

Document Imaging Report

Business Trends on Converting Paper Processes to Electronic Format

4003 Wood Street ● Erie, PA 16509 ● PH (814) 866-2247 ● <http://www.documentimagingreport.com>

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Testing Service Offering Third-Party TWAIN Certification

Panasonic first to pass hardware testing

When something goes wrong with a document scanning operation, there are multiple moving pieces that can be the cause. This often leads to confusion on who an end user should call for support. Do they call the scanner vendor, the capture ISV, the VAR, or a third-party driver developer? For years, Kofax VRS held sway as a de facto industry standard for driving scanners, in part because Kofax was willing to address all types of service calls.

As the market has evolved, so have scanning operations, which have transitioned from exclusively back-office deployments, to include more “distributed,” lower-volume implementations. With this transition has come an increasing desire to reduce the cost of drivers—the code that connects a scanner and a software application. Proprietary drivers like ISIS and VRS have worked well for many back-office implementations, but in lower-cost-per-unit distributed applications, the open source TWAIN driver is often preferred.

The issue with TWAIN is that because of its open source nature, the way the code is implemented can differ from vendor to vendor and application to application. And while ISIS and VRS undergo rigorous testing from the vendors that produce them (Captiva and

Kofax, respectively) to ensure that the drivers will work with the software piece of the equation, testing for TWAIN has traditionally been more like the Wild West—scanner and application vendors have basically been on their own.

A few years ago, **TWAIN Working Group** (TWG) board member Atalasoftware (now a part of Kofax) introduced a self-certification testing tool for TWAIN, which it continues to support and update. But, running and interpreting the tests is still up to the individual scanner vendors, so it's not an ideal solution. Enter the **Drummond Group**.

Based in Austin, TX, Drummond is a test lab that has historically focused primarily on certifying that Electronic Health Record (EHR) software applications meet the U.S. Federal Government's Meaningful Use standards. Compliance with these is required by healthcare providers seeking reimbursements for their EHR implementations. “We are known as a leader in that market,” said Dave Dolan, president of Drummond. “And the feedback we were getting from end users around their scanning operations was that IT professionals were frustrated. They felt that the burden of determining interoperability between their scanners and software was on them.”

To address this issue, last month Drummond (which earlier this year joined the TWG Board) introduced a TWAIN Compliance Certification program available to both scanner and scanning application vendors. “Our program offers a third-party organization that can validate the TWAIN test results,” said Aaron Gomez, chief scientist for Drummond. “Our testing tool is as comprehensive as anything you'll see in terms of test cases and reporting capabilities.”

Drummond gave us a demo of its testing environment, which consists of two parts:

■ **downloadable test application:** Downloadable into a Windows environment, the app provides a virtual scanner for testing software and acts as a scanning application to test drivers. The app is used to run the tests and acts as a go between for the item being tested and Drummond's hosted Web-based testing console.

■ **Web-based testing console:** This is where the tester can see the results and measure how well they are doing on their test cases. There are up to 163 criteria that can be tested for on scanner drivers and 61 on software applications. On the console, each criteria is represented by a small circle, which will turn green when the driver or software has passed. If

something fails, clicking on the red circle will provide “excruciating details” as to why the failure occurred.

“Not every criteria is applicable to every scanner,” explained Earl Evans, EHR/TWAIN device test proctor for Drummond. “The test tool can determine which tests are applicable for a specific device. The driver needs to have most of the circles filled in green for it to be certified. For scanner drivers, there are actually two levels of certification, a standard and what you could call a deluxe version.”

Evans noted that the testing tool can also be valuable in driver and application development. “Vendors can run test against their products as they are being developed to ensure they are in compliance,” he said. “We’ve already received some inquiries from scanner vendors regarding that type of use.”

The TWAIN Compliance Certification test was developed by Drummond and modeled after its EHR tests. “You have to run separate tests for each scanner model,” said Evans. “The amount of time it takes really depends on if the vendor has any issues. If they get all green circles, they should be able to go through it rather quickly. Any specific tests that don’t require manual invention, like feeding a page into a scanner, can run without anybody watching them.”

Drummond is making the testing available through two pricing models: as a subscription service with unlimited usage or on a per SKU basis.

Seeking to even playing field

Panasonic recently became the first vendor to have its scanners’ TWAIN drivers certified through Drummond. Panasonic is putting an increased focus on the healthcare market and thought working with Drummond would be beneficial. “Particularly in healthcare, we see large customers who, even though their EHR vendor might have their own certification program for scanners, have an entire arm of their IT department dedicated to testing hardware,” said Peter Bedell, senior business development manager for Panasonic Systems Communications Company of North America.

“The question in the market has always been who is responsible for demonstrating compatibility?” he continued. “From what we have observed, it was clear to us that historically the burden has always been on the end user. It’s our opinion that their IT people’s time can be better utilized doing projects that are more advanced than testing driver-level compatibility.”

Bedell provided an example of the headaches he has seen due to a lack of driver certification. “There was one healthcare provider that rolled out a number of \$1,000 scanners, and it cost them \$4,000 per device just to fix their driver issues,” he said.

Bedell indicated that Panasonic has been working with

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Editor: Ralph Gammon
4003 Wood Street
Erie, PA 16509
PH (814) 866-2247
FX (412) 291-1352
ralphg@documentimagingreport.com

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Drummond since before its TWAIN Compliance Certification program was officially announced. “Standardization and certification is something I have personally been advocating for in the scanner market for a long time,” said Bedell. “We see the Drummond program as something that benefits everybody by leveling the playing field.”

