs of the telecommunications market has given it a great advantage over even its biggest competitors. Although many large firms have employed OSGi technology in other enterprise offerings, they lack OSGi technology experience in telecommunications products. The competitive advantage Aepona has gained from harnessing the power of OSGi technology has helped it win major clients such as Sprint and other global telecommunications leaders.