Join us for upcoming webinars to learn how you can adopt TWAIN Direct!

Welcome!

Welcome to the TWAIN Working Group Newsletter. The TWAIN Working Group is a not-for-profit organization which represents the imaging industry. TWAIN's purpose is to provide and foster a universal public standard which links applications and image acquisition devices. The ongoing mission of this organization is to continue to enhance the standard to accommodate future technologies. This quarterly newsletter is designed to keep you up to date on group initiatives, news and upcoming events.

Application Developers and Scanner Manufacturers:

Learn how you can quickly and easily adopt TWAIN Direct for driverless scanning!

Join us for upcoming webinars to learn more about the new TWAIN Direct standard and how you can adopt this standard now. Carefully designed to work with your time zone, these one-hour webinars will take place April 25, 2:00 pm EDT and May 22, 2:00 pm CEST.

The new TWAIN Direct standard addresses the need for something simple and direct that shortens development time for software developers and scanner manufacturers,

providing a feature-rich end user experience. TWAIN Direct eliminates the need to install vendor-specific drivers for scanning devices and image capture software. Instead, TWAIN Direct supports direct network communication between software and hardware regardless if it is a mobile device or desktop PC. Best of all, TWAIN Direct maintains backward compatibility, OS independence and can evolve to meet the needs of future technology.

Create the future! Join industry leaders in the adoption of a new standard designed to embrace the versatility and power of cloud-computing: TWAIN Direct.

Join us for these important webinars to learn more about TWAIN Direct and how YOU can adopt this standard today with minimal investment.

USA - April 25, 2:00 - 3:00 pm EDT **REGISTER NOW**

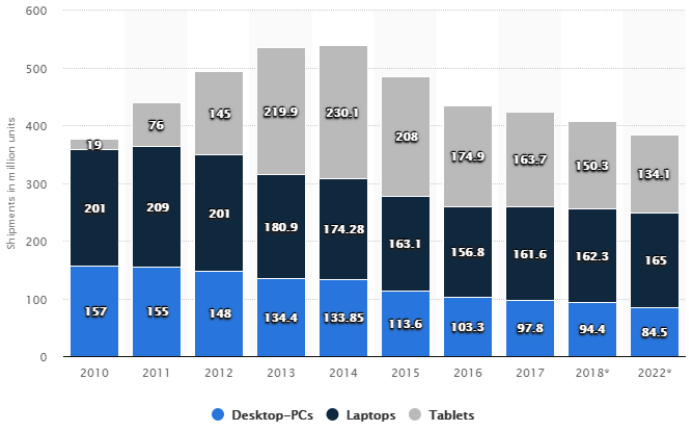
Outside USA - May 22, 2:00 - 3:00 pm CEST **REGISTER NOW**

The Trends For TWAIN Direct Document Scanning

By Kevin Neal, Founder and CEO, P3iD Technologies, Inc.

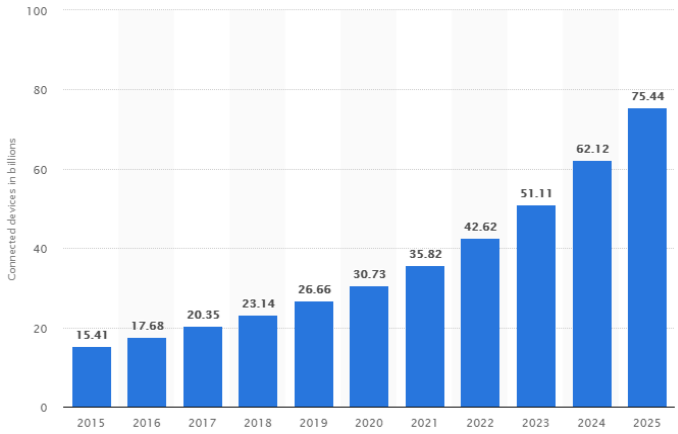
As anticipation continues to grow for the public release of the TWAIN Direct specification, the marketing team of The TWAIN Working Group is busy working on some great awareness and technical campaigns. Therefore, since many more details of the specification itself are forthcoming, for the purpose of this article we would like to focus on business justification for 'The trends for TWAIN Direct document scanning'.

