PERVASIVE® CPA GLOBAL

Accelerate Global Business Process Outsourcing

CPA Global Validates and Processes Intellectual Property Data 60 Times Faster with Pervasive

Processes 20-30,000 Records Per Second While Applying Almost 700 Business Rules

"Our clients trust us to handle their most valuable assets, and to do so to their specific requirements. The ease of use and vast number of supported data formats of Pervasive integration software allows us to make sure that our clients' valuable IP is secure."

– Nick Church, Business Applications Architect, CPA Global

Challenges

- High data volume
- High accuracy requirements
- Hundreds of business rules needed for validation
- Variety of platforms, Windows, Linux, Mainframe
- Globally distributed data

Implementation Highlights

	Legacy ETL Tool	e-DT Shell (Pervasive)
Processing rate	24,000 recs/hr	20–30,000 recs/sec
Create a new map	4-8 hours	2-4 hours
Add a new business rule	2-4 hours	30 min – 1 hr
# of business rules	421	690
# of file formats	19	48

Products

- Pervasive Data Integrator™
- Pervasive Professional Services Group

EXECUTIVE SUMMARY

CPA Global is one of the leading legal outsourcing companies in the world, offering a full range of general legal and intellectual property (IP) support services. The company has over 40,000 clients, over three million cases under management, and handles in excess of a million renewals per year. IP renewal involves processing large volumes of information, in a wide variety of different formats with a high level of accuracy.

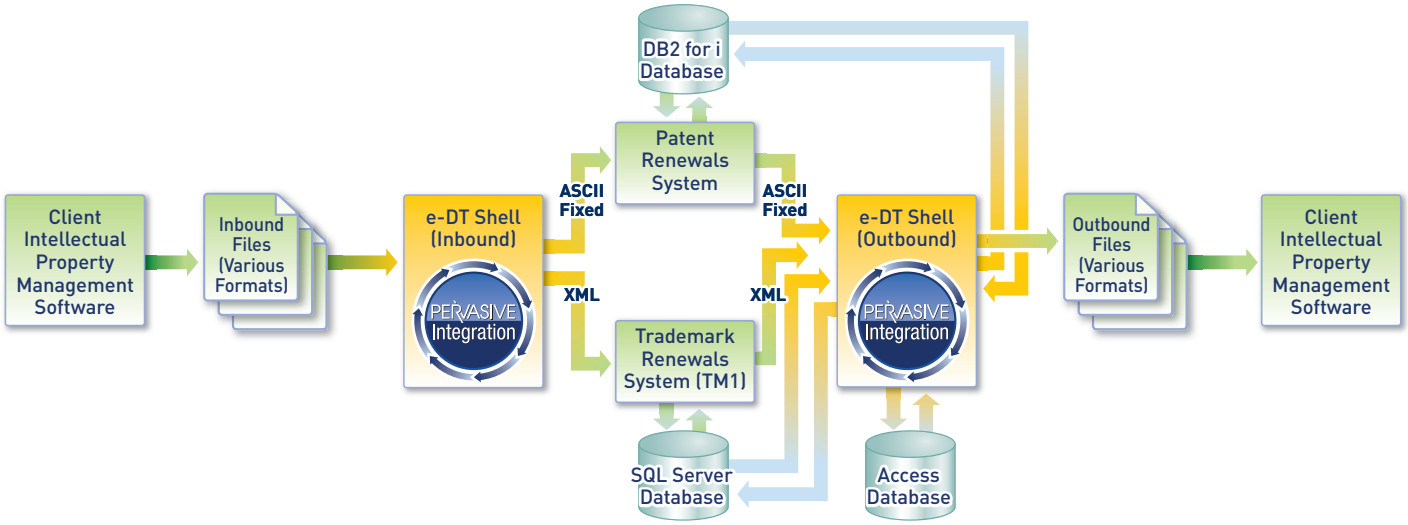
With Pervasive Data Integrator in place, CPA Global is able to validate worldwide IP data at the rate of well over 10,000 cases per hour.

CHALLENGE: HIGH VOLUME, MULTIPLE FORMATS, TOUGH BUSINESS RULES

With the number of patents, designs and trademarks growing rapidly worldwide, the need to protect Intellectual Property (IP) as both a commercial and legal asset has increased exponentially. In order to renew IP rights CPA has to deal with several issues.

First, CPA receives IP data from the client in a dizzying array of formats, from Microsoft Access to XML, including Excel spreadsheets and various fixed and delimited ASCII formats. The data and its format must be checked with government and other data sources and corrections made.

