

VALID Uses Dynamsoft's ImageCapture Suite SDK for Image Capturing and Faster Time to Market for its Popular Enrollment, Application, and Credentials Management Web App

INDUSTRIES:

Government, Education, Transportation

SUMMARY

VALID USA, Inc., headquartered in the Chicago area, is a wholly-owned subsidiary of its Brazilian parent company VALID S.A. The company directly owns and operates five US facilities with 900 employees. This includes more than 600,000 square feet of secure card manufacturing and personalization space. One of the company's popular applications is WebLink ID. WebLink ID is an enrollment, credentials and application management web app. It is used to issue mass transit cards, student IDs, access control cards, and state driver's license and ID documents. Thus, document scanning / image capture capabilities were a requirement for the software. VALID did not want to build this capability from scratch so it could instead focus on its core expertise. So, the team began a search for an image capture software development kit (SDK). After thorough research on multiple SDK options, the team settled on Dynamsoft's ImageCapture Suite SDK. This SDK pre-accomplished the heavy lifting of development to connect web browsers to hardware. So, not only did it help VALID narrow their focus and build better software, it helped shorten time to market. Today, the application is used by thousands of workers to capture millions of images annually in diverse environments. They include US state governments, K12 and higher education institutions, the public transit industry, and many other vertical markets that require photo identification.

THE COMPANY

VALID USA, Inc., headquartered in the Chicago area, is a wholly-owned subsidiary of its Brazilian parent company VALID S.A. The company directly owns and operates five US facilities with 900 employees. This includes more than 600,000 square feet of secure card manufacturing and personalization space. VALID S.A. has other regional operations in Brazil, Argentina, Columbia, and Spain, and more than 6,000 employees worldwide. These regions provide identity and security products and services to clients throughout the world. VALID's goal in producing software applications is simple: produce user friendly software that clients need.



<http://www.validusa.com/>

One of the company's popular applications is WebLink ID. This web application is used by a diverse set of workers with varying skill levels. Thus, the application needs to be dynamic, intuitive and flexible to accommodate varying user requirements. Underneath the hood, WebLink ID is a very complex, multi-step enrollment and vetting application. It is used to issue and manage secure credentials, such as mass transit cards, student IDs, access control cards, and state driver's license and ID documents. WebLink ID has front office enrollment functionality and back office management capabilities.

THE CHALLENGE

VALID application design involves many stakeholders. Product management and marketing departments perform market feasibility studies. Business analysts create functional outlines for VALID's software. Software architects create the software design and identify the development tools required to create the application. They also identify third party products that add value to the application.

When architecting software, it's well known that it's difficult to control locally connected devices, particularly from a web browser. This includes PC hardware and image capture peripherals such as document scanners, digital cameras, webcams, signature tablets, etc. And, precisely this device control was a capability required with WebLink ID. The software needed document scanning / image capture capabilities. But, VALID did not want to build this capability from scratch so it could instead focus on the team's core expertise. This core expertise is building enrollment and management software to issue credentials. So, the team began a search for a web-based image capture software development kit (SDK). After thorough research on multiple SDK options, the team settled on Dynamsoft's ImageCapture Suite SDK.

Software designers almost always face the "license vs. build" decision during planning and development. For WebLink ID, the VALID team had to build a lot of front and back office functionality. And, photo and document enrollment is a primary functionality. To avoid sacrificing user experience and losing control of this function, the VALID team properly analyzed building the document scanning capabilities. But, it turned out it would be no small effort. Instead, licensing Dynamsoft's ImageCapture Suite SDK allowed the VALID team to stay focused. With the SDK, it was quick to implement image capture functionalities. Also, the SDK didn't compromise the desired user experience or development flexibility.

THE SOLUTION

ImageCapture Suite SDK had already accomplished the heavy lifting of development to connect web browsers to hardware. So, not only did it help VALID narrow their focus and build better software, it helped shorten time to market. Today, the ImageCapture Suite SDK allows WebLink ID to create photo enrollment workflows that satisfy VALID's clients.

ImageCapture Suite

Dynamsoft's ImageCapture Suite SDK provides a variety of built-in capabilities. It allows developers to write just a couple of lines of code to interact with TWAIN-based scanners and DirectShow webcams. This is instead of taking months to learn the TWAIN and DirectShow standards, and then taking many more months to develop an application with hundreds to thousands of lines of code. The document imaging SDK enables developers to more easily create and deploy web-based document scanning applications.

