

# idm.

information & data manager

June-July 2019

BPA IS NOT JUST  
AP AUTOMATION



AUTO-CLASSIFICATION  
OF RECORDS:  
A CASE STUDY

2019 - THE  
YEAR OF  
MODERNIZATION



# Death of a Sentencer.

## A Records Manager's Lament

The Death  
of the  
Document?

Human Rights  
Commission embraces  
machine learning

How to Leverage  
Unstructured  
Data



Print Post Approved: 100002740

**ezescan.**   
*making digital work*



A records manager's job is  
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# **A healthy future for TRIM**

"The reports of my death are greatly exaggerated". David Gould, Senior Director, Secure Content Management Solutions at Micro Focus, used the famous Mark Twain quote to open his session on the future of the ECM platform formerly known as TRIM at Realize 2019, the company's annual user forum.

Twain reportedly sent the quote in a cablegram from London to the press in the United States after his obituary had been mistakenly published. The series of name and ownership changes to TRIM/Records Manager (RM)/Content Manager (CM) since it was acquired from Tower Software in 2008 have led to speculation about the future of Content Manager.

Gould told Realize 2019 attendees, "I'm here to say, with the greatest level of confidence that Content Manager is far from dead. And it's way further from retirement than I am.

"Micro Focus, more than any other organisation since Tower Software, is fully committed not only to the maintenance of the solution but to the advancement of it as well. Content Manager is core to Micro Focus' information management strategy and we now have more developers working on the product than any time in the past five years."

Micro Focus has a large development team in Bangalore, India but the bulk of the CM development team remains in Canberra, led by Rory Kleeman who has been in charge since the foundation of Tower Software in the 1980s. Gould revealed that CM Version 9.4, due out in August 2019, will have more than 200 customer enhancements, including enhanced SharePoint/Office365 integration, new data ingestion capacity and a revamped Web client.

Micro Focus undertook a survey of more than 170 Australasian users in 2019 which found that more than 80% desired better integration of SharePoint/Office365 with Content Manager.

"SharePoint on-premise is like the Wild West of enterprise technology, in the sense that no one deployment of SharePoint looks like another. Integration between CM and SharePoint is obviously desirable, but it's not something we see a lot of organizations willing to take on themselves. While organisations may have the SharePoint expertise, or they may not have the product knowledge of CM to allow them to do it. Or vice versa.

"Most of our partners here do have that capability, and we encourage our users to exploit that because it opens up the ability to take the product from a few hundred users up to covering the entire enterprise. We are looking at new licensing models that will also help facilitate that.

"In the world of Information Management and Governance it's really important that you collect all the information, not just a portion of it. Putting compliance on 40 or 50% of your information is no better than doing none of it really."

Gould also announced plans to take one of the Azure-based cloud SaaS solutions for Content Manager, currently being offered by an Australian partner, and make it available in other parts of the world.

"We're seeing tremendous demand for SaaS based CM in the Americas and in Europe. We are pursuing a major opportunity with this partner at a major global bank. I would anticipate over the next several months we will be making some significant announcements about our own branded SaaS solution for CM as well as that from current Managed Solution Providers in Australia such as Citadel, iCognition and Informotion," said Gould.

"Moving CM to the cloud is happening all over Australia through our local partners. CM runs very well in the cloud today and our roadmap includes operational dashboards to give partners a better view into how the system is performing."

# Google extends reach of Cloud Search

Google has developed a tool that allows enterprise users of its cloud services to search through their own data, regardless of any third-party platforms where it is stored.

Amazon S3, Box, and Microsoft OneDrive as well as databases such as Oracle, MySQL, and PostgreSQL, are among the storage devices, along with Salesforce, SAP, and ServiceNow.

The search tool, which launched in February 2017, previously only crawled data that companies stored in G Suite and on local servers.

In 2018, Google began offering Cloud Search as a stand-alone product, so businesses that have not yet moved to G Suite could use Google Search.

As a part of the stand-alone offering, Google made it possible for businesses to search third-party data sources from any internal data repository that has been indexed and stores in Google Cloud Search. However, users must sign up for a Google Cloud Search account before using the APIs and software development kit.

Google is also launching new ways to find files more easily in Drive with Drive metadata, according to David Thacker, VP of product management, G Suite, Google.

Metadata categories and taxonomies are created to make content more discoverable in search. It enables users to apply metadata to any file in Drive and minimize the time involved in tracking down a document.

# Box 2FA now secures external users

Box is extending two-factor authentication (2FA) to external users, acknowledging the need for corporate and government customers of the cloud-based enterprise content management platform to provide secure access for external collaborators.

In a recent survey, nearly 2/3rd of executives stated that the external workforce is critical to company performance. 2FA for external users is the latest addition to Box's built-in core security features.

Admins can choose to require 2FA across the entire extended enterprise or can include/exclude specific users and domains. Further, they can choose immediate enforcement of the 2FA requirement or allow for a gradual transition.

The external collaborator experience is introduced with guided setup embedded into the collaboration flow for existing users and into the sign-up flow for new users.

For instance, an enterprise may choose to enforce 2FA for all their independent contractors with personal email domains (gmail, hotmail etc.) and set a 30-day transition period to avoid work disruption. Automated reminders from Box leading up to the deadline gives contractors sufficient notice to sign up for access.

Two-factor authentication is a key component of a new 'zero trust' information security model that is emerging as the line between employees and the external workforce blurs.

# Fastman takes on KineMatik in APAC

OpenText solution provider Fastman has been appointed as an authorized KineMatik partner. The partnership provides Fastman with access to the suite of KineMatik Content Suite/xECM solutions, enabling them to bring enhanced project management, turnkey business process applications, and document publishing solutions to OpenText users within the Asia-Pacific region.

"We are delighted to announce this new partnership with KineMatik," declared Alister Grigg, Managing Director at Fastman.

"KineMatik brings almost 20 years of Content Suite experience, and their range of pre-built applications will enable our customers to transform and optimize new areas of their business by extending their use of Content Suite with best practice processes and supported off-the-shelf solutions.

Established in 2006, Fastman designs and delivers high-value business and technical solutions based on OpenText Content Suite and Extended ECM.

KineMatik is a leading OpenText technology partner with over 19 years of experience. KineMatik develops solutions for OpenText Content Suite/Extended ECM that enable organizations to further leverage their existing investment in the areas of Project Management, Business Process Applications, Business Application Builder, Publisher, Form Builder and Electronic Lab Notebook.

# Backscanning out-of-the-box with THz

The laborious and expensive process of backscanning boxes of paper archives could become a point and click operation in the future, via new Terahertz imaging technology that reads pages through closed books with invisible radiation.

Terahertz technology, pioneered by Barmak Heshmat, a researcher at the MIT Media Lab, is capable of time-gated spectroscopic imaging that allows for content extraction through layered structures.

Today, that means this technology can read through 9-20 pages of a closed book using Terahertz waves. But for the future, it unlocks the possibility of reading entire boxes of paper without removing the lid.

US startup Ripcord has just appointed Heshmat to its advisory board. It plans to integrate Heshmat's groundbreaking work in Terahertz imaging technology with Ripcord's existing OCR (optical character recognition) capabilities and AI powered entity extraction.

Heshmat joins an already stellar roster on the Ripcord advisory board, which includes Apple co-founder, Steve Wozniak, former NASA CTO, Chris Kemp and Oracle co-founder, Bruce Scott.

Currently, Heshmat serves as the founder and CEO of BRELYON, a stealth startup. His past work has disrupted the world of imaging all the way from fundamentals in design of optics to introduction to new applications such as batch scanning.

"I'm honoured to join Ripcord's advisory board to help leverage lessons learned in THz imaging and time-of-flight imaging that can help Ripcord radically accelerate data

# Brisbane City Council moves to the cloud

With more than 7,500 permanent staff and a \$3B annual budget, Brisbane City Council is significantly larger than most local government organisations in Australia. It serves more than 1.2 million people and 128,000 business in the state's capital.

The council has been a long time Records Manager (RM)/Content Manager (CM) site. RM was implemented by Council as an on-premise electronic document and records management system (eDRMS) in July 2008 to comply with the record keeping requirements under the Public Records Act 2002 (Qld).

In 2018 a tender was issued to replace the on-premise configuration with a cloud platform for more than 6,500 CM users

The council has a cloud-first strategy and it was keen to migrate to Records Management as a Service (RMaaS). Council's cloud-computing strategy and roadmap identified RM as one of 10 existing applications to transition directly to ICT as a Service by 2019

Citadel Systems won the tender with its Azure-based Citadel IX platform which also included a migration to CM Version 9.

Stewart Hollingdrake, Director of Sales at The Citadel Group, said, "The council is very keen to concentrate on servicing its ratepayers and move away from worrying about technology systems, software updates and integration. The platform Cita-

del is providing will ensure their records compliance for the foreseeable future with a Service Level Agreement that will give a clear indication how it is performing.

ISO 27001 certification was a fundamental requirement for the successful tenderer to ensure end to end information security. Council also sought improved functionality to enable employees to manage document and records more efficiently and effectively with SharePoint integration, Active Directory Synchronisation, Document review, GIS functionality and enhanced Web Client functionality.

The Easter 2019 long weekend provided an ideal opportunity for the data migration Having undertaken a number of test loads, over 37TB of data comprising 17 million records was successfully moved to the cloud with existing integration with other Line of Business (LOB) systems maintained.

Citadel's team of cloud and information management specialists upgraded BCC's existing application platform as part of the Citadel-IX implementation, delivering expert advice and support throughout the project. In addition to implementation services,

Citadel will provide ongoing maintenance and support for both application and infrastructure, end-to-end disaster recovery services and zero data loss.

Citadel CEO Darren Stanley said 'We are proud to be working with BCC to transform the way they manage their information. Citadel-IX is a leading product which provides security, scalability and flexibility for organisations of all sizes.'

capture from paper documents," said Barmak Heshmat, founder and CEO of BRELYON.

"Ripcord is an innovative and forward-thinking company that combines data that we can uncover through cutting-edge non-optical imaging with machine learning and artificial intelligence to produce insights that previously could not have been imagined. It's exciting to think about the possibilities this creates as we transition from physical to digital."

"Barmak's help in commercializing this approach will make Ripcord's mission of taking the entire world paperless a reality," said Alex Fielding, founder and iCEO, Ripcord.

"It's not every day that you meet a person as brilliant and curious as Barmak, much less have the opportunity to learn from him and work alongside him to commercialize and scale a technology approach that can help us create a paperless future. This advancement in imaging is the technological equivalent of going from an X-Ray to a high-resolution MRI."

Co-founded by former Apple and NASA employees, Ripcord enables companies to digitize paper records and connect those records to existing enterprise systems. The company says it provides an alternative to outdated records management systems that are overly complex, require expensive customization and take years to effectively implement.

<https://www.ripcord.com/>

## Herbalife Chooses Esker's AP Solution

Herbalife Nutrition, a global nutrition company, has chosen Esker's cloud-based Accounts Payable solution to automate its operations at the company's shared services centre in Malaysia, which processes over 40,000 supplier invoices for 14 markets in the Asia Pacific region.

Herbalife Nutrition has embraced digital transformation to reduce repetitive, low-value activity associated with traditional AP invoicing.

Seamlessly integrated with Herbalife Nutrition's Oracle ERP system, Esker enables the company to:

- Eliminate time-consuming manual tasks with intelligent data capture
- Achieve 100 percent control and visibility with customisable dashboards
- Centralise all documents and communication on one platform
- Improve supplier collaboration with vendor portal for self-service access to invoice status

<https://www.esker.com.au/solutions/purchase-pay/accounts-payable/>

## Malicious Attacks Cause of Most Data Breaches

Malicious or criminal attacks accounted for the main source of data breaches during the first year of operation of Australia's Notifiable Data Breaches Scheme, according to a 12-month Insights Report released by the Office of the Australian Information Commissioner (OAIC).

However, this figure turns around in the health sector, where human error was the leading cause of data breaches (55%), compared with an average of 35% for all sectors. There were 964 data breach notifications under the NDB scheme from 1 April 2018 to 31 March 2019 an increase of 712% over the previous 12 months when reporting was voluntary. The vast majority of breaches (83%) affected less than 1000 people.

Malicious or criminal attacks accounting for 60% of data breaches, or 580 notifications reported to the OAIC in the period. Of these, 394 data breaches (68 per cent) are attributed to incidents resulting from common cyber threats such as phishing, malware, ransomware, brute force attacks, compromised or stolen credentials and other forms of hacking. The remaining 186 data breaches (32 per cent) attributed to a malicious or criminal attack were the result of theft of paperwork or a data storage device, social engineering or impersonation, or an act of a rogue employee or insider threat.

Finance and health were the top industry sectors to report data breaches. The report notes this is likely a reflection of the high volume data holdings in these industries and may also indicate comparatively mature processes for identifying and reporting data breaches. Both sectors face

strong regulatory scrutiny around data protection, and the costs associated with data breaches may also be higher.