For a new client, the process will begin by processing the client's entire portfolio, which can range from under 1,000 cases to over 50,000 per portfolio. CPA may receive a corporation's portfolio in parts and in various formats, from different sources as various law firms in each jurisdiction have handled it in the past.



Renewal laws differ between countries and these laws can be amended or new laws added on an ongoing basis, so new business rules must be added frequently to any automated case processing. It is possible to create a hierarchy of IP rights, with one based on another; this adds another layer of complication to the data validation process.

CPA Global's solution had to be compatible with their complex IT infrastructure, based in Jersey in the Channel Islands. The Patent Renewals System runs on IBM POWER7 hardware using a DB2 for i database, with the trademark renewals system (called TM1) running on Intel hardware using a Microsoft SQL Server 2008 database. Other associated systems run on Intel hardware using Oracle and Lotus Domino databases under Windows and Linux.

In addition, CPA Global has regional offices across the United States, Europe, Asia and the Pacific. These are all linked through a high-speed wide area network. CPA makes extensive use of Citrix application servers to maintain a high level of performance across its global infrastructure.

SOLUTION

Pervasive Data Integrator runs on an Intel platform with an interface to both the Patent Renewals System and TM1.

The workflow system CPA Global came up with is called the e-DT Shell. A package of IP data is first received by email or via a web service. After initial virus checks, the e-DT Shell, which has Pervasive integration software embedded within it first unpacks, unzips, and decrypts the data. It then checks and cleans the data to make sure it is structured correctly and formatted in accordance with the specifications of each national PTO (Patent and Trademark Office). Almost 700 business rules had to be defined in the Pervasive integration solution to accomplish that validation, along with a great deal of aggregation, lookups, and data matching. All changes made to the data as a result of these business rules are recorded in a comprehensive audit trail, for later reference.

All incoming IP data is converted to one of two consistent formats, a compact flat file format for patents and designs, and an expanded XML format (CPA-XML) for trademarks. The latter provides complex hierarchical information, relationships and other metadata. Although the conversion into XML makes the file 15 to 20 times larger than the equivalent flat file, it gives significant data management advantages to the new SQL Server-based trademark renewals system, TM1. With the IP data loaded in the relevant renewals system, metadata associated with the batch is stored in an Oracle 10g database for use by the e-DT Shell browser-based application.

On the outbound side, Pervasive Data Integrator collapses all of that XML data back down to a compact ASCII fixed format, or other client expected format, merges it with the ASCII fixed data from the Patent Renewals System and sends it back out to the client via email, or it is collected by a web service.

Pervasive integration software is also used to convert reports generated in CPA-XML format by TM1 into the ASCII fixed format expected by the client. These reports are run asynchronously during system downtime to provide clients with details of all their cases, for example. Portfolio status files can be very large; the biggest IP renewals brokers have up to 200,000 cases under management, which results in an XML file of over 1.5GB. Providing customized reporting for their brokers is an important value-add for CPA Global.

BENEFITS

Speed

CPA can build a new business rule in less than an hour, and easily test and debug new validations and transformations.

Customer satisfaction

Rapid, customized portfolio reporting makes brokers happy. Rapid processing makes everyone happy.

Robust connectivity

With Pervasive universal connectivity, CPA can handle whatever format their clients send them.

CONCLUSION

The original implementation allowed CPA Global to go from processing 24,000 records per hour up to 78,000 records per hour. When the new trademark processing caused a need for splitting data into and out of XML, the processes became far more compute intensive. The Pervasive services team helped optimize the new processes, so that a process that ran 56 minutes before now runs in 11 minutes. Now, inbound, outbound, and bi-directional processes are all multi-threaded and highly efficient, processing as much as 20 – 30,000 XML records per second on an ordinary four core server.

Pervasive allows CPA to handle the most valuable assets of their clients and provide a high standard of service. Besides processing thousands of cases per day, CPA can be sure of the high quality and accuracy of data, which is crucial in managing IP renewals.

About Pervasive Software

Pervasive Software provides agile data integration software that speeds the flow of data between applications and between organizations. Our robust technology addresses SaaS, SOA and traditional integration modes and allows customers to re-use the same software for integration scenarios that span data warehouses, real-time application integration and data exchange with trading partners.

About CPA Global

Founded by attorneys in 1969, CPA Global has grown to be one of the leading legal outsourcing companies in the world, offering a full range of general legal and intellectual property (IP) support services. With offices across the United States, Europe, Asia and the Pacific, CPA Global is well placed to support attorney firms and corporate clients with a diverse set of legal and IP specific needs including document review, contract management and litigation support right through to top end intellectual property software, renewals and data management, research and consulting. http://www.cpaglobal.com

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