Bedell noted that one of the challenges in the healthcare market in particular is that software vendors will create private certifications with specific scanner vendors. “There are a couple problems with this,” he said. “Obviously, the existence of the testing labs in some of the largest hospitals and healthcare providers I’ve worked with indicates that the users do not trust these certifications. The second issue is that it limits the choice of scanner vendor for the end user.

“As scanners have evolved over the years, there are a lot more good choices available. Standardization levels the playing field for everybody and lets end users choose their scanners based on price, performance, and other factors—not just because their ISV has a good relationship with a vendor.

“And for ISVs, certification should reduce the volume of support calls they are getting related to drivers. We had a vendor we were working with that told us 40% of its support calls were related to an issue its users were having due to our scanners’ compliance with the latest EnergyStar regulations. Instead of our scanners just going to sleep when they were inactive, the new regulations required that they turn all the way off. Now, TWAIN doesn’t address that today, but the best way to deal with it in the future would be to create an error code in the TWAIN spec that alerts users that their devices are about to power off.”

Bedell noted that when users with distributed applications change software, or decide to update their fleets of scanners, there is a heightened chance for something to go wrong with the drivers. “In addition, as we move to more cloud applications, which can be updated every night if the ISV wants, can’t we do the same thing with drivers?” he asked. “The only way to ensure that thousands of driver updates being sent nightly don’t cause something to break is through certification.”

For Drummond’s TWAIN certification to be effective, it’s important that both hardware and software vendors get on board. “We don’t want this just to be about Panasonic; the hope is that by getting certified first Panasonic will be recognized as a leader, but we would like to get everyone in the industry involved,” said Bedell. “One of our goals is

to get software vendors to participate. We need to have response from all people leveraging the TWAIN spec.”

Dolan noted that ISVs have initially been more active in reaching out to Drummond than scanner vendors. “A lot of that probably has to do with how strongly our brand resonates in our market,” he said. “People in the EHR space understand the value of a Drummond certification. Of course, the TWAIN Compliance Certification isn’t restricted to EHR software, we can certify any application that interfaces with TWAIN.”

Dolan concurred with Bedell’s view that having both scanners and software certified represents the best possible outcome for the market. “It will address the finger pointing that we see all too often,” he explained. “When something goes wrong, the scanner vendors are pointing at the application vendors, who turn around and point right back at the scanner vendors. As this goes back and forth, it ends up creating extra cost for everybody to resolve the issue. If both sides are in compliance with the standard and certified by our testing, interoperability issues should go away.”

TWAIN Chair Weighs in

TWAIN Chair Jon Harju agrees that Drummond’s offering both hardware and software certification for the scanning standard could be a big benefit to the market. “For the hardware driver tests, Drummond is using our criteria and following verbatim our certification standards that can be found in the TWAIN test docs. These tests can be run manually or through testing tools like those offered by Drummond and Atalasoft. Drummond has also added some scenarios that are not detailed in the TWAIN certification but are interesting. Some examples are qualitative tests for barcode reading and auto-cropping.

“What Drummond is also doing that is new is introducing the ability to test and verify the software piece of a TWAIN scanning application. In the past, there hasn’t been anyone testing applications for compatibility with the standard. In fact, there is not a documented set of tests for software applications, but Drummond has established criteria that they believe are important. As they are a member of the TWG board, they will have the opportunity to work with us to help evolve the software certification standard.

“The TWG is stoked that a company that focuses on certification has helped close the loop when it comes to TWAIN certifications. Because no matter how good a hardware driver is, if a software application relies on proprietary behavior from a

particular vendor's driver, then their software will only work with that vendor's hardware—that kind of defeats the purpose of a standard.”

For more information:

<https://www.drummondgroup.com/twain-landing-page>;
<http://bit.ly/PanasonicDrummond>

TWAIN Direct Update

At the recent **Harvey Spencer Associates** Capture Conference, Jon Harju, chair of the **TWAIN Working Group** (TWG), provided an update on TWAIN Direct. TWAIN Direct is the driverless scanning platform that TWG first began work on in 2013 [see *DIR* 12/20/13]. Harju revealed a 2017 timeline for three significant TWAIN Direct releases.

A TWAIN Local standard, enabling TWAIN Direct scanners to run on a local area network, is scheduled for release in mid-2017. At the same time, TWG will release a software “bridge” that can be run on top of traditional or “Classic” TWAIN drivers, enabling them to connect to software applications that have been developed to the TWAIN Direct standard. A TWAIN Cloud version is scheduled for a late 2017 release.

In 2014, TWG announced a partnership with **Google** Print, whose infrastructure it was planning to utilize as a hosting service for TWAIN Direct Web. However, work between the two groups has stalled, so TWG is now planning on hosting its own TWAIN Cloud. Developers will be able to either make calls to the TWG Cloud to enable scanning for capture applications or they will be able to utilize sample code to create their own Cloud TWAIN scanning implementations. Either will be able to connect with TWAIN Direct scanners. Harju noted that TWG learned a lot working with Google Print over the past couple years, but the organization felt the need to move forward on its own.

The final vision is for TWAIN Direct compliant software to be able to connect directly over a network to scanners with TWAIN Direct embedded in them. This will create true network scanning, without the need for installing drivers or utilizing specific network-scanning interfaces. It will enable scanners to plug-and-play with network applications like any other piece of hardware does, such as a printer. Once it's connected to the network, a TWAIN Direct scanner should be able to be

controlled by a TWAIN Direct-compliant network application that can be interfaced through a browser, mobile device, or whatever else a user connects to their network applications with. TWAIN Direct also incorporates the PDF/Raster standard, being jointly developed by TWG and the PDF Association [see *DIR* 10/30/15].

For more info: <http://www.twain.org/twain-direct.html>



*Jon Harju, Chair,
TWAIN Working
Group*