Notably, phishing and spear phishing continue to be the most common and highly effective methods by which entities are being compromised – whether large or small – in Australia or internationally. Within the period, a total of 153 data breaches were attributed to this method.

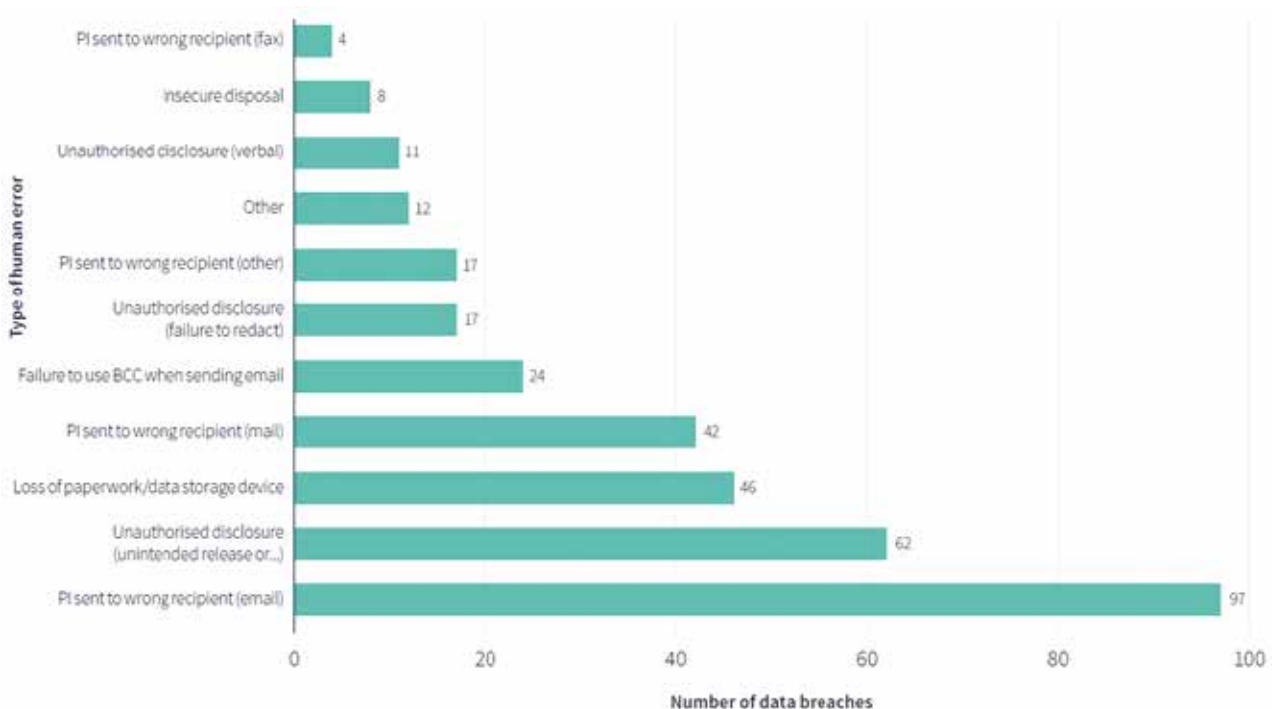
Attackers typically use phishing to elicit credentials – usually a username and password – from a user to gain access to systems. Attacker techniques continue to evolve in this area, making phishing emails increasingly difficult to detect without sustained and focused user education.

After phishing, the second most prevalent cyber incident data breach involved compromised or stolen credentials where the method of compromise was not known by entities reporting to the OAIC. An explanation may be the growing prevalence of 'credential stuffing' attacks using breached user credentials that have been leaked or posted online.

Excluding cyber breaches, social engineering or impersonation and actions taken by a rogue employee or an insider threat were also significant contributors to data breaches, as was theft of paperwork or data storage devices. After malicious or criminal attacks, human error accounted for 35 per cent of data breaches over the period (see breakdown below).

Contact information was the most common form of personal information disclosed through data breaches – it was involved in 86% of notifications.

Angelene Falk, Australian Information Commissioner and Privacy Commissioner, said, "Many entities have taken a proactive approach in engaging with the OAIC, and we have been able to work constructively with those in their response. This includes assisting entities to navigate the reporting threshold. As the year has progressed, some maturation has been evident in entities assessing the likely consequences of a data breach and in their subsequent notification processes."



Human error breaches – all sectors, from 1 April 2018 to 31 March 2019



TOTAL:  
14,622  
INV No

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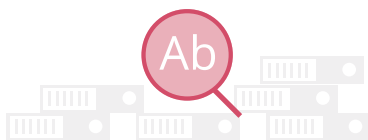
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### Mobile Capture

Captures content from document images and photos via tablets and smartphones for instant integration into organizations' business processes.



### Document Archiving

Captures paper documents and converts them into searchable digital files that include metadata, and which are optimized for digital archiving and records management processes.



### Accounts Payable Automation

Automated invoice processing can help make AP departments more productive, and offer significant potential for immediate savings and fast ROI.



### Mailroom Automation

Replaces time and cost consuming manual work for input-management by digitising, sorting and intelligently routing all incoming mail in one smart software application.



### Document Classification

Automatically identifies various types of documents based on their layout, text or images.



### Forms Processing

Automates data extraction from paper forms (e.g. credit card applications, questionnaires, damage reports, etc.) to reduce manual processing costs.

- 
- Reduce document and data related Costs — usually by 50%
  - Accelerate Transactions
  - Fast ROI — usually 3 to 6 months
  - Increase Visibility and Control
  - Optimisation of data quality
  - Reduce Operational Costs

# Get set for a skills shift as RPA gets smarter

**Professor Leslie Willcocks is a Professor of Work, Technology and Globalisation at the London School of Economics and Political Science and a global through leader and author on automation and the future of work. Prior to arriving in Australia and New Zealand for a series of high profile seminars in August in association with Blue Prism, he gave IDM a glimpse into his thoughts on what the impact of next generation automation will mean for the public sector.**

**IDM: What is the difference between RPA and intelligent automation?**

**LW:** RPA is software that can be configured to do the work a human can do that involves processing structured data, using rules, to produce certain outcomes. It is best used for repetitive, relatively simple tasks, that are large volume, where the process is mature, stable, and optimised. My widely used phrase for this is that RPA 'takes the robot out of the human'.

Intelligent automation is a catch all phrase that includes RPA, cognitive automation tools (e.g. machine learning algorithms, visual image processing, natural language processing), analytics tools and AI. The phrase is more accurate than using AI for all these technologies that do not really fulfil the definition of AI as 'using computers to replicate what minds can do'.

**IDM: You're visiting ANZ to give a series of seminars focusing on automation in government and healthcare agencies - what is the biggest impact likely to be?**

**LW:** We are finding RPA is delivering multiple organisational benefits, if properly managed. So over the next five years I would see government and health care - which are heavily information based and great targets for automation in their service and back office dimensions trialling and taking on more and more RPA, then taking advantage of complementary cognitive automation tools that enhance the power of RPA, for example allowing the use of unstructured data by converting that into structured data for RPA use, powering analytical insight from the RPA data exhaust.

The gains are in regulatory compliance, improved customer service, hours back to the business, cost, efficiency, accuracy, and dealing with the ever-rising amount of work to be done in these organisations. I see automation much more as a set of coping technologies than job replacement headcount reduction technologies i.e. about doing more, a lot more with the same or slightly a smaller number of retrained people. Note that most of the reports in the last year projecting job loss from automation to 2030 come out with very small figures, for example McKinsey in 2019 reckoned that the net job loss globally would be 1%. The key issue is skills shifts, not job loss numbers.



**IDM: From your research, how advanced (or not) are the Australian and New Zealand public sectors when it comes to adopting intelligent automation compared to the rest of the world?**

**LW:** Adoption and applications in the public sector are netting variable results. It's been slower to begin than the private sector, but as the market accelerates there's a real opportunity for forward thinking entities to become leading practitioners. Total revenue from the intelligent automation market by end of this year is sitting around \$US 5-6 billion, but its poised to rise to 46.5 billion by 2024, with revenue rising at an exponential rate - about 48-50% per annum over that period.

US health care has spent a lot on intelligent automation, to some extent to good effect, though there have been some poor results and there have been notable successes within the UK NHS. Here in Australia, finance, education and defence are making some great advances and it's going to be interesting to see what comes next.

**IDM: What are the biggest challenges for government when it comes to adopting intelligent-automation solutions?**

**LW:** There are understandable issues with political agendas - for example managing perceptions of job loss in



particular states or regions that cannot afford job loss. The main challenge is getting the management act together to scale the resources, projects, and applications in order to get the real benefits from automation freeing people up to do work that play to human strengths e.g. problem solving, customer relationships, decision making.

There is already a skills shortage felt in the intelligent automation area, so public sector organisations are going to have to carefully think through the management skills and changed skill sets needed for development and deployment and focus a lot on growing their own capabilities. Part of the general challenge is getting people to see that it is not so much about the technology as the organisational imperatives and processes, and how well the change process is managed. It is best NOT left just to IT departments, though they are vital to success, but growing the business capability side is a real challenge.

**IDM: Can you give us a sneak peek into what attendees can expect to learn from the seminar series?**

**LW:** I think we have a real insight into how automation is going to play out in the next 12 years, and it's not as most headlines suggest. I think our analysis of hundreds of deployments of intelligent automation has identified the key management practices that get superior value from automation, and some 41 material risks to avoid, and how to avoid them.

We also see the way forward, with many examples, of how the move is towards integrated automation platforms. I will also be suggesting that Artificial Intelligence is really over-hyped and organisations should be focusing on RPA and the next steps with complementary cognitive technologies – there is more than enough advantages from that, and it matches the speed with which the necessary management and skills can be put in place to deploy these technologies.

**IDM: And where do you see the biggest impact on the citizen journey occurring?**

**LW:** Well at its best automation gives a simpler faster experience of government services, more accurate, better quality, and more opportunity to deal with knowledgeable people where there are difficult problems that can be resolved by automation. Meanwhile the back-office backlogs will get more relief as a result of automation. But all this is dependent on getting the data sorted – historically most public sector organisations are not great at data management (but they are not alone in that!)

**IDM: Which government around the world is leading the pack with its adoption of automation?**

**LW:** A lot are leading the world at the level of policy, but very few at the level of actual practice!

I think Australia is doing some very interesting things, USA is making the most investments, and the UK is slow and pragmatic in its usage pattern. Not well advertised are some great uses in Scandinavia, and Germany.

*Readers of IDM can register for the seminars for free at [blueprism.com/anzsummit2019](http://blueprism.com/anzsummit2019) – Wellington (6th August), Brisbane (8th August), Melbourne (9th August), Canberra (13th August), Sydney (14th August) and Perth (16th August). Registration is essential.*



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Perth | Friday, 16 August

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[blueprism.com/anzsummit2019](http://blueprism.com/anzsummit2019)



# EzeScan eliminates the hassle of NDIS claims processing

Spinal Life Australia, a registered National Disability Insurance Scheme (NDIS) provider, has implemented a capture solution from EzeScan to streamline the process of administering plan management and invoice payment for its clients.

The NDIS is currently being rolled out across Australia, giving people with a disability access to essential funding they need to achieve their goals. There are now more than 275,000 Australians benefitting from the NDIS, according to the March 2019 quarterly report provided to the COAG Disability Reform Council. This is set to rise to 460,000 people at full roll-out in 2020.

As the number of NDIS participants has risen, so has the requisite paperwork that must flow between funding recipients, registered service providers and the NDIS. Under the scheme, individuals have the flexibility to select their own supports and services and pay for them via an NDIS portal, which contains their own personalised funding plan. Spinal Life's mission is to support people with spinal cord damage to live accessible, equitable and empowered lives, offering a range of services including personal care and allied health.

With an increase in clients asking for support to process NDIS claims and related invoices, Spinal Life Chief Information Officer Brent Silva went to market for an automation solution to solve a range of challenges.

"As the NDIS has been progressively rolled out, we have been working through significant changes to our processes and procedures, including introducing a plan management service that assists clients with the financial administration side of the NDIS," Mr Silva said.

"This service grew to the stage where we had about 1,000 invoices arriving per month. They would arrive in an inbox where one team would print them out, stamp them and manually claim them via the NDIS portal.

"This team would then provide that paper copy to our Accounts Payable Officer, who would then re-enter the data into our TechnologyOne system to be processed."

To outline the NDIS claiming challenge, Mr Silva provides the example of client who uses a wheelchair and needs to have someone mow their lawn.

"If somebody organises a mowing company to come and mow their lawn, and they are using our plan management service, they will then send the bill to us to make a claim on the NDIS portal on their behalf.

"In order for the claim to be processed by the NDIS, the person must also have the necessary funding allowances for this service under their personalised NDIS plan. Along with entering the invoice details, we need to add in a unique NDIS support code which corresponds to the services that are funded under a person's plan, and there are over 600 of those.



