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Millman Surveying Makes Online Legal Review Part of Customer Service Excellence

IMAGINiT solution enables cost effective, cloud-based application

The Organization

Millman Surveying, Inc., a division of Millman – National Land Services, is a nationally recognized surveying firm specializing in American Land Title Association/American Congress on Surveying & Mapping (ALTA/ACSM) Land Title Surveys for the commercial real estate market, as well as wireless site and cellular tower surveys. Established in 1995, Hudson, Ohio-based Millman Surveying has quickly gained a reputation for executing thorough, high quality surveys with maximum client communication at minimum expense. Today, the company has offices and crews in all major regions of the United States.

The Challenge

Millman works with some of the largest land developers and owners across the United States. Annually, the firm produces over 5,000 legal packages for survey and land title purposes for very large retail, office, multifamily and hotel chains, property developers, and government, nationwide. Client legal teams review these survey documents and are often under tight time pressures to clear the way for financing and zoning approvals. Legal review can be onerous, involving the shipping of stacks of documents back and forth between the survey team and client lawyers. As a progressive, customer-focused company striving to continually improve service levels, Millman is always looking for opportunities to improve the process. They knew that an online review and approval process would be much more efficient and give them a competitive advantage.

As early adopters of online technology, Millman commissioned a local web development company to build an online land title and survey review and approval application. The web team was able to put together a working front end that allowed attorneys and paralegals to access everything they needed from the survey drawings. This greatly helped reviewers to do their job more quickly and clients loved the "Millman Virtual Surveyor."

> **"We needed IMAGINiT's deep expertise in AutoCAD to get the backend working within realistic timeframes. The IMAGINiT team was able to provide us with a solution that radically reduced our time to client from one day to 30 minutes."**
>
> **—Vince Macauda
> President
> Millman Surveying**

The problem was that to turn an AutoCAD survey into a document that customers and their lawyers could interact with securely over the internet, CAD technicians were spending upwards of a day to prepare views and link files. "We had a successful live application that worked really well for clients," said Vince Macauda, president at Millman. "However, we had a real challenge on the backend. We wanted this to be a free service for our clients—to help them do their jobs more accurately and efficiently. Unfortunately the initial system ended up costing us too much in effort due to the manual processes."

The Solution

Millman turned to IMAGINiT's software development solutions division to help them automate the backend CAD file processing and then also integrate it with a new customer presentation interface.

IMAGINiT software designers spent nine days with Millman to gain a full understanding of the requirements and then produced a comprehensive specifications document. Now the new *Millman Virtual Surveyor* system automates document linking, and automatically finds and highlights property boundaries, flood zones, wetlands, building envelopes, parking, utilities access, gas lines, electrical, and more. The system takes underlying AutoCAD drawings and turns them into a fully reviewable ALTA/ACSM compliant package in a matter of minutes—even for the largest parcels of land.

"Before the new version of the *Virtual Surveyor* tool, one of our technical staff would have to go through the document and manually choose each line set, highlight it and then save that layer. For each document, we then had to manually assign links to approval forms, photographs and site videos. It would take us up to a full day to produce an online package," said Macauda. "With the new, automated system, a package takes almost no time to produce, and our team can spend more time on quality control."

"One of the main technical problems we had to solve was how to get the drawing to load only once, while giving the client access to view any part," said Gareth Marland, a senior developer at IMAGINiT Technologies. "The original application re-rendered the drawing from the server each time a reviewer altered views. This was causing some systems to hang and was a frustrating experience for Millman's clients. We used a combination of AJAX and Java to eliminate reloads and provide a seamless browsing experience."

For any original survey drawing there can be many related notes—from five to 25 per drawing. Virtual Surveyor pulls these drawing notes together on a single, easy to read web page. A reviewer can click on a note and Virtual Surveyor will take them automatically to the pertinent portion of the drawing.

Similarly, multiple people might be reviewing a package online. To help keep track of their collective comments, IMAGINiT built-in the ability to make comments on the drawing and then to push them all into a word document and incorporate them within the legal documents.

