







# Industry-standard drivers yield better customer support and reduced costs

## **Business overview**

Canon Electronics Incorporated is the product planning and manufacturing arm of Canon Inc. for the Canon document scanner product line. Canon scanners occupy the second position in U.S. scanner market share with approximately 15 percent of the market. Canon scanners are direct-connect desktop, workgroup, and production scanners used by a wide cross-section of business customers from small businesses to the largest corporate enterprises.

# **Challenges**

Canon's document imaging market success depends on the ability to connect to a wide variety of scanning applications. Whether customers are scanning a low volume of documents in a regional office or a high volume in dedicated central scanning locations, the scanning and imaging application must reliably work as expected in all of these different settings.

Canon's marketing division distinguishes the different document scanners by emphasizing the speed and feature capabilities of each model. It is crucial that each document scanner is able to meet its advertised performance rating specifications.

Another challenge faced by Canon is the need to minimize support costs for its wide variety of document scanners. Using a reliable and consistent interface technology for its scanners is a key factor in minimizing the cost of internal training as well as simplifying the job of the support division.

Canon also needs to be able to distinguish between document scanner platform issues caused by user misuse, software malfunction, or genuine hardware problems. This ability saves them time in trouble-shooting reported issues, and also enables the Canon support group to zero in quickly on true hardware issues, without any finger-pointing to third-party software partners.

### **EMC** solution

To address these requirements, in 2004 Canon Electronics released Capture Perfect, an out-of-the-box scanning application for end users. Capture Perfect is designed to support all the features of each document scanner and to allow users to operate the document scanner immediately upon purchase without having to make separate decisions about which software application to implement or learn.

At the heart of Capture Perfect is EMC® Captiva® ISIS® (Image and Scanner Interface Specification), an industry-standard enterprise-level interface that unites scanners with software applications. By allowing scanners to run at their rated speeds or higher, ISIS is the only imaging solution that allows users to take full advantage of the power inherent in scanners and other imaging machines. ISIS drivers are available for more than 300 document, book, check, and large format scanners from more than 50 scanner hardware manufacturers worldwide.

## An easy choice

As they began development of Capture Perfect, Canon engineers debated whether to base the solution on TWAIN or ISIS technology. "Although we have historically supplied both TWAIN and ISIS drivers for our end users, our customers tend to use ISIS if there is a scanning interface technology choice," said

Mr. Kazuo Otani, assistant group executive for Canon Electronics' Image Management Systems Group. "Compared to TWAIN, ISIS-based applications will run on Canon document scanners faster, and ISIS provides more comprehensive support for our scanner features. And, since the ISIS standard is maintained by EMC, it remains consistent in its implementation."

Another large selling point for ISIS was its level of support, readily available through e-mail and phone. "With ISIS, our developers could count on full support to help resolve inconsistencies and other scanner issues—and the EMC Pixtools support team was responsive and constructive when help was requested," said Mr. Otani.

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#### A powerful toolkit

An important component of Capture Perfect is EMC Captiva ISIS PixTools®, a suite of software developer toolkits built specifically for ISIS capture, including scanning, viewing, and image processing. In deciding which functions to add to the document scanning application, the Canon team evaluated several toolkits and chose PixTools for its superior performance and speed.

In addition, Canon engineers found that PixTools offered a variety of well-documented function libraries, which enabled rapid development and included a variety of useful features, such as basic image processing. "PixTools offered features that went well beyond what we had originally envisioned for our bundled scanning and imaging application," said Mr. Nozomi Masao, manager of Canon Electronics' Image Management Systems Design department. "ISIS by nature requires less coding than TWAIN; for instance, PixTools came with pre-configured basic functions such as "scan" and "save."

#### More satisfied customers

The ISIS interface has enabled Canon to significantly reduce its support costs. In fact, the bundled ISIS-based capture application is helpful even if the customer chooses not to use it. If there is an issue with an ISIS application, Canon support can request that the user try to run the Capture Perfect application; in fact, if there is no problem encountered running Capture Perfect, then the user can be directed to his or her software developer for further assistance. Better yet, since both the software developer and Canon are customers of the EMC ISIS group, the ISIS support team can be called upon to act as a neutral investigator and problem solver to speed up the problem resolution effort and speed the conversion of unhappy customers into satisfied users.

# **Summary**

Based on EMC Captiva ISIS, the Capture Perfect application has shipped with every Canon document scanner for the past four years, and is now in use worldwide. In fact, the Capture Perfect application has been so well accepted by Canon users that other software developers in Canon's partner group requested a software development kit (SDK) for building other applications based on Capture Perfect. In response, Canon now distributes an SDK which includes the licensed ISIS technology. Canon Electronics Inc. has further cemented its full support and commitment to the ISIS technology through its ongoing development of ISIS-based drivers concurrently with ongoing scanner hardware development.



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