This SDK provides an integrated rasterizer to convert PDF files into images and a barcode SDK to add and read 1D/2D barcodes to/from images. ImageCapture Suite also provides an optical character recognition (OCR) engine. This host of features makes it ideal for users in industries requiring heavy scanning and digital document management like healthcare, finance, government and more.

ImageCapture Suite also helps ensure application robustness and security with Sandbox security implementation built in. The SDK enables the use of popular browsers for document scanning and management. Browsers supported include 32-bit and 64-bit Internet Explorer® (IE); Firefox®; Chrome™; Safari®; and Opera®. Devices supported include TWAIN-compatible scanners and DirectShow-compatible webcams. For webcams, it supports snapshot grabs from live video streams. The SDK has

built-in support for image rotate, crop, zoom in/out, and more. In addition, it features multi-threaded and secure image uploading and downloading to/from a database, file system, SharePoint® and more. It also has built-in JPEG, PNG, PDF and TIFF encoders for users to compress acquired images regardless if the TWAIN source has the capability or not. ImageCapture Suite works with JavaScript® on the client side and ASP.NET (C#); PHP; JSP; ASP; VB.NET on the server side.

A Polished WebLink ID Application

VALID leverages ImageCapture Suite in WebLink ID for secure, web-based enrollment application and credential management. WebLink ID and its integrated ImageCapture Suite SDK is used by thousands of workers to capture millions of images annually in diverse environments. These include US state governments for driver's license issuance. It includes K12 and higher education institutions for student IDs. It's also used in the public transit industry to provide mass transit cards and in many other vertical industries requiring photo identification. The ImageCapture Suite SDK is used to capture ICAO-compliant photos and scan vetting documents. Such files are then stored in document management systems and processed by document authenticity scanners.

VALID hosts its web application for clients that require a completely hosted application. It also provides on-premise installations at client data centers. Thus, Dynamsoft's ImageCapture Suite SDK exists at data centers for federal and state government, large K12 school districts, law enforcement, and mass transit agencies.

THE BENEFITS

The primary drivers for VALID to use the SDK were time to market and cost reduction. But, the savings also provided VALID with other revenue opportunities. Licensing the SDK shortened their development lead time and placed the application into production sooner. Thus, revenue was also realized sooner. The SDK was also seamless to integrate into WebLink ID. So, the team saved a lot of time as a result. Therefore, VALID was able to also develop add-on modules and plug-ins to sell to customers wanting advanced features.

Today, WebLink ID has many core functionalities. They include image capture, document vetting, workflow processing for applicants, and back office credential management. VALID developed the workflow engine, user management, and elements to create credentials, forms, and workflows (front and back office). This was all accomplished within 24 months, which VALID views as quite a feat with a small team. The company also recognizes this time to market was significantly improved mostly by using Dynamsoft's ImageCapture SDK.

Realized Best Practices

VALID transitioned to an agile methodology approximately at the same time the team began to build WebLink ID. The team has since realized that making this transition was incredibly beneficial. VALID's client base is too diverse otherwise. Technology and standards move too quickly to be an expert in all areas. Agile software development has allowed VALID to align its software development to better satisfy client needs. It can also more elegantly address the software industry's ever-changing technology and standards requirements.

The VALID team has come to realize it's important to not try and reinvent the wheel. It was clearly entirely too expensive to internally build all the pieces that make up WebLink ID. As always, outsourced teams can help too but, nowhere near the degree of using an SDK. It's clearly important to leverage SDKs and other tools from companies that have expertise in certain areas.

Clients expect consumer and enterprise applications to operate on many platforms: Windows®, Mac®, iOS®, Android®, Windows Phone, and others. The challenge to develop for this is magnified by diverse browser technology and ever-changing standards. It's important to remember you not only have to build the app, you must also maintain its support on all those platforms and browsers. Such a task becomes incredibly difficult if you own and built every piece of the application. Managing those tasks is easier if you leverage outside parties. This includes vendors like Dynamsoft who've built SDKs that saves shops like VALID on development and support time and costs.

QUOTE

With our small team, we could not have completed WebLink ID's development in a timely fashion if we tried to also develop our own image capture interface. So we turned to Dynamsoft for an image capture SDK and it helped us deliver our application to market far quicker than anticipated. Honestly, the SDK was a primary driver to achieving good time to market and other revenue opportunities sooner. - Kevin Freiburger, Director of Product Management, VALID USA