



NASCIO Category: Improving State Operations
Gale Given, Chief Technology Officer
West Virginia Office of Technology

West Virginia Secretary of State
Uniform Commercial Code

Administration Main Menu
Welcome to the West Virginia Secretary of State UCC Back Office System.

Process Paper Filing

UCC-1 New Filing Process new filings brought into the office on paper.	UCC-3 Assignment / Amendment / Continuation Process UCC-3 filings assignment, amendment, or continuation brought into the office on paper.	UCC-3 Termination Process filing terminations brought into the office on paper.	UCC-5 Statement of Claim Process statements of claim brought into the office on paper.
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Perform a Search

Search Click the Search link to search the database and/or purchase copies of filing documents.	Certified Search Click the Certified Search link to perform a certified search.	Validate Certificate Validate Certified searches using the validation code printed on your Certificate.	Retrieve Documents Retrieve completed search of court processed filings by order review number.
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Reports: End of Day, Filing Transaction, Rejected Filing

Tools: Reject Filing, Corrective Action, Retrieve

Settings: Manage Users, Manage Rejection Reasons, Manage Filing Data

Secretary of State UCC Back Office System

Project Initiation: November 2013 | Project Completion: January 2015

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Executive Summary

When a borrower gets a loan in West Virginia using consumer goods, commercial, or farm property as collateral, the lender files a commercial lien to protect its financial interest through UCC filings with the Secretary of State.

The Secretary of State’s UCC Back Office System enables Business and Licensing (B&L) specialists to process paper UCC filings received at the filing office. Additionally, the application generates certified search orders and copies of filing documents in a consolidated PDF file format. It also provides robust reporting, user management tools, data management, and record search features.

UCC filings are public documents, therefore keeping sensitive data from being recorded is top priority for the filing office. The new web-based system includes a state of the art built-in redaction solution that allows paper forms to be scanned into the system directly from the web browser, which enables the user to see a live preview of the scanned PDF and seamlessly redact sensitive information during processing.

All filing documents and search orders are stored and distributed electronically during processing, and storage of paper documents is completely eliminated.

Features

- User-friendly filing interface with built in validation
- Robust auto-fill features
- Built-in redaction process
- Electronic storage and distribution of all filing documents and searches

Benefits

Increased Filing Accuracy

Built in data verification ensures that filings pass all business rules, which increases filing accuracy. In addition, the robust auto-fill features enable the user to automatically populate data such as name and address, which improves filing accuracy and reduces data entry time.

Built-in Redaction Process

Built-in redaction features enables the user to redact sensitive information from filing documents and prevents sensitive data, such as social security numbers and bank account information, from being recorded in filings.

Time/Cost Savings

Electronic storage and distribution of filing documents, acknowledgement copies, and search orders drastically reduce the costs and processing time for the filing office.

Results

Since launch, 34,000 filings and searches have been processed with an average time savings of 25 minutes per filing. As a result, over 14,000 hours have been saved!

Project Narrative

Concept

When a borrower gets a loan in West Virginia using consumer goods, commercial, or farm property as collateral, the lender files a commercial lien to protect its financial interest through UCC filings with the Secretary of State.

The Secretary of State's new UCC Back Office System enables Business and Licensing (B&L) specialists to process paper UCC filings received at the filing office. A built-in redaction solution provides the ability to securely redact sensitive information from filing documents during processing. All filing documents are stored and distributed electronically during processing, and storage of paper documents is completely eliminated. Additionally, the application generates certified search orders and copies of filing documents in a consolidated PDF file format.

The system was built utilizing a three tier architecture consisting of two load-balanced front end servers working securely over HTTPS, with two backend servers communicating to a SQL Server Database cluster. The system was developed using the latest Asp.NET C# MVC Framework. The system also uses AJAX, JQuery, and CSS to improve the user experience by maintaining a consistent look and feel throughout the Application, enforcing required fields and enabling elegant error handling. Additionally, this system utilizes responsive design utilizing Twitter Bootstrap to provide usability on mobile devices. iTextSharp PDF generation tools were used to build custom PDF forms that mirror official forms used by the state agency. In addition, Atalasoftware was

seamlessly incorporated, which allows paper forms to be scanned into the system directly from the web browser. This third-party system provided an SDK and tool that not only enables the user to scan directly from an ActiveX control, but also to see a live preview of the scanned PDF page and redact any sensitive or private information that should not have been included.

Usability

Responsive Design

The Application utilizes the Twitter Bootstrap to provide a responsive design that allows the site to be used with mobile devices and standard PC screens alike which provides a simple, easy to use, and responsive website.

Rich User Interface

The JavaScript library KnockoutJS was used throughout the site and provides a rich user interface. The front end was also enhanced with a comprehensive 'Help' system using ChardinJS. It provides a simple pop-up functionality above existing components on the page, which helped to relieve confusion a new application can present.

