Case Study

Alberta Sustainable Resource Development

Alberta, Canada

Alberta Sustainable Resource Development

Key Facts

Industry: Government

Problem: Increase in land-use activities makes paper-laden process unsustainable

Solutions: FME® Desktop

Results: Web-based CAD validation system improves productivity and efficiency for technologists and customers

"Our technologists no longer need to spend extra time validating CAD layers and element contents."

–Pauline Peterson
e-Support Teamleade
Technical Services Division

The Organization

Based in Edmonton, the employees of Sustainable Resource Development's (SRD) Lands Division are responsible for managing and approving land-use activities on public land. They balance various industries' land-use needs with the equally important need to protect and manage public lands for present and future enjoyment. Historically, public land management was directed at homesteading, agricultural development and timber management. However, unprecedented increases in industrial and recreational activity and population growth in the province have resulted in increasingly more complex land management issues for the Lands Division to address.

The Challenge

Before any disposition on Alberta public lands can occur, users must first receive approval from the Lands Division. Historically, this has been a multi-step, paper-based application process. However, with the launch of the Digital Integrated Dispositions project in 2005, the department modified the process by requiring users to submit a land-use plan package, including a CAD drawing of the area of interest and relevant metadata. If the plan was approved, clients submitted a formal public land disposition application. At an average of 20,000 land-use plans to process a year, the storage and maintenance of this data became overwhelming.

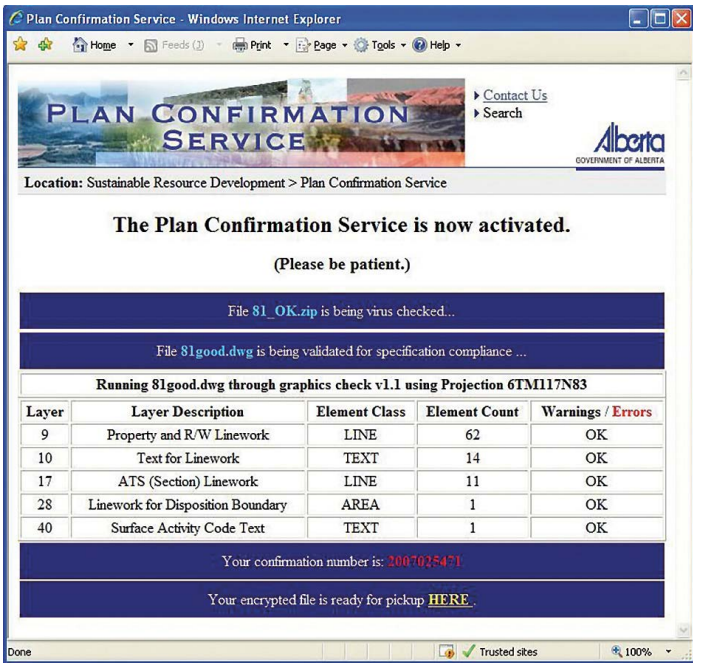
"The process created a significant amount of manual work for an already stretched workforce," says Ron Orr of the SRD's Information and Communication Technology Division. "Staff had to manually register, file and check each submission and then inform applicants if their submission was approved or had errors. Any data errors would force applicants to submit an application amendment, which we then had to store and start the whole process again. When clients changed their minds, we would also need to store their extra digital submissions, leaving us with huge amounts of data that may never be used."

The Solution

To meet the challenges of the Lands Division's mandate, the department needed a technological solution that would take it from a p-business to an e-business, enabling personnel to minimize the manual validation of CAD files and ultimately create a far more efficient and effective land-use application process. The electronic service needed to be user-friendly, efficient and secure. Already versed in the versatility and software-development efficiency of FME, the department's ICT staff chose the spatial ETL platform to create the automated and electronic plan validation service – the Plan Confirmation Service (PCS).

Anchored by FME, the PCS allows external clients to submit land-use plans from their own desktop to the Lands Division's secure Web site and immediately receive a validated, encrypted file or a notification of errors in the plan.

To submit a plan, users simply create a log-in account, chose the relevant plan package and click "upload". Uploaded plan packages are automatically checked to ensure they contain the required files and formats. If they don't, they are rejected and the client receives a data detailed report. Properly formatted files are virus checked and passed to FME to perform the bulk of the validation work, starting with the data content and format – CAD files must be submitted as either AutoCAD® or MicroStation® drawings. FME then quickly performs a "data-level check", ensuring that all required CAD data elements such as text data and linear data are present and are on the correct levels. With approved files, the service automatically issues a unique confirmation number, zips the plan package and encrypts the file for clients to download. When a land-use application is ready for submission, clients then attach the pre-approved, zipped plan package to their land disposition application, thereby saving SRD's team 20 hours a day in application processing during peak season.



The Results

By setting data standards for the PCS service, personnel no longer have to decipher diversely formatted plans or contend with varying degrees of data quality. They are assured they are receiving consistent data.

"Moving from a paper-based system to an electronic one is the best thing that ever happened to us," says Peterson. "Our technologists no longer need to spend extra time validating CAD layers and element contents. This enables our team to move into the future of electronic document management, spatial data management and natural resource management."

The PCS system also supports encryption for plans with sensitive information. "The system allows us to lock approved files and then un-encrypt them with our own encryption key," says Pauline Peterson, the Lands Division's team leader of e-Support for the Technical Services Section. "This not only eliminates the possibility of any file tampering throughout the disposition submission process, but it also makes our job much easier because we already know the encrypted file has been validated."

Learn More

To find out how FME can help address your data interoperability challenge, or to request a free trial of FME, visit **www.safe.com.**

SAFE SOFTWARE