"We also have to match the invoice information with the participant's details including their individual NDIS reference number, which previously involved manual data queries of our CareLink client management system or the TechnologyOne system."

EzeScan was engaged to automate the processing of NDIS claims that are emailed with attached PDF invoices. In collaboration with Spinal Life, a module was developed to extract line item data from invoices and insert them into a CSV file that could be bulk uploaded to the NDIS portal for claims. As part of this module, EzeScan also obtains data such as the client's NDIS reference number through automatic querying of internal Spinal Life systems including CareLink and TechnologyOne.

"We worked closely with EzeScan to build in the ability to further assist our team by predicting the NDIS support codes that need to be added to a line item. So, for example, if it's an invoice from a particular mowing company, EzeScan is able to show the support codes that have been used on the last five invoices from this vendor, which helps to reduce time as well," Mr Silva said.

After the claims have been uploaded to the NDIS portal, a payment reference file is returned for each individual claim, including payment details and any errors that may have been found. The Spinal Life team is then able to overlay the data in EzeScan to pick up any errors and correct them at an invoice level before it is passed over to the TechnologyOne system.

"By using EzeScan, we have been able to streamline the payment processes and avoid the duplication of tasks, many of which were previously done manually," Mr Silva said. "This also improves the accuracy of the data as it is being managed in the one place, where it can be reviewed and uploaded to the NDIS portal, then amended based on the response if there are any errors found before reaching TechnologyOne."

Spinal Life is also implementing the EzeScan solutions for processing all corporate invoices through the TechnologyOne system, using approval workflows within the organisation.

Demos Gougoulas, Director Sales and Marketing at EzeScan said, "The term 'customisation' has always been synonymous with 'expensive', no more so when applying this to software development. At EzeScan we prefer to create software that is highly configurable and easy to deploy. Our solution for Spinal Life Australia was 95% existing functionality. At EzeScan, making digital work, has become our mantra".

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# Human Rights Commission embraces machine learning

**The Australian Human Rights Commission was drowning in a sea of duplicates, tangled in nested folders and perplexed by lost documents. Funding shortfalls and other challenges saw the Commission unable to implement an EDRMS solution that was viable.**

An EDRMS solution implemented for the Agency with just over 150 staff in February 2019 now employs RecordPoint's Records365 and SharePoint Online along with Machine Learning technologies to classify records without the need for staff input. Researching options, the Commission headed by Ron McLay, CIO and Ryan McConville, Information Manager, incorporated the Department of Finance's study into the failings of the traditional EDRMS.

In particular, the report suggested that records management should be automated, rather than a being a manual task for public servants. Inspired by the report, the Commission set out to implement a fully automated EDRMS, using artificial intelligence (AI) and machine learning. This would form the basis of RADICAL (Record And Document Innovation & Capture - Artificial Learning).

The Commission avoided customization and add-ons for RecordPoint and SharePoint Online, focusing on configuration instead. A common problem agencies have experienced is in the customization and use of third-party add-ins to suit existing or outdated business processes. This often resulted in systems that were difficult to use, inefficient and unreliable, and hard to upgrade with user uptake suffering accordingly.

Harnessing the native functionality of RecordPoint and SharePoint translated to improved business processes. The Commission also incorporated simple navigation for easy browsing of records, supported by a powerful search feature in Records365.

Before RADICAL, the Commission managed its corporate records in paper files and electronic file shares. The paper file was considered the primary file, while electronic copies of those files were kept for ease of reference and sharing.

The process of creating and sentencing paper files was time consuming and relied on staff members with limited experience, and often no interest in records management, to make accurate decisions about the retention and disposal of valuable corporate records.

The Commission's approach was 'configuration over customization' as recommended by the DTA, focused on human-centered design. Staff were consulted extensively on current needs and pain points. When possible, native Records365 and SharePoint functionality was preserved, limiting the need for end user training and burdensome change management.

Records classification involves categorizing records by function and activity as set out in the Administrative Functions Disposal Authority (AFDA Express).

Traditionally, the classification process has been performed manually by records officers. The manual element of classification can be time consuming, can lead to inaccuracy and can be disruptive to staff. Previous methodologies to automate records classification uses rules trees that classify records based on their metadata and saved location. However, rules trees need to be built



and maintained by experienced records officers and rely on end users to apply accurate metadata and save to specific locations. Leveraging AI in this process solves many of these problems by combining a minimal rules tree with a machine learning model. If a record cannot be categorized by a rule, the machine learning model classifies the record based on its contents. This system eliminates the need to maintain complex rules trees, the reliance on metadata and record location.

The RADICAL project team worked with RecordPoint's AI developers to create a statistical model that can classify records against AFDA Express and the Commission's agency-specific records disposal authority.

The statistical model is developed by taking a set of records that have been manually classified and applying Natural Language Processing techniques to normalize the document content into vectors. The model is then trained using algorithms. After an initial training period, the RADICAL statistical model can categorize individual records with an accuracy of 80%. The Commission expects this accuracy will increase over time. RADICAL also re-categorizes records each time they are edited, ensuring the classification is always current.

Although the machine learning model will initially work in conjunction with a rules tree, as the accuracy of the model increases the rules will be gradually removed and the Commission will rely solely on machine learning to manage their corporate records.

A 'greenfield' implementation was a strategic advantage to the design and change management process. RADICAL presented an opportunity to use an advanced AI-driven platform to deliver an easy, modern and powerful platform

without staff preconceptions and complex data migration.

Compiling a training dataset for the machine learning model proved to be another challenge. In order to provide a learning dataset for Record365's learning algorithm, a minimum of 1,000 electronic records was needed, individually classified against each class in AFDA Express and the Commission's agency specific authority.

As the Commission's primary files are paper, no electronic records had been previously classified. While a problem at first, this was also an advantage as the Commission could ensure the dataset had been classified accurately and consistently, in turn increasing the quality and accuracy of their model.

Another challenge was that the model accurately classified records according to their content but cannot yet factor in the context in which they are created. For example, a legal advice about a procurement process will be classified under the AFDA Procurement function rather than Legal Services, as its contents primarily concern procurement. Additionally, where the model identifies the correct function, identifying the correct disposal class often requires a subjective assessment beyond the capability of the Commission's current model.

However, in working with the RecordPoint team, the Commission was able to address these scenarios and have several promising options to test. The Commission is also looking for opportunities to further leverage Microsoft's machine learning technology to improve the accessibility of its records. For example, the Commission has been testing machine learning services to transcribe audio-visual records to text, and to translate some publications to Easy English.

# AWS launches Amazon Textract OCR

Amazon Web Services has announced the general availability of Amazon Textract, a fully managed service that uses machine learning to automatically extract text and data, including from tables and forms, in virtually any document without the need for manual review, custom code, or machine learning experience.

Amazon Textract is available currently in the US and Ireland and will expand to additional regions in the coming year. Open source alternatives include Tesseract (<https://github.com/tesseract-ocr>) or GOCR (<http://jocr.sourceforge.net/>)

Amazon says Textract goes beyond simple optical character recognition (OCR) to identify the contents of fields in forms, information stored in tables, and the context in which the information is presented, such as a name or Tax File Number from a tax form or the product SKU or quantity in a warehouse from an inventory report

The extracted text and data can be used to build smart searches on large archives of documents or can be loaded into a database for use by applications, such as accounting, auditing, and compliance software.

Textract's API supports multiple image formats like scans, PDFs, and photos, and can be used with database and analytics services like Amazon Elasticsearch Service, Amazon DynamoDB, and Amazon Athena and other machine learning services like Amazon Comprehend, Amazon Comprehend Medical, Amazon Translate, and Amazon SageMaker to derive deeper meaning from the extracted text and data.

Amazon says Textract analyzes virtually any type of document, automatically generating highly accurate text, form, and table data. Amazon Textract identifies text and data from tables and forms in documents – such as line items and totals from a photographed receipt, tax information, or values from a table in a scanned inventory report – and recognizes a range of document formats, including those specific to financial services, insurance, and healthcare, without requiring any customization or human intervention.

Results are delivered via an API that can be easily accessed and used without requiring any machine learning experience.

Amazon Textract takes scanned files stored in an Amazon S3 bucket, reads them, and returns data in the form of JSON text annotated with the page number, section, form labels, and data types. This data can then be used for a range of applications (e.g. generating smart search indexes, redacting text in a massive collection of forms, creating automated loan approval workflows, using the data for regulatory compliance, and flagging fraud risk for insurance claims). Customers can load the data into business software, such as spreadsheets, databases, and payroll systems, or they can analyze and query the data using Amazon Elasticsearch, Amazon DynamoDB, Amazon Redshift, or Amazon Athena.

PwC helps organizations and individuals create value by delivering quality in assurance, tax, and advisory services.

"At PwC, we work to provide our customers with intelligent

automation tools that help transform previously manual processes. We've integrated Amazon Textract into our solution for the pharmaceutical industry to automate document processing for various FDA forms like MedWatch and CIOMS," said Siddhartha Bhattacharya of PwC.

"Previously, people would manually review, edit, and process these forms, each one taking hours. Amazon Textract has proven to be the most efficient and accurate OCR solution available for these forms, extracting all of the relevant information for review and processing, and reducing time spent from hours to down to minutes."

UiPath is a leading Robotic Process Automation vendor providing a complete software platform to help organizations efficiently automate business processes.

"Amazon Textract will further differentiate UiPath's robotic process automation platform by enhancing UiPath's document understanding capabilities, enabling our customers to unlock critical business data from documents, transform that data into actionable business insights, and deliver those insights into line-of-business and operational systems," said Param Kahlon, Chief Product Officer of UiPath.

<https://aws.amazon.com/textract>.

# Nuix offers hosted eDiscovery in APAC

Nuix has launched a software as a service (SaaS) eDiscovery platform in the Asia Pacific region, including Australia and New Zealand, utilising the Ringtail platform it acquired in 2018. Nuix Ringtail SaaS runs on Amazon Web Services (AWS), which has ISO27001 certification, an internationally recognised security standard.

"There isn't enough time in the day to discover the traditional way anymore," says Shane Jansz, Global Head of eDiscovery & Information Governance Solutions for Nuix.

"People are overworked with little time to sift through mounds of information with anything resembling efficiency. Our customers have told us that it's essential for their eDiscovery platform to handle large data volumes at speed, and without failing. It also needs to be easy to use, learn, deploy, grow, and manage which Nuix Ringtail SaaS delivers.

"Nuix Ringtail enables teams to stay ahead of the data curve by using predictive coding and advanced analytics to more efficiently review data with reduced costs. We're really excited to be able to now support Asia Pacific clients with this leading-edge technology in cooperation with AWS."

Nuix, which formed in Sydney in 2000, has more than 2,000 customers in over 75 countries. The release of its Ringtail SaaS solution into Asia Pacific region is the next step in the company's SaaS growth strategy according to Paul Muller, Nuix CEO Nuix, Asia Pacific & Japan.

"Places like India, Japan, Singapore, Australia and New Zealand are highly sophisticated technology markets, often early adopters of new technologies and in many respects ahead of the digital transformation curve," said Muller.

"We know that businesses involved in discovery want smarter ways of working and we're seeing a positive market response to Ringtail SaaS with customers already lining up for the new service. Technologies like Nuix Ringtail SaaS can have a huge impact on improving productivity and reducing the costs of legal discovery and regulatory response."



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- Records Management
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# BPA is not just AP Automation



**By Kris Elliott**

**Recently I attended a business networking event and, as you'd expect, the question "So what do you do?" was asked. I gave much the same answer as I've given hundreds of times before in that situation and my elevator pitch included the words, 'business process automation' (BPA).**

The person I was speaking with quickly replied with something along the lines of, "Oh, we are all sorted in that area. We already scan our invoices". Now in the moment I naturally began to paint a picture of AP Automation being more than just scanning invoices.

However, thinking about that conversation in retrospect some days later, I realised that there was perhaps a larger assumption that I had left unaddressed. That assumption prompts the question: "When did Business Process Automation become a synonym for Accounts Payable (AP) Automation?".

It's no secret that AP Automation is a popular project for organisations looking to find efficiencies in their back-office processes, however BPA is not just some marketing catch phrase for AP Automation.

Sure, in a sales conversation it's the example often reached for given that it crosses almost all businesses, it isn't industry specific terminology, and it is a common challenge most businesses face. However, it's an example that's been used so much that it's now polluted the meaning of Business Process Automation to the point where that's the instant word association people have.

Organisations are getting so blinded by the example being used to illustrate the larger concept that they are losing sight of the concept itself. This is perhaps compounded by some vendors who are conflating the terminology in an effort to appear cleverer than they are. The end result is that companies have heard about AP Automation so much they developed BPA sales fatigue.

The unfortunate outcome is that they are now missing out on the efficiency gains other Business Process Automation projects could deliver for their organisation.

So, in an effort to help reclaim the phrase "Business Process Automation", here are three quick examples of other non-AP business requirements that a BPA project

could deliver. While granted some of these may be industry specific solutions, and of course they are document focused processes, I nevertheless challenge you to see past the specific document types and envisage how the underlying solution would apply to your business.