Ease of Use

The Application uses KnockoutJS Validation which allows complex validation scenarios to be setup in JavaScript, and provide immediate feedback to the user without waiting for a round trip from the server. Combining TypeAheadJS and Full Text Index Search in SQL, a real-time type ahead feature was provided that lets users search hundreds of thousands of items based on the first few letters of a name. This provides the ability to retrieve the record and bind them to their corresponding input fields to allow a user to quickly add a new record to the system.

Security

The application uses the Secure Sockets Layer (SSL) protocol to safeguard sensitive information. Transactions are secured from the personal computer making the request to the application server processing it.

Accessibility

Every effort has been made to ensure the pages of the Application are accessible to individuals with disabilities, in accordance with Section 508 of the Rehabilitation Act. In instances where innovation outpaces accessibility, the Application is designed to degrade gracefully and provide a standard user interface control accessible to all users.

Privacy

WV.gov's Security, Accessibility and Privacy policies are located in the footer of every page within the Application.

Significance

The new Application has completely transformed the entire back office process and was designed using IACA standard data storage architecture. The new system provides a single integrated solution for validation and processing of UCC filings and searches, as well as all other pertinent functionality. The new system architecture and technologies ensure that the system will remain viable for years to come, while also keeping maintenance costs at a reasonable level. Additionally, the electronic storage and distribution of filing documents and search orders have practically eliminated mailing and postage costs. Through the updated, streamlined business processes UCC filing transactions are now completed in about five minutes (83% quicker than legacy process). UCC search orders are now completed electronically with most orders being completed and delivered within hours as opposed to days. Through these improvements, staff backlogs have been nearly eliminated and overtime significantly reduced.

Filing Process

Previously the filing process was labor intensive and filings were handled at a minimum of six times. Before the implementation of the new system, documents were manually redacted prior to being processed and once redacted changes were permanent. The process consisted of:

1. Marking the filing with the date received.
2. B&L specialist verifies the filing is acceptable and valid.
3. B&L specialist generates and stamps the filing number on the filing
4. Accounts receivable process the payment and generates a receipt.
5. B&L specialist enters and scans the filing.
6. B&L specialist physically stores filing.
7. B&L specialist mails acknowledgement copy and receipt to the customer.

The new Application process is reduced to:

1. Marking the filing with the date received.
2. System automatically validates filing and generates filing number.
3. Accounts receivable verifies payment.
4. B&L specialist enters and scans the filing.
5. System emails acknowledgement copy and receipt to the customer.

Search Requests

Fulfilling requests for certified searches also consisted of multiple separate steps in the legacy system.

1. Customers would send a request by mail, email, fax or phone
2. B&L specialist would log the search request.

3. B&L specialist would complete the search, calculate the total amount due and print the search documents along with a certificate if applicable.
4. Accounts receivable would process the payment and generate the receipt for the transaction.
5. Accounts receivable delivers search order via USPS to customer.

The new Search process reduces processing time and significantly speeds up delivery to customer:

1. Customers would send a request by mail, email, fax or phone
2. B&L specialist would log the search request and system automatically complete search.
3. Accounts receivable would process the payment and generate the receipt for the transaction.
4. Accounts receivable delivers search order via email to customer.

To date, over 34,000 filings and searches have been processed through the system.

Impact

There were three primary goals for the implementation of the Application. First, the legacy system had inflexible system architectures which prevented the integration of new technologies and resulted in mounting maintenance costs. Second, the costs of continuing to return paper filing acknowledgement copies and search orders were escalating and impractical. Lastly, the business process was labor intensive. The legacy process for filing paper documents required the paper filing to be handled at a minimum of six times between different employees.

In summary, the goals of the Application were to:

- Update the technology and backend
- Improve the system architecture
- Reduce maintenance costs
- Reduce costs associated with printing, mailing, and storage of filing acknowledgement copies and search orders
- Streamline the entire business process.

Multiple stakeholders benefit from the efficiencies provided by the Application.

Lenders

The streamlined solution for back office UCC filings and searches saves lenders time. Filings and searches are available for lenders to instantly view, print, and save after a transaction is completed by the filing office.

Secretary of State's Office

The Application provides the filing office with substantial time and cost savings. Prior to the implementation of the Application, it took approximately 30 minutes to process a paper filing or search order in addition to the time necessary to mail the order to the customer via USPS. Now filing and search orders are completed in minutes and available immediately with postage costs practically eliminated.

Businesses

The Application provides image redaction capabilities when processing filings and searches. Through this redaction capability, sensitive PII information can be safely removed from the public eye without slowing down the filing process.

In conclusion, the new system architecture and technologies ensure that the system will remain viable for years to come while keeping maintenance costs at a reasonable level. Additionally, the electronic storage and distribution of filing documents and search orders have practically eliminated mailing and postage costs. Through the updated, streamlined business processes UCC filing transactions are now completed in about five minutes (83% quicker than legacy process). UCC search orders are now completed electronically, with most orders being completed and delivered within hours as opposed to days. Through these improvements, staff backlogs have been nearly eliminated and overtime significantly reduced. The agency embraced technology to meet and exceed their goals, and the result is a resounding win-win for both the agency and its customers.