Shipment forecast of tablets, laptops and desktop PCs worldwide from 2010 to 2022 (in million units)[1]



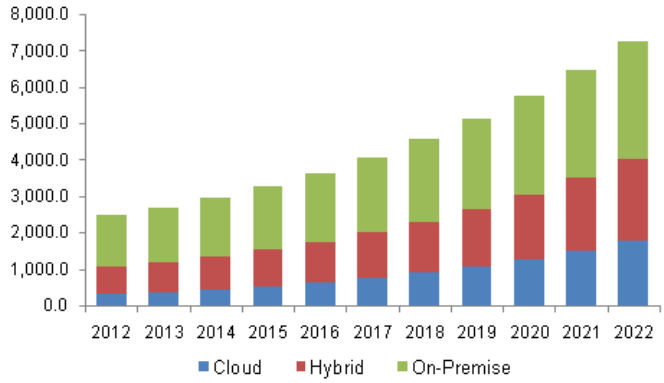
The first rather obvious trend is the decline in usage of laptop and desktop PCs. With more communication and productivity options such as smartphones, voice assistants as well as other electronic appliances, the need for PCs is decreasing. In fact, this trend of communication 'directly' from a software application to a device, such as a document scanner, is one of the main reasons that the TWAIN Working Group has been working so hard on developing the modern specification of TWAIN drivers with TWAIN Direct.

Internet of Things (IoT) connected devices installed base worldwide from 2015 to 2025 (in billions)[2]



Although laptop and desktop PC usage is in decline the need for hardware devices still exists, and more than ever in fact. These PC devices are being replaced by Internet of Things (IoT) devices such as document scanners that have 'direct' network-attach capability such as WiFi and/or Ethernet connections. It's forecasted that in 2025 there will be over 75 billion IoT devices worldwide, up from just over 23 billion in 2018.

U.S. identity and access management market share by deployment, 2012 - 2022 (USD Million)[3]



The driving force for these two trends of decline in PC usage and increase in IoT devices is clearly the third major trend for TWAIN Direct, and this is all the benefits of cloud computing services. The great business value that can be derived from a document scanning application that connects-to a whole variety of cloud services is clearly a terrific benefit to organizations. However, these new types of cloud and hybrid document scanning software applications present certain software design considerations that must be addressed.

One design consideration that we haven't had to traditionally focus on too much previously, because most document scanning applications were not cloud connected, is user authentication (or, 'identity and access management (IAM)'). For example, in order for a cloud service to know who you are and store your scanned images in the specific folder you specify, you must now log into your application, as simple as it sounds. The trend towards IAM, driven by IoT and cloud, is explosive but it's interesting to note that organizations still choose to control their own identities with on-premise or hybrid identity and access management services. One example of a popular use case is Single-Sign On (SSO) where organizations use their existing on-premise username/password authentication system, controlled by the businesses themselves, yet utilize commodity cloud services for computer resource, networking and storage. With this SSO approach organizations can benefit from the cloud, yet still maintain control over their users' credentials without giving complete access to cloud providers.

The business value of TWAIN Direct by being ahead of technology mega trends

In summary, let's dissect each one of these technology mega trends and provide a tangible business justification.

First of all, with TWAIN Direct the driver is embedded on the scanner itself which drastically reduces costs and complexity. There is obviously no need to purchase a PC and all the associated software with that PC. Also, those dreaded USB connection errors and conflicts are all eliminated which greatly reduces technical burden and provide much better user experiences.

Secondly, by being able to use whatever IoT device you wish such as a native smartphone application, web-browser client or even voice assistant instead of a thick-client USB-connected scanning application, this provides a much higher level of user productivity because they can scan documents at any time, anywhere and from whatever device they wish.

Finally, using modern identity and access management technologies, and especially IAM with Single-Sign On (SSO) capability makes document scanning applications more secure as well as enhances interoperability for improved business productivity.

Given this technology convergence of these three technology mega trends, forward-thinking organizations and software developers have a wonderful opportunity to design innovative document scanning applications. Using TWAIN Direct, organizations can reduce operational costs by eliminating PCs, provide better user experiences with IoT and improve overall security with IAM/Single-Sign On (SSO).

Sources:

1. Forecast: global shipment of tablets, laptops and desktop PCs 2010-2022
2. Internet of Things - number of connected devices worldwide 2015-2025
3. Identity And Access Management (IAM) Market - Growth, Analysis and Forecasts To 2022

Alaris

a Kodak Alaris business

Member Spotlight

Meet Mark McLaughlin. Mark is a Senior Software Engineer at Alaris, a Kodak Alaris business, in Rochester, NY, and one of the very first volunteers for the TWAIN Working Group. Mark currently serves on the TWAIN Working Group's Executive Committee as Technical Committee Chair.

We sat down with Mark recently, and wanted to gain some insight from him on the evolution of TWAIN and his role with the Group.

Q: When did Alaris join the TWAIN Working Group? What was your motivation for joining the Group as a representative for Alaris?

A: ***The company was Eastman Kodak at the time, which was a founding member and contributed to the first release of the TWAIN Specification in 1992.***

In 1997 I was asked by management to be the TWAIN technical representative. There was an urgent need for an open driver standard free of royalty payments. Kodak didn't have a production TWAIN driver at the time. Joining the working group to tap into their expertise seemed like a solid start towards developing one. We also determined that while TWAIN 1.7 was a good step towards support for production scanners, more work was needed, so I became involved in defining TWAIN 1.8.