### Onboarding

Whether onboarding customers, suppliers, patients, students, staff, or even sub-contractors; on-boarding a third party into your line of business applications generally requires a myriad of forms, supporting documentation, checks & validations, and some form of approval.

Business Process Automation looks at:

- the information you need to gather, e.g. how the information comes into your organisation;
- how that information is validated, e.g. reference checks, database look-ups, etc;
- how the decisions are made based on that information including who makes the decision, e.g. which applicant to hire, who your preferred supplier will be, delegated authority levels, etc; and
- how the information is then ingested into your system of choice

### Compliance

Compliance paperwork is usually all about making sure that your business is following all the rules, laws, guidelines and regulations around how you provide your products and services to your markets. Depending on your industry, this paperwork manifests in different ways and often there is quite a lot of it.

For example, if you are in the business of exporting food products to other countries there are all manner of MPI and biosecurity related certifications needed at both the port of exit as well as the port of entry. Whereas if you are in the construction industry compliance might mean Health & Safety. It could be the way in which your subcontractors are inducted to sites, daily hazard briefings, incident forms, or even the library of sub-contractor H&S Policies you need to keep.

However compliance is satisfied in your industry, you can be certain that involves not only the gathering of various documents from multiple sources, but also on the searchability, retrievability and auditability of those documents.



# Should Robots Run the Accounting Department?

By Steve Smith, Esker

If you've ever worked in an accounting department that relies on manual processes, you'll know exactly how days filled with tedious data entry tasks can make you feel: like a robot.

It's inevitable. But most highly trained professionals in the accounting department didn't enter the accounting field to become invoice sherpas. Not only does the tedious drudgery of keying in data on a computer and shepherding invoices from one place to another take a toll on employee morale, it has other significant downsides.

None of us are perfect, which means that a reliance on a manual accounts receivable (AR) process will inevitably lead to mistakes and potential compliance failures. Equally important, those inaccurate invoices translate into late or even missed payments from customers, not to mention the damage caused to the customer relationship.

Does that mean that jettisoning people for a fleet of robots in the accounting department is the best way to eliminate errors and avoid the displeasure of understimulated employees? It certainly doesn't. Trained accounting professionals are critical for ensuring your company is meeting compliance obligations and able to provide strategic insights on improving the efficiency and financial performance of your business. People will always be the critical foundation of an effective accounting department.

Nevertheless, there are ample reasons to find a way for technology to free up accountants to pursue more strategic work that can boost the bottom line. One example: technology such as robotic process automation (RPA) presents a flexible and economic solution that prevents your staff from having to act like invoice escorts.

If you wonder whether making the leap to implement

sophisticated technology to replace mundane tasks currently handled by your accountants will make you a pioneer (and let's face it, most accountants don't want to be trailblazers), rest assured that you're in good company.

In fact, research firm Gartner Inc. reported that global spending on RPA software was estimated to have reached \$680 million in 2018, an increase of nearly 60 percent from 2017. Gartner also projected that growth would continue to be brisk, estimating that RPA software spending would hit \$2.4 billion by 2022. The rationale for this rapid embrace of RPA – which Gartner reported was led by banks, insurance companies, utilities and telecom firms – was straightforward and based on the benefits that come from automating tasks that would otherwise be handled by people.

"End-user organizations adopt RPA technology as a quick and easy fix to automate manual tasks," Cathy Torbohm, a Gartner vice president, said in a press release about the research results. "Some employees will continue to execute mundane tasks that require them to cut, paste and change data manually. But when RPA tools perform those activities, the error margin shrinks and data quality increases."

We all know what increased accuracy and improved data quality means when it comes to handling customer invoices: security and scalability, greater consistency, reduced costs and happier employees.

An example of how this all works can be found in Spain, where the Bel Group, a world leader in branded cheese and a major player in the healthy snack market, opted to automate its AR process. Like so many large organizations, Bel was eager to get rid of paper invoices altogether and better utilize automation to ensure customer invoices are accurate and received quickly.

The new process integrated seamlessly with its existing IT infrastructure and drastically increased invoice traceability. The cost-savings, enhanced visibility and improved efficiency that Bel has experienced are the direct result of handing over manual data tasks to technology. Maybe people and robots can live together just fine after all.

*Steve Smith is U.S. chief operating officer at Esker.*

## Contract Management

Contracts form the basis of many of business relationships organisations undertaken with outside parties. From suppliers to customers, sub-contractors to service providers, the scope and nature of these legal documents can be wide and varied.

Business Process Automation can add efficiencies to all steps of the contract lifecycle by providing visibility into the status of individual contracts, while also providing organisation level reporting.

A Business Process Automation project could be used to manage: new contracts requests; data capture; document creation; review & negotiation; approval; digital signatures; execution KPIs; going reviews; and renewals.

So, as I've illustrated, Business Process Automation is not

just a fancy name for scanning invoices. If your AP Invoice processes are your current frustration, then we are only too happy to have a chat about them. However, if your pain-point is something else entirely, let's not get mired in financial jargon.

Let's focus on the real challenges your business is facing. Furthermore, let's uncover the path forward and take the journey of business process automation together.



### Kris Elliott

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# 2019 - The Year of Modernization

By David Jones, Nuxeo

**Enterprise content management (ECM) has been with us for almost 20 years now. In an ideal world, one could argue that this longevity has given us a deep understanding of how to manage content within an organization. The reality however is quite different.**

Seventy-five percent of ECM users claim they can't find the information they need to do their job in a timely manner. One of the main reasons is the failure of ECM to deliver on its "single version of the truth" promise. ECM systems were supposed to become the single, central hub for content within an enterprise. But we all know that never happened - and now almost all organizations have multiple repositories for content and process, let alone for data.

But let's not paint every organization with the same brush. Some are blazing a trail which sees them taking very simple, traditional concepts and creating digital equivalents. Often, they do this to specifically address the disjointed, digital landfill that ECM systems have left them with. The use case below describes how the intelligent modernization of an aging information management architecture can be used to both strengthen compliance and drive competitive advantage.

### The Data Vault

A leading global financial services institution needed to react to the challenges of new competition, increased regulation, and a desire for enhanced customer experience by taking an age-old financial concept and digitizing it.

The bank took the idea of a safety deposit box and created a digital version - a "Digital Data Vault." The data vault would serve as a place where:

- Customers could access all of their bank-related information
- Customers could upload, store, and view their critical personal documentation such as deeds, contracts, insurance documents, etc.
- The bank could enhance their ability to meet regulations such as GDPR, while reducing the overall cost of compliance

To achieve these goals the bank had to overcome a number of challenges that will be familiar to many organizations.

The bank had vast amounts of information in various formats scattered across the organization in numerous systems that were difficult to access. Many of these systems contained data that was out of date, making compliance with regulations such as FATCA difficult. In this specific case, there were six legacy archives that were largely obsolete and expensive to maintain. The bank needed an architecture that could enable them to ease the transition from their antiquated legacy systems without disrupting the business.

Despite these significant challenges, the bank persevered and worked through a major technical and change management project. The project delivered a system that provides a paper-free, single point of access for all of their customer information, that:

- Enhances customer experience
- Provides a means to harvest and interrogate all customer-related content and data from one place
- Reduced costs by enabling the sunsetting of obsolete legacy systems
- Reduces time to market for new products
- Enhances compliance and financial crime/fraud capabilities

So how did they manage to deliver such a groundbreaking project? The key was their staunch focus on three pillars of good technical and business practice.

### 1. Business-Driven

Throughout the whole project the focus was on the business goals. Never did the project team deviate from why they were doing this. There were no technical egos at play, forcing particular tools or techniques into the project. The business goals were king.

### 2. Connected Content and Data

A core technical facet was that the vault needed to contain content and data from across the business, or more specifically, from across the legacy systems. That content and data did not necessarily need to be migrated into the new system but needed to be accessible from the new system. This subtle but important aspect enabled a gradual transition from old repositories to new and avoided the big-bang migrations of yesteryear.

### 3. Common Metadata

Content professionals know how valuable content is - data professionals know how important data is. But content and data typically live in separate worlds. Metadata is the marriage of the two, and the project team understood this. The value that can be gained from creating a common metadata layer to connect the two worlds is vital.

From a best practice perspective, the example cited above delivers some tremendous insight.

Many organizations rush blindly into digital transformation without ever asking what it really means for their business to transform digitally. At a minimum, an organization needs to truly understand what it is trying to achieve and how to change the way employees think about the business.

In many cases, the business change can be driven by the desire for enhanced customer experience - it is a very compelling driver in today's world.

Collapsing the worlds of content and data into one is not for the faint of heart. But the benefits of creating a single, connected view of all of the "information" across an organization is immensely powerful - and a necessary step on the journey for any organization hoping to achieve digital transformation.

Only by having a solid information management infrastructure can an organization hope to perform against challenging and ever-changing business requirements. But, given the consequences of not adapting, of not reacting to the rapidly changing needs of the market, what choice do organizations have?

As a result, 2019 truly does look like the year of modernization.



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# How one Victorian Agency Now Protects Their Emails with Ease

In 2018, the Australian Government released the new Protective Security Policy Framework. This framework aims to assist Australian Government agencies to protect people, assets, and information, as well as providing guidance on how to apply the framework's requirements.

From an information security perspective, the PSPF focuses on maintaining the confidentiality (ensuring information is accessed by the right people), integrity (ensuring information is accurate, complete and up to date), and availability (ensuring people have timely and reliable access to information) of information.

This, in conjunction with the release of new protective markings by the Office of the Victorian Information Commissioner and the current requirements of the Privacy and Data Protection Act 2014 (Vic), prompted one Victorian state government agency to seek the development of a solution that would help them manage the ever-increasing volume of information being shared over email. As organisations produce a range of information using different tools and techniques, the approach to the application of protective measures will vary. In the case of Emails, it is the responsibility of the originator to ensure any recipients of the information they create understand how to protect the information.

In order to achieve this, the originator is required to apply relevant markings to emails (referred to as "Protective Markings") to communicate to the recipient how the information needs to be protected.



Figure 1: Mapping from Old to New Protective Markings. Victorian Protective Data Security Framework | Version 2.0 | February 2019

The Victorian Legal Services Board recently engaged Kapish to design and build a technical solution that would assist them in complying with the requirements of the Privacy and Data Protection Act 2014 (Vic), supported by the PSPF.

The solution should:

- Apply the relevant protective markings to emails
- Apply the relevant security classification to emails
- Assist with the accurate registration of emails into the organisation's EDRMS - Content Manager
- Be intuitive to use to increase the uptake of the new solution

Kapish worked closely with the Victorian Legal Services Board to design the solution using the updated Protective Markings provided by the Office of the Victorian Information Commissioner (see Figure 1: Updated Protective Markings). The solution has been successfully implemented at this agency.

The solution that Kapish developed works seamlessly with Microsoft Outlook, allowing Protective Markings and security classifications to be applied to emails as they are sent out. The 'Application of Protective Markings' component, initiated on 'send', gives the user the ability to choose the most appropriate Protective Marking from a series of Security Classifications and Information Management Markers.

The available Protective Marking options are derived from values created and managed in Content Manager (CM) as Security Classification and Information Management Markers. This will allow the CM Administrator to easily modify the available Protective Markings values in CM.

The selected Protective Markings will be applied to the email in the following three (3) places:

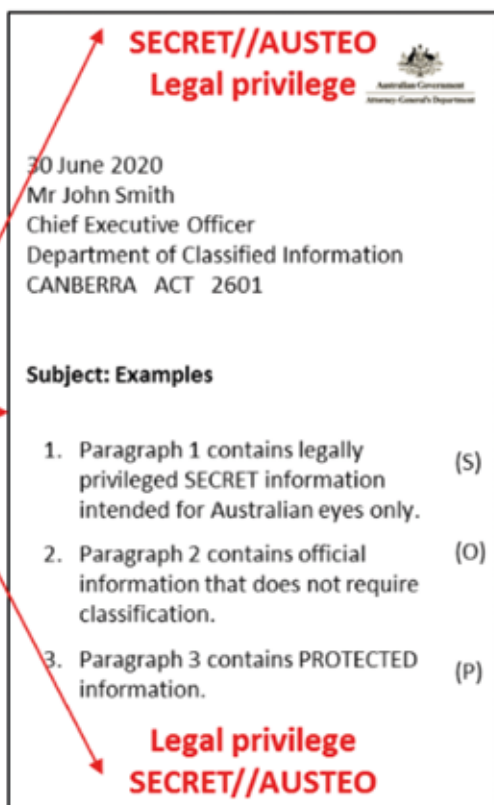


Figure 2: Example email showing the proposed formatting of Protective Markings in Email Body Header and Footer

## WA Auditor General slams security shortfalls

The Auditor General of Western Australia has called on state government entities to upgrade their information security practices, with a new report finding, in some cases, a complete absence of infosec policies.

