



Software Performance Systems, Inc.

CASE STUDY

Int'l Org. to Protect the Rights and Ownership of Intellectual Property

Situation

Although long recognized as a standards-setting body, this organization had only recently begun to address issues specific to electronic patent application filings. The core issues were security, to protect applications sometimes valued in the billions of dollars; access, important to ensure that all nations could participate in the creation and use of intellectual property; and usability, to make electronic filing of PCT applications readily available to anyone who wishes to file in this way. The organization had limited experience creating large IT systems. Standards and processes had to be formally coordinated and approved by the participating states of the Patent Cooperation Treaty (PCT).

SPS – Problem Solved.

SPS helped define a development strategy through analysis of candidate software technologies, creation of a software architecture strategy model, and analysis of national Office E-Filing systems. SPS provided expert services for Internet standards, PKI, digital signature/encryption, XML development, and project control and tracking using the Rational Unified Process. SPS supported the deployment, installation, and training of a secure

worldwide Virtual Private Network (VPN).

Methodology

SPS relocated four employees to Geneva, supported by corporate resources near Washington, DC. Our domain expertise was based on patent understanding derived from extensive engagements with the U.S. Patent and Trademark Office.

SPS participated in informal and formal consultation meetings, conducted in Geneva, Switzerland, and many other working meetings to assist in developing standards and an enterprise architecture. Coordinated through three rounds of international review, SPS standards and guidelines were published as Annex F, with four appendixes, to the Patent Cooperation Treaty. Annex F is the Standard for the Electronic Filing and Processing of International Applications. The appendixes are XML DTDs for the E-PCT Standard, PKI Architecture for the E-PCT Standard, Basic Common Standard for Electronic Filing, and Use of Physical Media for the E-PCT Standard. SPS:

- Facilitated and/or participated in PCT-SAFE system development workshops.
- Tested and validated prototype and proof-of-concept systems.
- Assessed Internet, PKI, and cryptographic solutions used in other Patent offices (e.g., USPTO EFS, EPO Epoline) and e-business solutions.
- Designed requirements for the PCT-SAFE pilot project.
- Provided extensive XML development, in consortium with other major patent offices, to create document representations in the standard.

CASE FACTS

Sector

Public

Organization

Int'l Org. to Protect the Rights and Ownership of Intellectual Property

Customer Profile

90% of the world's countries. Protects the rights of creators and owners of intellectual property. Administers 23 international treaties.

Business Challenge

Limited access to intellectual property difficult for less developed countries to improve quality of life and compete in the modern world. Access barriers included a lack of technical infrastructure and internationally agreed upon standards and processes for patent applications.

Solution

Design, build, and deploy a secure Internet-based suite of hardware and software in all participating countries.

Client Benefits

File, search, and exchange electronic versions of patent applications worldwide. Costs greatly reduced and more effective.

- Creation of an XML authoring tool.
- Coordinated development cycles with third party developers in Europe and America.

Regarding security, SPS experts:

- Established a structured, secure interface between organization and external applicants.
- Provided a security design commensurate with the information being processed.



"One million international patent applications translate into one million pieces of technology that have entered the public domain for the benefit of society at large. This reflects the contribution that the intellectual property system makes to spurring technological development and expanding the pool of public knowledge."

—Dr. Kamil Idris, Director General, World Intellectual Property Organization, on the occasion of the one millionth international patent application under the PCT, January 7, 2005

- Designed architecture to securely receive, validate, and distribute PCT applications.
- Assessed risk exposure of implemented systems.

Lessons Learned

Client inexperience with large IT projects, timelines sensitive to international review cycles, and limited funds required particular attention.

SPS introduced, trained, and applied the standards and benefits of the Rational Unified Process. SPS implemented Quality Assurance and Configuration Management processes and standards. One full-time employee was dedicated to project management oversight. To address cost concerns, SPS emphasized reuse of components from other national systems and use of "free" technologies, such as the Internet and open-source components.

Results

The client successfully accomplished a difficult transition from paper to electronic capabilities, transforming itself from a standards-setting body to a provider of vital intellectual property services.

ABOUT SPS

Software Performance Systems, Inc. (SPS), a small business based in Northern Virginia, is a privately held information technology services provider. Established in 1995, SPS specializes in the design and integration of large web-based solutions for Federal, State, and Local Governments and commercial clients worldwide. SPS has been honored with many national awards, including: #10 ranking in the Computerworld Top 100 Best Places to Work in IT, Deloitte's Virginia Technology Fast 50 and North America Technology Fast 500, and as a SBA Exporter of the Year. More importantly, SPS solutions helped our clients win prestigious awards, including the Grace Hopper Federal Government Technology Leadership Award, the E-Gov Pioneer Award, the Excellence.gov Grand Prize Award, and the Government IT Agency Award for Excellence in Government. **SPS...proven over time.**

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