During that process I was voted in as TWAIN's Chair of the Technical Committee. We released our first TWAIN driver for the Kodak DS3500 scanner in the fall of 1998.

Q: How do you view TWAIN with regard to the scanning industry? How has it affected the industry in your opinion?

A: *TWAIN is the most successful image capture API in the market, reaching countless applications and almost every major scanner vendor. Its design empowers applications to dynamically discover a scanner's features, and to do it in such a way that all versions of the standard are interoperable.*

Modern TWAIN applications can still run drivers created back in the 1990's. And modern TWAIN drivers can be used by older applications. That durability and consistency makes TWAIN a good choice for future-proof adoption.

Also, TWAIN is still very much a living standard. We meet weekly to discuss it, we support a website and forum to help developers and end users. Probably the best indicator of TWAIN's impact on the industry is the general expectation that legacy USB scanners include it in their driver support.

Q: How have you seen the TWAIN Standard evolve over the years? How do you think the new TWAIN Direct standard will change things?

A: *There have been several milestones for TWAIN: providing an open source Data Source Manager and sample code, adding support for Linux and macOs, adding support for 64-bit, and most importantly providing a Self-Certification path.*

Conforming to standards is challenging. Coding from a document and getting every detail correct is too much work to ask anyone who just wants to capture images, so they can do interesting things with them. With that in mind the TWAIN Working Group provides boilerplate code, and a way to confirm that a TWAIN driver is compliant with the standard.

TWAIN Direct takes these lessons and improves upon them for a modern cloud environment. By using it, application writers can maximize their image capture functionality with minimum development effort. A successful user experience is a core tenet. Users get the best images their scanner can supply, based on their request.

Q: With your time and experience working on the new TWAIN direct specifications, which is soon to be launched, what are your thoughts on how software partners and hardware OEM's will adopt this new standard?

A: *There are two main approaches to network scanner communication. Many vendors have developed proprietary APIs, and for some customers this is a good solution.*

TWAIN Direct provides an important alternative for customers who need the flexibility of an open source standard that's not bound to a proprietary API or any given cloud ecosystem. The TWAIN Working Group provides sample code at every level showing how this can be accomplished. None of this sacrifices value add, both vendors and end users are free to customize their experience. But the core foundation of TWAIN Direct is a common, interoperable standard.

The TWAIN Bridge was developed to address the problem of who goes first when it comes to developing products: application developers or scanner vendors. The Bridge lets users experience TWAIN Direct today using legacy TWAIN scanners, while scanner vendors develop the firmware for true native TWAIN Direct scanners. The TWAIN Working Group also provides sample applications for both desktop and mobile devices.

All members of the TWAIN Working Group would like to thank Mark for his many, many years of selfless dedication to the TWAIN Working Group and development of the TWAIN and TWAIN Direct standards. Mark has been key in moving development forward on the standards and his efforts are truly appreciated!

Gain early access to TWAIN Direct by Joining the TWAIN Working Group!

Are you familiar with TWAIN Direct and the next generation of cloud-based image acquisition technology?

Did you know that TWAIN Direct offers a universal platform for scanning documents from any brand scanning device, without proprietary device drivers? Best of all it can be embedded into any document management application regardless if you are using a traditional PC or Mobile device regardless of its operating system.

The future of image acquisition is here. Regardless if you are an independent software vendor or hardware OEM. TWAIN direct is positioned to revolutionize the image acquisition process by creating a universal platform for both hardware and software!

The TWAIN working group has developed everything you need to develop a TWAIN direct hardware or software solution. Beyond a working specification, we offer everything you need from sample code and applications, including our TWAIN bridge application which allows you to turn any USB based scanner into a network discoverable device.

Ready to get a jump start on developing a TWAIN direct enabled device or adding a universal scanning platform to your cloud-based software before TWAIN direct if formally launched?

Then we have the answer for you! To gain access to the new TWAIN Direct protocols, documentation support and even contribute to any improvements for the official release later this year all you have to do is become a member of the TWAIN Working Group.

Be part of the early adopters of this new technology before everyone else has access to it!

More information about TWAIN Membership

TWAIN Has a New YouTube Channel!

The TWAIN channel features videos for software application developers and scanner manufacturers demonstrating easy scanning for every application using TWAIN Direct. Our videos demonstrate how communication between software and scanners can be enabled using TWAIN Direct protocol over a network or in the cloud, including mobile applications.

Recent News

- **LEAD Technologies Joins TWAIN Working Group as an Associate Member**
- **P3iD Technologies Joins TWAIN Working Group as an Associate Member**
- **ABBYY Joins TWAIN Working Group as an Associate Member**
- **HazyBits Joins TWAIN Working Group as an Associate Member**
- **TWAIN Working Group and PDF Association Announce PDF/raster: The Next-Generation Format For Imaging**
- **TWAIN Working Group Releases 2.4 Specification and Launches New Website**