In its annual Information Systems Audit Report, Auditor General Caroline Spencer details the results of the 2018 probe of government entities, looking to determine whether controls "effectively support the confidentiality, integrity, and availability of information systems". An audit of key business applications at four public sector entities found all four had weaknesses, the most common of which related to poor contract management, policies, procedures and information security. The Recruitment Advertisement Management System is an application employed by the WA Public Sector Commission to manage staff recruitment and redeployments, and to record severance details. The public use the system to apply for WA government jobs. The system is externally hosted and managed by a third-party vendor in a Software as a Service (SaaS) arrangement. It contains personal identifiable and sensitive information such as names, addresses, work history, qualifications, bank details and tax file numbers. The Auditor General found that poor user access management has the potential to expose personal and sensitive information to inappropriate access or misuse, particularly as the Commission has kept all information stored on the system since 2003.

It also identified the following control deficiencies:

- **Unsupported software** – Some software components that underpin the application are no longer supported by the software vendors. In addition, 1 component has not had software updates applied that fix known security vulnerabilities. Unsupported and out-of-date software increases the risk of attackers using known vulnerabilities to gain access to sensitive information or disrupt systems.
- **Disaster recovery not tested** – The vendor has not performed a full disaster recovery test since 2015. The Commission cannot be certain that it can recover the application as required.
- **Outdated technical specification documentation** – The technical documentation describing the application does not reflect the current application environment. The Commission

cannot be certain that all appropriate controls are in place to protect the application.

■ **Unspecified data retention** – Data retention requirements have not been specified. All information since 2003 has been retained in the system. This information is vulnerable to exposure if the application is compromised. Further, retaining all this information increases the risk that Australia's Privacy Act 1988 and the European General Data Protection Regulation may be breached, which could result in infringements and reputational damage. The contract should also be consistent with the State Records Office's General Disposal Authority. This states that job applicant information should be disposed after 7 years for successful applicants and 1 year for unsuccessful applicants.

It also identified the following weaknesses in access controls to minimise the risk of unauthorised access:

- **Ineffective user account management** – The Commission does not have a policy or a procedure to manage entity user accounts, including highly privileged accounts. In addition, there is no process to routinely review user activity and their levels of access. There is an increased risk of unauthorised access to, or misuse of, information in the application. Ineffective user account management may have contributed to the high number of enabled accounts (approximately 30,000). 26% of these (8,000 accounts) have never been used and 50% (15,000 accounts) have not been used in over 6 months.
- **Weak password configuration** – The 'admin' portal does not meet good practice requirements for password complexity and does not limit the re-use of passwords. In addition, multi-factor authentication, where user access is only granted after successful presentation of 2 or more pieces of information, is not required to access the application. This leaves the portal susceptible to password guessing attacks and unauthorised access to information.
- **Unmanaged generic accounts** – Fifty five entities use generic accounts to access the internet facing reporting portal and the password for the generic account is easy to guess. Generic accounts and passwords are shared by email and the Commission does not know who has been given this information. As the password is easy to guess and not changed on a regular basis, staff moving within or leaving an entity may retain access to the reporting portal, increasing the likelihood of unauthorised access and disclosure.

The full report is available at <https://audit.wa.gov.au/wp-content/uploads/2019/05/IS-Report-2019.pdf>

■ Appended to the 'Subject' field e.g. "This is an example subject line [SEC= PROTECTED]"

■ Added to the Internet Message Header Extension e.g. "X-Protective-Marking:SEC= PROTECTED,DLM=Sensitive:Personal"

■ Added as a Header (optionally in the Footer too) in the Email Body – Bold typeface, Red font colour and Centre Paragraph Alignment (refer to Figure 3: Example email showing the proposed formatting of Protective Markings in

Email Body Header and Footer).

The CM Administrator has the ability to configure the add-in to suppress the 'Application of Protective Markings' dialog box for emails addressed to internal contacts.

The Victorian Legal Services Board are the first Victorian government agency to implement such a solution.

For further information visit <http://kapish.com.au/contact-us/>

# The Death of the Document?

**By Joe Shepley, DocuLabs**

**In May of this year I delivered the keynote at the Document Strategy Forum in Anaheim, CA. My topic? The Death of the Document.**

Ever since AllM proclaimed “paper free in ‘93,” we’ve been hearing about the end of the document: no more paper, only a blessed nirvana where we can work with digital data, unfettered by the constraints of the way things have always been done. Cut to today, and we joke about “paper free in 2003, ‘23, ‘33 ....” Which is to say that, despite the massive amounts of brainpower expended on the paper problem, in many cases, we seem no closer to realizing the paper-free dream than we were in the early 1990s.

The very premise behind the “death of the document” predictions and the effort to eliminate paper seems misplaced.

The issue isn’t documents versus data or paper versus electronic, but rather what’s the most effective way to gather and present data to end users — whether customers, employees, or other parties (regulators, external partners, etc.)?

Let’s first look into how we might define a document. Then, let’s use that definition exercise to ask whether documents might be a perennial part of how we conduct business successfully, even if their relative dominance declines in comparison to other modes, such as apps and IoT sensors.

Finally, let’s sketch what a future with documents and (dare I say it) paper looks like.

### What’s a Document?

This is an important question for our current context. People involved in forms design, transactional customer communications, etc., need to be deliberate about their work to justify spend on resources, software, hardware and professional services.

These practitioners have been grappling for many years with how to define exactly what a document is. Yet despite this effort, I haven’t seen a definition that settles the issue.

Taking the question up a level beyond these more tactical concerns, I propose we view a document as the following:

1. A container that holds data, but that isn’t a structured database (rows and columns).
2. A container that, whether paper or electronic, is a way to gather or present data, but is not a structured database application or interface.

Now let’s take it a step further and think about what all businesses, in every industry, of every size, do with data: they gather it and manage it to get work done.

If we agree with this, then documents (whether paper or electronic) are one modality among many that an organization has available to gather and manage data. Web forms, fillable PDFs, IoT sensors, apps, data streams and more can be used in addition to documents.

Although trying to reach a more nuanced definition of a document has value for some contexts, adopting this broader definition frees us to think about data in general.

### It’s Not About the Container - It’s About the Customer

The most important advantage of adopting this more expansive and general definition of a document is that it allows us:

- 1) to consider documents as one modality among many for gathering and presenting information; and
- 2) to focus on the needs of the customer and choose the mode of information gathering and presentation accordingly.

Looked at this way, the question becomes what mode of gathering and presenting data will be most valuable to customers while creating the least friction to our organization? To adopt this perspective, you need to ask yourself what method of gathering and presenting data is best for the customer for a given business process (e.g., mortgage origination). There likely won’t be a single best answer, but rather a number of options (paper, app, data stream, etc.). The next question is of these options, which presents the least friction for us as an organization? And then finally, can we afford to implement the option that addresses both considerations?

### Documents Not Going Away Anytime Soon

If we truly shift our focus onto the modality best suited for gathering and presenting data, then we have to admit that documents (and even paper) will always be a part of how we do business. A bank in the open expanses of west Texas trying to get a lease agreement from a farmer will, for the foreseeable future, be working with paper. And that’s okay. The cost, effort and risk of failure in trying to get these farmers to adopt a digital-first approach to leases isn’t worth the effort: paper is the best option.

No matter the answer you reach, the process of asking and answering these questions will help your organization focus more narrowly on customer needs (a universally good thing), rather than on trying to define documents versus content versus data, etc., in an overly academic way.

### Keep Focused Managing Data in a Way that Works for the Business and its Customers

It’s important we continue to debate how to define a document, whether to eliminate paper, and similar points. But don’t let the debates cause us to lose sight of the bigger picture: we’re successful as a business based mostly on how well we gather and present data.

Given the ever-widening array of options for doing so, documents and paper are decreasing in importance. Yet there will always be a place for them in our efforts to conduct business more effectively and economically.

So let’s worry less about the end of documents and worry more about how to gather and present data in a way that is affordable and serves our customers.



**Joe Shepley**

VP and Practice Lead for Doculabs' InfoSec practice.



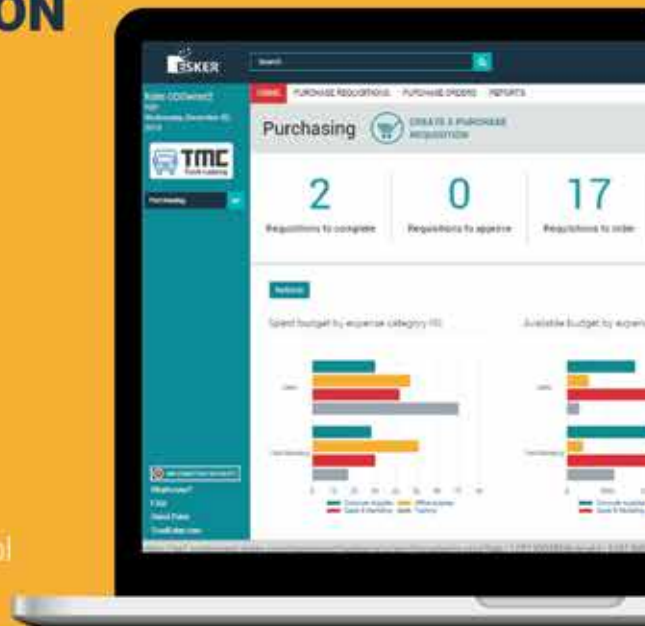
## PURCHASE-TO-PAY AUTOMATION

### ACCOUNTS PAYABLE

- Automatic invoice matching
- Accurate and rapid financial closing procedures
- Audit trail and KPI management
- Vendor portal for easy communication

### PURCHASING

- Centralised application to raise purchase requisitions
- Supplier catalogue management
- Quote to purchase requisition conversion
- Optimises indirect spend requests with budget control



RECEIVE & SCAN



EXTRACT



VERIFY & MANAGE



ANALYTICS  
& AUDIT TRAIL



SUPPLIER  
PORTAL

## ORDER-TO-CASH AUTOMATION

### ACCOUNTS RECEIVABLE

- Automates the delivery of invoices (all formats)
- Reduce receivable and DSO rates
- Get paid faster
- E-invoices compliance (PEPPOL format)

### SALES ORDER PROCESSING

- Process orders in all kinds of format
- Issue management workflow
- Respond to inquiries faster
- Measure efficiency and have accurate forecast



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# RPA surge inspires ABBYY acquisition of TimelinePI

Enterprise Capture leader ABBYY is moving up the enterprise software food chain with the announcement it will acquire US startup TimelinePI. TimelinePI provides a process intelligence platform designed to empower users to understand, monitor and optimize any business process.

TimelinePI says it can connect and extract data from practically any system used in the running an organisation whether Legacy Systems, Packaged Applications (ERP, CRM, HCM, etc), Trading Partners, Databases/EDW/Marts.

The platform is designed specifically to aggregate and reassemble the breadcrumb trails left behind in the audit logs of transactions executed by any software application. It then uses these to understand the impact and effectiveness of business processes and identify opportunities for productivity gains from digital transformation investments.

Buying a process intelligence software startup may not seem a natural move for ABBYY. However, the company claims the purchase of TimelinePI is a natural extension of its successful drive to expand its integration with leading robotic process automation (RPA) platforms.

ABBYY Chief Sales Officer Bodo Wagener admits, "It may seem odd at the first glance, but if you look into the logic behind this deal, it's actually a very smart move. ABBYY has positioned itself in the RPA space, and we are closely collaborating with the Blue Prism's and UiPath's of the world".

"TimelinePI is another nice complement to this market. The RPA industry is looking to improve processes and TimelinePI is actually the tool that helps the end user to understand where the problem actually is. It provides a way to understand bottlenecks in the company and then RPA will follow.

"One of the biggest challenges with RPA right now, is to identify the most suitable use cases. If you understand the processes, it's much easier for you to find a suitable use case. We believe that this TimelinePI acquisition is actually very complementary to ABBYY and our ecosystem of not only RPA vendors, but also BPM vendors and ECM vendors, in workflow and approval as well."

Joseph Rayfield, EVP Sales and Business Development for TimelinePI, explains, "There seems to be two major concerns around truly expanding and accelerating our RPA initiatives. The first one is, no one knows what to automate or why they're automating it, so identifying, justifying, prioritising what to automate is critical if we're going to make RPA a core enterprise function.

"The second stumbling block, which becomes increasingly important, is whether everything is working as we expect it to work post implementation. Believe it or not, these robotic processes don't always run at maximum levels of efficiency. So, understanding how they're performing on a daily basis, and understanding how they affect the rest of the end-to-end process is important.

"It really stems from our desire to create an environment

of sustainable and continuously improving automation. It is important to accept that if you are going to accelerate a number of steps by 100% or more, it is inevitably going to have an effect on the downstream process flow, and we also need to acknowledge that as processes change over time it will affect the robotic execution. So, staying on top of process operations on an ongoing basis is extremely important as we significantly expand out robotic deployments.

