

# Document Imaging Report

Business Trends on Converting Paper Processes to Electronic Format

## The Imaging Format of the Future Is Here

Built into TWAIN Direct, PDF/R is key to next-generation document capture

*By Duff Johnson, CEO, PDF Association*

PDF/R (the “R” stands for “raster”) is the PDF technology-based ISO standard designed expressly to support modern standards-based document imaging workflows. A lightweight format designed to be output directly from the scanner, PDF/R leverages PDF’s compatibility and connectivity - as well as PDF’s vast ecosystem of developers - to effectively replace TIFF and JPEG as the primary output format for imaging systems.

### What Is PDF/R?

Based on a domain-specific subset of PDF, PDF/R is an ISO-standardized format for storing, transporting, and exchanging scanned documents. It’s just as easy to create, view, and print as any image format. As compared to TIFF and JPEG:

- PDF/R is simpler than TIFF, with fewer variants and superior compression
- PDF/R is more capable than JPEG as it is natively multipage and handles bitonal images
- PDF/R may be created as PDF/A (archival-quality PDF) conforming without changing image data

Unlike plain image formats, PDF/R offers security and digital signature capabilities as well as support for XML-based XMP metadata. PDF/R files may be viewed, OCR’d, navigated, and manipulated just like any other PDF file using normal PDF software.

## Integration into TWAIN Direct

TWAIN's royalty-free open standard protocol supports direct network communication between scanning devices and mobile or desktop applications without vendor-specific drivers. PDF/R is a native output for TWAIN Direct, allowing developers to integrate scanner output directly into server and end user applications that support PDF technology.

As such, PDF/R also represents a business strategy for document imaging vendors, integrators, and users. By moving beyond the limitations of traditional imaging technologies PDF/R smooths the transition from image data to usable documents, reducing the need for scanner vendors to provide and support software beyond that required for image capture.

## Where Did PDF/R Come From?

ISO 23504 was developed by the [PDF Association](#) at the request of the [TWAIN Working Group](#). The initial specification was first published as [PDF/raster](#) in 2017 and the ISO-standardized version, known as PDF/R, became [ISO 23504](#) in late 2020.

As an ISO standardized technology PDF/R is freely usable without royalties. Integrators can expect PDF/R files to be immediately compatible with all manner of PDF processing software.

See <https://www.pdfrafter.org> for more information about PDF/R and <https://www.twaindirect.org> to learn more about TWAIN Direct.

## Why PDF/R Matters

The fact that today's scanning and imaging system output must be transformed from images into document formats is an artifact of technological evolution, not a result chosen by end-users. With PDF/R, low-cost image capture systems can easily generate an ISO-standardized secure, digitally-signed, multipage document format with standardized metadata directly from the hardware. Normalizing imaging outputs eliminates numerous inefficiencies and vulnerabilities while the built-in document functionality opens new possibilities for integrated capture, storage, and distribution workflows. Best of all, it's just a PDF, so it works with software that's already running on almost every server, desktop, and smartphone in the world today.

## Attend a webinar on May 4!

Join panelists René Rebe (ExactCODE GmbH), Mark McLaughlin (Kodak Alaris) and Duff Johnson (PDF Association) for “PDF/R: The Imaging File Format of the Future”, a [TWAIN WG webinar at 1100 ET on May 4 2021](#).

Editor's Note: We are experimenting with something new with Duff's contribution, contributed content. We're still ironing out a few things. However, if you're interested in contributing content to DIR, please email me to let me know and/or share an idea for a contribution:  
[bdu@info-source.com](mailto:bdu@info-source.com).

## DOCUMENT IMAGING REPORT

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3. RPA
4. ECM
5. Records Management
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Managing Editor: Ralph Gammon  
Email: [rg@info-source.com](mailto:rg@info-source.com)

Editor-in-Chief: Bryant Duhon  
Email:  
Phone: +1 (301) 275-7496

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