"When you are buying 300 motel sites, the legal review process takes considerable time," said Macauda. "We strategically automated as much of the process that we could to help make our customers more effective, and thanks to IMAGINiT, the system now works extremely well for both our clients and for us."
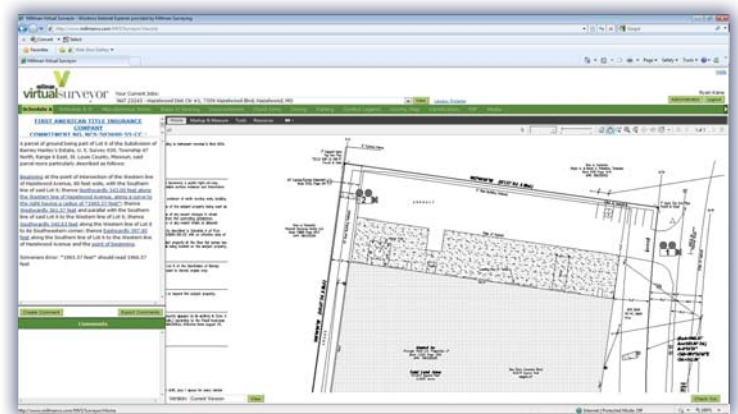
Long-Term Benefits and Results

An estimated 50% of Millman's customers are using the Millman Virtual Surveyor tool, and more are jumping on board every day. The cloud-based system means users can work from anywhere with an internet connection. "Some clients are intimidated by the new technology," explains Macauda. "Then when they actually get down to using it, they say 'Wow! That's amazing!' They can work from home without having to cart along a desk full of documents and the ease with which they can locate elements makes their lives easier."

Virtual Surveyor Tool Attracts New Business

Millman brought in new business from one of the top three food franchise operations in the world due to a demonstration of Virtual Surveyor that Macauda took to the American Bar Association Convention. This franchise operation—with thousands of locations—divides the country into many regions. Currently, each region uses local survey firms, then the surveys and reviewer's comments are sent to the legal department a company headquarters. This takes a lot of time and slows down the project. They are now a national account. An in-house attorney from this potential client, saw Virtual Surveyor at the convention and then asked Millman to present it to their

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paralegals, who immediately saw the benefits of working online—saving thousands of hours and making their operation that much more efficient.

Improved Accuracy

Millman Virtual Surveyor can also help reduce human error. By presenting a checklist of the required reviews, the system walks users through their review—like a workflow for the legal department. "If you have to find all the places where utilities cross building boundaries, for example, this can be a tedious process for a human reviewer," describes Macauda. "With Virtual Surveyor, all utilities will highlight automatically with the click of a mouse. This helps reviewers detect intersections more easily and they in turn can report issues more accurately."

Streaming Video Improves Visualization

Another unique feature that customers find helpful is the embedded photos and streaming video. Reviewers can navigate to a camera icon on the survey drawing, and by clicking on it, can view a photo or video of the actual site location. This reduces guesswork and increases a reviewer's ability to understand the underlying site situation by actually viewing the building or object in question.

"There are very few companies of IMAGINiT's caliber who have the depth and breadth of programming capability to successfully complete a project of this type," said Macauda. "Virtual Surveyor is such a unique and powerful tool that we've already filed patents on to protect it. Customers are telling us that copycat products on the market are not nearly as robust as Millman Virtual Surveyor."

About IMAGINiT Technologies

IMAGINiT Technologies (imaginit.com), a division of Rand Worldwide, advances the way architects and engineers design, develop, and manage projects. Customers of this leading professional services and technology company include organizations in the building, infrastructure, manufacturing and facilities management industries. Fortune 500 and *Engineering News Record's Top 100* organizations work with IMAGINiT Technologies to gain competitive advantages through expert technology consulting, implementation, training, and support services. As one of the world's largest integrators of Autodesk 3D design and engineering software, the team leverages unrivalled industry experience to design systems that accelerate innovation while improving project quality and profitability. For more information visit imaginit.com or rand.com.

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