"Furthermore, being able to really interact with 'in flow' processes, to the point where you can detect a business condition like a missing credit check or missing fraud check, and being able to automatically spawn a digital worker to remedy that situation, starts creating 'true' closed loop remediation and significant additional value in automation"

Over the last 25 years, the cofounders of Timeline PI have created multiple enterprise software companies: including data integration, business process management and a business intelligence platform, two of these subsequently being sold to webMethods and Kofax respectively.

"So, without giving their ages away, they've spent a long time involved in processes and analytics so they really understand this emerging space well," said Rayfield.



*TimelinePI EVP Sales and Business Development Joseph Rayfield*

"To me Timeline PI is the natural evolution of process analytics. You've got the manual approaches of Lean and Six Sigma which are really powerful, but suffer from being costly with regards to both time and money, and it is also, if we are honest, partially subjective. We have also seen an influx of Process Mining, which can be very interesting but, to this day, tends to be more of a retrospective view of how you have previously performed rather than anything pushing towards operational process performance monitoring or predictive capabilities.

"One of the most interesting thing about process analysis is that it has a dramatically reduced the time to value when compared to existing types of analysis. It really only needs three things too get started: a time stamp that something's happened, an activity log of what happened and a unique identifier of who or what it happened to.

"So, the data requirements for our type of analysis are just a fraction of what you'd need for BI. And if you think of any modern system of record, they all have a capability to export those three specific fields. Now obviously we like



# Riding the Digital Transformation Wave

**Chief Sales Officer Bodo Wagener oversees the global sales organization for ABBYY. On a recent visit to Sydney he sat down with IDM to discuss challenges and opportunities in the enterprise capture market.**



*ABBY Chief Sales Officer Bodo Wagener*

**IDM: ABBYY has been around for a long time helping companies with scanning and workflow tools, is it now looking for ways to extend its traditional business model?**

**BW:** Yes, but that doesn't mean we give up our traditional markets. Back office capture is a mature market, it's been around for 20 years. There are still some organizations installing capture for the first time, but you also find many that are installing capture for the third time, and it's getting more and more complicated to do business there. We must look into other areas and we are doing this right now.

**IDM: Which markets are you focusing on as you look to extend from traditional back office capture?**

**BW:** Dealing with documents, with text, with language, that's our DNA and it doesn't make sense for us to go to a completely different area. We see a lot of activity in the digital transformation market to enable smoother customer processes, better customer experiences, faster onboarding and more revenue. This market is way bigger than our traditional back office market, but it's driven by other people who are not so familiar with data capture. They're not familiar with traditional PDF and document conversion. So, we must approach them in another way, and that's what we are doing right now.

**IDM: What technologies and processes do you see as the most exciting for taking your approach forward?**

**BW:** We have to change to make it easier for users to consume and roll out our Content IQ technology. Collaboration in the RPA market requires a different go-to-market than in the past. It needs less professional services and products that work out of the box. These need to be consumable by knowledge workers without teething problems. We're investing in this area.

**IDM: ABBYY has been developing its computer linguistics technology since the 1990s. How is it being deployed in the market today?**

**BW:** We have invested a lot of resources and money into this technology. We now embed it in our existing products to make them better, to make them smarter, especially the learning capabilities and the artificial intelligence

attributional data like who was involved in the process, which time zone was it in, which department was it, etcetera.

"But realistically, if I can get the three mandatory data points, I can successfully provide process analytics - automatically displaying sequencing of events, bottlenecks, missed steps, repeated steps and more....."

"To help we've got multiple out of the box connectors like ServiceNow or Salesforce and it's very simple to do real time integration with other leading platforms. For some legacy systems, there's a bit more work to do but what we've found that the data is generally available and it is certainly worth getting to. Finally, TimelinePI has an

technology pieces we have been integrating into our standard products. This makes them less dependent on configuration, able to learn and train on the job.

**IDM: Amazon and Google are both now offering OCR and machine learning as a cloud service. How big a threat is that to the traditional OCR vendors?**

**BW:** It seems to me at least for the near future that Google and Amazon are not trying to create a business based on these technologies, that they're using these technologies to bring users to their platform. I don't think they've really started to compete with us in selling IP based on these technologies. To embed it, you must have a professional services team that is able to deliver projects on the customer's side and is able to commit to SLAs. Just try to imagine calling somebody in Google or Amazon to say you have a problem with your installation. You won't get any help. You can try, but you're pretty much on your own. Our licence agreements provide this kind of protection to our customers, and I think this is one of the huge benefits we offer.

**IDM: What are the biggest challenges in your business right now?**

**BW:** There are great challenges all around us. I think technology-wise, we have to understand that the future is not on premise any longer. The future is cloud-based, that's clear. We are now focusing more on offering different consumption models like subscription and per transaction, which better facilitate current business requirements and potential transition to cloud, rather than the traditional perpetual licensing model. These consumption models will assist our customers and us to better facilitate the fast paced and ever-changing business requirements especially when it comes to "Speed to Value" and utilisation of cloud. Right now, we are really investing in making consumption of this kind of technology much more intuitive, much more out of the box. That's our mission.

extensive ETL function that can help all forms of data preparation - to simplify and automate as much data manipulation as required.

"Realistically, Process Intelligence is fast becoming a strategic imperative - regardless of industry, all organizations have a myriad of hundreds, if not thousands of different processes, some of them very horizontally applicable with some vertically specific.

"The TimelinePI vision is that in the future, all organisations will have libraries of 'living' interactive digital twins that will be continuously monitoring how their processes are executed, and how they are affecting the experience of the internal and external customer," said Rayfield.

## RPA investment continues to surge

Companies are investing heavily in robotic process automation (RPA) to carve out a competitive advantage, according to a survey of executives from 450 companies in 14 markets worldwide (including Australia) conducted by Protiviti. The survey found the average annual spend on RPA was around US\$5 million, with the largest organisations planning to invest up to US\$20 million.

Businesses are planning to deploy RPA in virtually every function of their organisations, with usage having progressed the most in IT management as well as marketing and communications. Over the next two years, deployment is expected to spread most rapidly in functions including auditing and compliance, supply chain management and human resources.

But many organisations are still only in the early stages of RPA implementation, with the majority of respondents still at the planning or experimenting stage. Although the survey found cost reduction is not among the most important direct advantages of RPA, companies nonetheless anticipate substantial benefits in this area.

Between 77% and 93% of organizations, depending on the industry, expect to see cost cuts as a result of RPA usage over the next two years. It's also important to note that other cited benefits of RPA, such as increased productivity, will lower costs.

"We see RPA as a huge driver of improved performance and efficiency," says Prakash Mall, senior director of RPA and chatbots at Target. "That correlates back to productivity gains, accuracy and customer experience."

The telecommunications, media and technology, and financial services industries were found to be more advanced in their adoption of RPA technology, while healthcare, consumer goods (including retail) and manufacturing and distribution organisations lag. Energy and utilities companies are even further behind.

Joel Cherkis, vice president for product management at UiPath, says that automating highly repetitive tasks and clearing backlogs are common starting points for executives when they look at what they would like to accomplish with RPA. The UK Department for Work and Pensions, for instance, had a backlog of some 30,000 applications that would have taken months to process. Pensioners would have had to wait in the queue to have their requests processed. To prevent that, the agency turned to RPA and cleared the backlog in a matter of days.

Michael Marchuk, chief technology evangelist for Blue Prism, says marketing units are developing some of the most powerful RPA apps.

"They are getting traction with customers and clients in ways they haven't before," he says. "Marketing can automate communications to engage with customers and even build new communication channels."

Some companies leverage RPA to improve processes directly related to the customer experience. A major retailer, for one, uses RPA in managing its supply chain to avoid stock outages that can frustrate customers.

Bots automatically reorder stock when the inventory management system indicates supply has fallen to a designated level. In the case of this major retailer, not only is merchandise more reliably in stock, but store managers also have more time to focus on the customers in their



stores. Also of note, RPA usage is steadily moving from back-office functions to front-end customer interactions, particularly call centres. For example, by automating caller identification, including aggregation of caller data from different systems, agents can be freed up to spend more time solving problems and helping clients.

RPA can also help companies avoid the expense of replacing outdated legacy systems. Peter Henstock, a senior data scientist at Pfizer, says that bots can "work around" legacy systems by extracting data from various systems that aren't connected. The bots can then perform the tasks that these systems can't do on their own.

Similarly, some companies use RPA as a stopgap while deciding what type of data repositories will work best for them. Bots can pull information from different legacy systems and aggregate it, giving managers and executives access to information critical for timely decision-making.

<https://www.protiviti.com/US-en/insights/rpa-survey>

## Deloitte develops first legal RPA app

Deloitte Legal and UiPath are collaborating to develop and implement cutting edge automation solutions. Among the first solutions is a robot for the legal industry which Deloitte Legal and UiPath have co-developed to drive greater efficiencies for due diligence exercises.

The robot can search public records such as a securities register, which are frequently accessed in due diligence exercises. This has the potential to drive greater efficiencies - for example in one case the robot performed a search in approximately seven minutes versus the three and a half hours it took a lawyer to do the same thing.

Making better use of advanced technologies will be crucial as increased demands are placed on the legal function, said Piet Hein Meeter, Deloitte Global managing director, Deloitte Legal.

Together Deloitte Legal and UiPath plan to create a number of solutions which address specific client pain points, rethink legal processes, and drive greater efficiencies by automating repetitive tasks and freeing up creativity. The solutions will be delivered through Deloitte Legal's CoE and through Deloitte's existing RCA capabilities, including the Deloitte Robotics Center of Excellence in Spain.

UiPath has just announced it has raised a total of \$US568 million in a series D funding round. The valuation of the firm now stands at \$US7 billion - up from \$US3 billion at the time of its series C valuation just seven months back.

# Blue Prism enhances document processing with Decipher

**Robotic Process Automation (RPA) leader Blue Prism is introducing intelligent document processing capability to its RPA suite with the Beta launch of Blue Prism Decipher.**

Blue Prism Decipher is an intelligent document processing solution that can scan invoices, identify data points - regardless of their format and location, then extract those data points for use within RPA processes.

When analysing the interactions on its Digital Exchange (DX), Blue Prism found that the single biggest application, representing 60% of the items being downloaded from DX, was related to unstructured document processing.

Decipher is positioned as an easy on-ramp to document processing and is a document processing workflow that can be used to ingest & classify unstructured documents

. It can be used "out-of-the-box" without the need to purchase additional licenses or products, and organizations can also incorporate their own document capture technologies, such as ABBYY, or document capture services companies within the Decipher framework.

Blue Prism Decipher is the first product to result directly from Blue Prism's dedicated AI Research Labs

headquartered in London, which brings together PhD level research scientists and engineers across multiple AI fields, who will inform and spearhead developments on the company's embedded AI capabilities.

Decipher will clean documents to ensure that they are ready for processing, apply machine learning to classify the documents, and then to extract the data.

Finally, it will apply a confidence score to the validity of the data extracted and pass to a business user where necessary, incorporating human-in-the-loop assisted learning.

Accordingly, Decipher is viewed by Blue Prism as a first step in the increasingly important move beyond rule-based RPA to introduce machine learning-based human-in-the-loop capability.

Blue Prism recognizes that, as machine learning becomes more important, people will need to be brought into the loop much more than at present to validate "low-confidence" decisions and to provide assisted learning to the machine learning.

Decipher is starting with invoice processing and will then expand to support other document types such as inbound purchase orders, contracts and resumes as well as providing integration with best-of-breed, third-party document processing capabilities.

Blue Prism customers and prospects interested in becoming a Decipher beta tester can file an application. Following the trial, the Blue Prism Decipher software will be posted on the DX for free download by all Blue Prism customers.

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# How RPA Empowers Humans & Increases Job Satisfaction

By Chris Brown

**The robots are coming! The robots are coming! At least that's the impression you might get from all of the conversations around robotic process automation (RPA) so commonly heard these days by software vendors and analyst firms.**

But the robots are already here, and have been for quite a while. Considering that RPA started with screen scraping 15 years ago, what explains the recent surge of interest? We've been using RPA-type technologies for years; we just never called them RPA.

Our latest advancements, in fact, might well be thought of as RPA 3.0. More importantly, what are the current uses of RPA and why should you care? What else do the conversations tend to get wrong?

While robotic automation inevitably stirs concerns around human job loss, the use of RPA can actually lead to job promotions, especially when RPA is effectively combined with enterprise content management (ECM). We see the purpose of ECM as replacing paperwork, manual data entry and the inevitable human error that can make a mess of your data downstream (garbage in, garbage out).

RPA is a component of ECM and goes by different names under the solution heading "advanced document capture": image enhancement, barcode reading, OCR, ICR, exception processing, line-item extraction, database look-ups, and intelligent document recognition (IDR) are all functions of RPA.

### Eliminate the Gruntwork

ECM using RPA technology automates the soul-crushing drudgery that too many employees have to endure, empowering them to slip their paper shackles, be more creative, add more value to your organization, and reach their potential as knowledge workers instead of manual office laborers.

When jobs are more satisfying and engaging, there's less employee turnover and reduced need for hiring - no small benefit in a difficult job market. We've even heard of cases where not only were accounting clerks not replaced after AP invoicing was fully automated, they were promoted to customer service and other departments needing help.

PSIGEN has long been committed to automating document and data capture to reduce manual data entry and the inevitable mistakes that come with it.

We are pioneers in the development of everything that goes into advanced document capture, with the addition of a form of RPA we call the Accelerated Classification Engine (ACE) of PSICapture.

In the old days, templates had to be built manually to automatically extract information from paper and PDFs, especially invoices. Before they could be used, they had to be manually separated and processed in batches by document type. Software engines were slow and a lot of human intervention a.k.a. "exception handling" was required.

No one had the time for this. Only large corporations could afford the small fortune you had to pay for early generations of advanced capture and take advantage of this technology.

Today, PSICapture with ACE will process whatever you throw at it - no manual template building or document separation required. Within months you'll recoup your investment, with an ongoing ROI that will make your CFO very happy.

Because RPA can only do what you teach it, ACE uses additional technologies like machine learning (ML) to learn over time, requiring less and less human intervention and processing documents faster and faster.

Once documents and data have been captured, workflow automation in document management software like PSISafe uses RPA to streamline manually intensive processes, including your monthly financial close, purchase requisitions, employee onboarding and offboarding, and more. Workflow automation also has a payback period of months and an ROI, making your CFO even happier.

Put RPA from advanced capture and workflow automation together, and watch as productivity multiplies.

*Chris Brown is Business Development Manager at PSIGEN Software. PSIGEN's Australian distributor is UpFlow.*

<https://upflow.com.au/>

## Sydney University rolls out RPA

The University of Sydney has revealed details of its extensive rollout of robotic process automation (RPA) at an event held by Blue Prism in London. The University launched its automation focused AI Hub in 2018 to improve service levels for staff and students, release staff time back to the business; and reduce risks.

Working with partner EY Australia and using the Blue Prism Platform, the University of Sydney has automated 33 processes to date across six functional areas including Student Administration Services, Finance, Human Resources, Campus Infrastructure and ICT functions. It is now piloting the use of cognitive services to augment the Blue Prism solutions. According to Steve Blunt, General Manager of the University's AI Hub, "The AI Hub team has had an immediate and significant impact on service improvement, implementing a range of automated processes to improve student and staff experience while mitigating the challenges of disaggregation, complexity and volume for staff and students.

"Our decision to focus on a service improvement ethos as the overarching metric has seen the AI Hub gain momentum across the University in a very short period. Business units across the University are seeking out the automation team as they see the tangible benefits for their staff," said Blunt.

The AI Hub was launched with a broad proof of concept approach to both maximise visibility and include a range of stakeholders. The program automated a range of processes across functions delivering real value across multiple internal processes, including estate management (space bookings), student administration, procurement, exam management, document verifications, etc., with high customer satisfaction.

Ean Evans, EY Oceania Intelligent Automation Lead Partner, whose team supported the University in cognitive

RPA deployment at the AI Hub commented, "What makes the Automation & Innovation Hub achievements so compelling is the University's commitment to improving service delivery to students and employees alike. This focus has supported rapid adoption of automation across a range of key processes across the University. We believe service delivery improvement and augmenting staff capabilities need to be key objectives to maximise the enterprise value possible from intelligent automation."

## UiPath Speeds RPA on Microsoft Azure

UiPath has announced an RPA automated deployment solution on Microsoft Azure, significantly speeding RPA initiatives with reduced DevOps and data centre infrastructure costs. UiPath makes it easy for customers to leverage a broad range of Azure services including Azure Cognitive Services, Microsoft Office 365, Power BI, and Dynamics 365 to deliver RPA solutions at scale.

"While UiPath has always been able to run in Azure, the

new 'auto-deploy' allows our customers to quickly scale automation initiatives," said Param Kahlon, Chief Product Officer at UiPath.

"And by quickly, we mean in a few minutes, rather than hours for a small implementation - or just days for a large enterprise installation. This is a gamechanger for customers who are invested in Microsoft technology."

The automated deployment is available from the Azure Marketplace as well as directly from the Azure console to support productivity and save time. The solutions cover single instance deployments of UiPath Orchestrator (the centralized UiPath Management and Controller offering), a full Orchestrator multi-node with Redis Cache, and a fully automated UiPath RPA Robot deployment in Azure Virtual Machines.

The Orchestrator deployment includes deploying an SQL Azure database instance that is a managed SQL Azure database. Robots get auto-provisioned in a virtual machine of choice and automatically registered with Orchestrator. UiPath robots and Orchestrator can be deployed in any Azure data centre location across the globe.

## The End User Classification Problem

By Jeff Sizemore

When cloud-based Enterprise Content Management (ECM) came into the mainstream in the mid-2000s, businesses began digitizing old analogue processes and migrating content from local machines and on-premises repositories to the cloud. As the world of digital content grew, ECM providers deployed a variety of ways to sort and segment proprietary or sensitive content. For most, this meant relying on IT administrators to set and enforce policies and end users to properly tag and categorize the content they create and share.

That's the way most organizations still do it today. In other words, the way we think about data classification hasn't changed much since we were all walking around with flip phones in our pocket.

What we can see now is that end-user classification was never very good on its own. In 2007, IT consulting firm AIIM conducted a survey which revealed that classification was a big challenge in Microsoft SharePoint deployments, with only 22% of organizations providing users with any guidance on corporate classification policies. Almost a decade later, AIIM found that more than one-third of users still say it is inconsistent metadata and classifications presenting the biggest issue for their organization.

It is clear that the problem isn't getting any better. When enterprise cloud was in its infancy, it may have been easier to require everyone in an organization to label, categorize, or tag all content in a repository. But the explosion of unstructured data has quickly made it impossible to keep up. By as early as 2013, IBM reported that humans were creating 2.5 quintillion bytes of data every day, the vast majority of which is generated by businesses.

The size and scope of unstructured enterprise

content makes the prospect of end-user classification untenable. A typical Egnyte scan covers 7,000,000 documents, spreadsheets, PDFs and image files. We find sensitive PII in 10 percent of those files spread across hundreds, often thousands of locations. We are officially beyond the point where it makes sense to rely on a network of humans (your employees) to effectively classify that much content and still be productive.

In the age of GDPR, CCPA, PCI and HIPAA, relying on end users to properly classify data isn't just inefficient, it's risky too. The definition of PII (personally identifiable information) under GDPR alone encompasses potentially hundreds of pieces of information. Add that to the alphabet soup of other data privacy regulations, separate requirements for data retention and deletion, and corporate policies on proprietary content and you've got a level of complexity that human brains just aren't built to handle.

Organizations must ask themselves if end-users can reasonably carry that burden or else pay hefty fines for overexposed PII.

At Egnyte, we believe in a different approach that shifts the burden to machines to do the heavy lifting, and leverages human judgement to oversee the process and make decisions.

By scanning the content and matching it to preconfigured classification policies, you can get a 360 view of the sensitive data on the system, where it lives, and who has access to it. As new content is created, it is automatically scanned and classified.

This approach doesn't mark the end of all forms of tagging or manual classification. Employees still have a role to play in responsibly managing and storing their content. But with a little assist from machine learning we can make the process a whole lot better so they can get back to work.

Jeff Sizemore is VP Governance and Compliance, Egnyte. <https://www.egnyte.com/>

# Why a global file system should be a core component of your business continuity strategy

**By Warren Arnold, Nasuni**

Business continuity and disaster recovery solutions have been effective in reducing downtime from days to hours; however, modern solutions are typically reliant upon backup files which are normally inactive and need to be tested and restored. That takes time.

To further complicate things, not all backup files are usable, and some can contain malware. As a result, IT teams often must go deep into their archives to find the best version to restore, and the deeper they go, the more data, time and productivity the organization stands to lose.

The good news? There is a better way to manage the recoverability of unstructured data after an outage, which isn't through the backup application and files, but rather, how the file system itself operates. Today's global cloud-based file systems do more than change how enterprises store, use and collaborate with data and files. They also provide IT with a powerful, fast and effective way to address backup and disaster recovery-related tasks.

Data normally exists in three states: at-rest, in-use and in-transit. But data also exists in another state: 'at risk'.

Both structured and unstructured data are at risk from the likes of everything from natural disasters striking a data centre to malware or ransomware attacks.

### Your best recovery option is not your traditional backup

Cloud computing has upended enterprise IT as we know it. Increasingly, organizations of all kinds utilize cloud object storage as the most reasonable repository for their unstructured data and files. Initially this was done to overcome the capacity issues that for so long plagued traditional approaches to storage while simultaneously enabling organizations to embrace the inherent resiliency and economy of the cloud.

A cloud-based file system takes this evolution one step further - enabling IT to use cloud object storage for primary storage while still enjoying the control and performance they have come to expect from traditional network attached storage. In this way, a cloud-native global file system enables an enterprise to realize the benefits of the cloud, centralize corporate IT's control over the global file share, and still give users immediate access to the files they need as if they were on their own desktop.

Enterprises also deploy global file systems to coordinate document contributions and version control for their global teams. Some of these systems can be configured to snapshot file changes every 15 minutes, and more frequently for very active, or hot, data. If an enterprise leverages a cloud or hybrid cloud environment, these same file deltas, fully encrypted with customer-owned encryption keys, can also be sent to the organization's cloud-based storage, where the gold copies are also secured.

Public cloud providers like Amazon Web Services, Azure and Google, maintain high levels of availability and data durability through redundancy and co-located data centres at a level most enterprises can't begin to match in

their own environments. In this way, the cloud has emerged as the ultimate medium in which to store critical data - a stark contrast to prevailing perceptions just a few short years ago.

In addition, writing new data to the cloud as Write Once Read Many (WORM) objects prevents any data from being overwritten or corrupted. Maintaining separate metadata versions for each snapshot also allows for fast restores of metadata, while also enabling enterprises to quickly access any urgently needed files stored in the cloud without a full restore or migration which can encompass many hundreds of gigabytes or many terabytes of data. Because migrations from the cloud can take time, to do this quickly requires a true, cloud-native global file system rather than a simple data backup to the cloud.

This combination of solutions - cloud object storage and a cloud-native global file system - can make restoring unstructured data, including all of the application files required to conduct business today, easier than ever before. And, depending on the data in question and other factors, this approach enables enterprises not only to meet their recovery time objective (RTO), but in most cases to be back in operation far faster. Of course, being back in operation in seconds or minutes is very different to being out of commission for hours or days!

If this approach to safeguarding all your unstructured data is one you'd like to pursue, there are a few best practices to keep top of mind. For starters, not all file systems function the same. A system designed for and relying on local disks will not be able to achieve the required granularity, and it will quickly run out of space as only a limited number of snapshots can be stored locally.

In contrast, a true cloud-native, global file system saves data, including snapshots, directly to the cloud, where capacity is not a limiting factor. With this kind of configuration, a snapshot becomes much more than a backup, but rather a true, immutable point-in-time copy. By storing the master copy and all its metadata in the cloud, it also alleviates the immense volume of data that needs to be restored after a loss, resulting in a much speedier recovery.

### Increase protection further with WORM

As mentioned earlier, to take data protection a step further, each snapshot should be written as WORM objects, ensuring that the data's integrity is preserved and that all restores can be performed from a viable, clean version.

Local data snapshots are capable of being corrupted by malware, or in some cases hardware malfunctions, making them unusable for system recovery. Since WORM data cannot be altered, IT recovery teams will have a wide selection of immutable options from which they can select the best restore point. Increasing the resiliency and speed of recovery using a true cloud-native global file system and a public cloud or private object store in a hybrid model is an extremely cost-effective way to reduce interruptions to business continuity.

Depending on the frequency with which a business chooses to configure its snapshots, it may only miss a few moments of productivity before the recovery is made. And barely missing a beat due to an unforeseen event is something all business continuity teams are after.

## Dramatic Rise in Fraudulent PDF Files in Q1 2019

Threat researchers are reporting a substantial increase of fraudulent PDF files. This fraud campaign takes advantage of recipients' trust in PDF files as a "safe" file format that is widely used and relied upon for business operations, according to SonicWall Capture Labs.

"Increasingly, email, Office documents and now PDFs are the vehicle of choice for malware and fraud in the cyber landscape," said SonicWall President and CEO Bill Conner.

"SonicWall Capture ATP with its RTDMI technology is at the forefront of catching new cyberattacks that elude traditional security sandbox technology. For example, in all of last year, our Capture ATP sandbox discovered more than 47,000 new attack variants in PDF files. This year, we've already seen that number rise significantly with over 73,000 PDF-based attacks discovered in March alone."

Last year, SonicWall Real-Time Deep Memory Inspection (RTDMI) identified over 74,000 never-before-seen attacks, a number that has already been surpassed in the first quarter of 2019 with more than 173,000 new variants detected. In

March, the company's patent-pending RTDMI technology identified over 83,000 unique, never-before-seen malicious events, of which over 67,000 were PDFs linked to scammers and more than 5,500 were PDFs with direct links to other malware.

Targets of the phishing style PDF scam campaigns typically receive malicious documents from "businesses" luring victims with attached PDF files that look deceptively realistic with misleading links to fraudulent pages. The business offer within the PDF attachment is enticing to recipients, as it promises to be free and profitable with just the click of a link.

Most traditional security controls cannot identify and mitigate links to scams or malware hidden in PDF files, greatly increasing the success of the payload. This increase implies a growing, widespread and effective strategy against small- and medium-sized businesses, enterprises and government agencies.

RTDMI identifies and blocks malware that may not exhibit any detectable malicious behaviour or hides its weaponry via encryption. By forcing malware to reveal its weaponry into memory, RTDMI detects and proactively stops mass-market, zero-day threats and unknown malware accurately utilizing realtime, memory-based inspection techniques. RTDMI also analyses documents dynamically via proprietary exploit detection technology, along with static inspection, to detect many malicious document categories. [www.sonicwall.com](http://www.sonicwall.com)

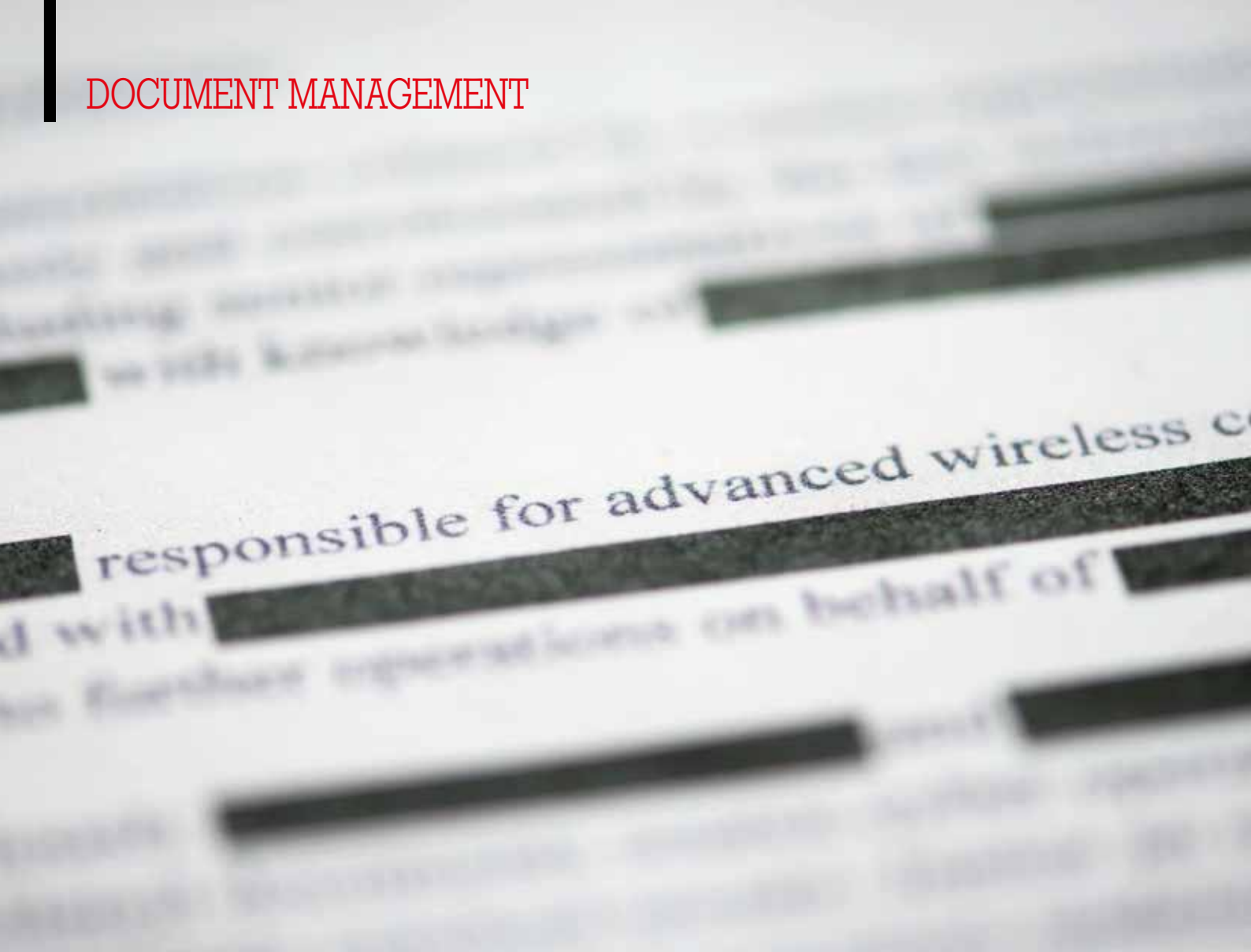
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## Why the need to redact implies using PDF

**By Duff Johnson**

**Historically, the process of redaction - removing content from documents for national security, intellectual property, privacy or other reasons - has involved physical implements such as razors, grease-paint, magic-markers and photocopiers. Then came PDF.**

Once people were able to share documents without using paper the physical tools became obsolete. The need for redaction as a feature, however, exploded.

Redaction differs from editing, which is key to understanding why redacting PDF differs from simply deleting text. To be useful, redaction must leave un-redacted content fully intact, but it must also account for the fact that a redaction has occurred, typically by introducing a coloured box in place of the redacted content.

The proliferation of websites emails, posts, documents and other content bearing (potentially) personally identifiable information (PII) and other sensitive material, from court records to medical information to trade secrets, Freedom of Information Act (FOIA) requests and government investigations, makes redaction a critical capability in managing digital content.

Further, in an era where document distribution no longer requires physical paper; when it's possible to transfer millions of pages in seconds, and search them in even less time... it's hard not to notice that end users' ideas about redaction remain stapled firmly to the age of paper.

We see this in the prototypical error users make when redacting digital documents - the use of a highlighter tool, which only changes background colour, and doesn't actually result in redaction. Some users; even legal professionals using desktop computers for 20 years or more, even those who have always used digital documents, sometimes fail to understand the difference between highlighting and redacting.

When they make this mistake, these users are confusing the color of the highlight for the functionality they'd expect from paper. It's an ironic testament to the success of PDF in representing paper documents in a digital context.

It's time to stop thinking of documents as paper, and start thinking about them as PDF files!

Of course, PDF is not the answer to all documents, or even most. It is, however, the only good answer in one extraordinarily horizontal use case: documents that require redaction. It's a big category, since almost any type of document (business records, correspondence, invoice, etc.) in any format (web page, email, word-processor, spreadsheet, scan, etc.) may require redaction.



If your workflow might include redaction, then your format should be PDF. With tagged PDF, it's possible to have your source file information and semantics, and a rendering too.

## The future of redaction

There's no (good) solution in HTML for the idea of removing specific content while leaving an indication of removal and somehow leaving other content undisturbed. One can imagine all-new XML constructs to handle the requirements of redaction workflows in HTML contexts, but it's not easy. Committing to a rendering is definitive; final, portable... and generic. PDF happens to have a standardized model, and it's already ubiquitous.

Just a little extra support – most notably in tagged PDF – and the web could begin to integrate rendered content far more cleverly than is possible today.

- PDF provides a highly capable rendering model that already... took over the world
- PDF provides a proven platform and solution for redaction irrespective of layout, format, CSS, implementation etc.
- Tagged PDF provides a solution for semantic reuse of PDF content, including for accessibility purposes
- PDF 2.0 provides a specific, targeted solution for rich reuse of redacted documents
- PDF 2.0 even includes namespaces (ISO 32000–2, 14.8.6), a mechanism for capturing arbitrary source content semantics in the PDF context

In a world where privacy needs demand solutions from content technology providers everywhere, PDF offers a universal, and universally accepted solution. Since PDF content is reusable, it's possible to use PDF for critical document features (e.g., redaction) without loss of unredacted data.

Alone among file formats, PDF explicitly includes redaction features, including new features added in the latest iteration of the PDF specification, PDF 2.0. Let's take a quick tour.

## Redaction annotations (PDF 1.7)

Redaction annotations (introduced in PDF 1.7 back in 2006) are designed to allow users to mark content for redaction using familiar box-drawing or text-selection tools, manual or programmatic. Users may think of redaction annotations as "draft" or "candidate" redactions.

The redaction annotation feature is completely described and fully standardized, any vendor can support the redaction annotations model in PDF. Redaction annotations added by one party, with one type of software, may be changed by another party, with different software.

Interoperability is a key feature of PDF, and this principle extends throughout the specification.

Redaction annotations are used by the redacting software to effect the desired redactions and remove the specified content. Of course, the annotations are themselves removed from the document during the final redaction process. In addition, software intended to perform redaction typically offers a "sanitization" process to eliminate metadata and other potentially sensitive information from the file.

## Semantic enhancements for redaction

ISO 32000–2 (PDF 2.0) introduces two enhancements to the basic redaction model. Superficially modest, these features point the way towards flexible reuse of redacted content, including for accessibility purposes.

Although the redaction annotations defined in PDF 1.7 allowed for exemption codes (such as "Grand Jury") to be included in the redacted version of the document, that specification did not provide for indicating any semantic information about such artifacts. In PDF 2.0, the new Artifact structure element type solves this problem by allowing redactions to be indicated in the logical content.

## New Artifact structure element type

The Artifact structure element type was introduced in PDF 2.0 to "...accommodate artifact content in cases that have positional context relative to real content within the structure tree." (ISO 32000–2:2017, 14.8.2.2.2).

What is "positional context"? Think of line numbers in a contract. As a user, you'd like to be able to read the contract without being forced to also read the line numbers. But on the other hand, you need to know what line you are reading. You might also want to reflow the text and retain information about the line numbers.

In PDF, content semantics are established by means of "tagged PDF" which establishes a logical ordering of the semantic content (headings, paragraphs, lists, etc.) in a structure tree, making it available for reuse.

If we assume logical reading order in the structure tree, then using Artifact structure elements to enclose the line numbers associated with each line of text makes it possible to represent this use case in a reusable fashion.

## New subtypes for use with the Artifact structure element type

In PDF 2.0, achieving these objectives in PDF syntax means simply tagging the line numbers with an Artifact structure element with the appropriate subtype. The rest is up to supporting implementations, which may then choose to represent the line numbers to the end user, or not, as may be desired. Line numbers were the first and most obvious case considered for an "artifact with logical position with respect to real content", and are addressed via Artifact structure elements with subtype LineNum (see ISO 32000–2, Table 363).

## The second use case was redaction.

On the same basis as line numbers, PDF 2.0 Artifact structure elements with subtype Redaction make it possible to semantically locate a redaction (or more properly, the content identifying a redaction) in the logical order of the PDF file. Well-tagged PDF 2.0 files make it possible for any (in principle) PDF content to be located, marked for redaction, and then redacted, with the redaction preserved for any downstream reuse.

Much as a razor shows redactions via a hole in the paper, PDF redaction annotations and structure elements provide a significant improvement in the end product.

*This article was originally published at pdfa.org.*



## Duff Johnson

Executive Director of the PDF Association



## Death of a Sentencer: A Records Manager's Lament

**By Lynda Leigh, ARIM**

**At its most fundamental, the job of a professional records and information manager involves being able to sentence records for destruction. There have been many occasions when the frustrations and challenges of the job have left me wondering that I was the one being sentenced. So, you think the basic job of cleaning up information isn't deadly work? Here's proof.**

First there are the physical challenges. When you're up a ladder in the vault, moving stuff around on the top shelf of the compactus and the shelving starts to give way. You will hear me scream, I promise!

Then there was the time they placed my desk at the back

wall of the same vault allegedly for efficiency, and so I didn't need to adhere to the "clean desk" policy. We promise will check you're not still at your desk before we shut and lock the vault for the night, they said. GULP! I made sure I knew how to open the vault door from the inside as a precaution, just in case.

My query about the halogen gas fire retardant used in the same vault resulted in reassurances that the alarm would sound five seconds before releasing the gas. It didn't.

Wearing white gloves, a face mask and with an industrial air purifier to cope with the paper mites, cockroaches, mould and diesel dust makes it look like I am on a crime scene. But no, it's just hardcopy sentencing.

The physical hazards are one thing, but how about the mental? The stress of coping with "record-keeping resistance" by the average user can frustrate me no end.

"Who needs an EDRMS when you can use a share drive!" Um, where do I start in responding to that overused cliché.

Particularly when staff are given no limit to the number of folders they may create and duplicate - leading to the creation of 15 folder levels and the document titles in the lowest folders are reduced to three characters and will not open or be renamed. Aaargh!

Emails are saved as per policy, but their attachments aren't and "see attached" is a cute little icon within the email - I can see there was an attachment but certainly can't read it. Enquiries reveal that the original email system had been decommissioned because ALL the emails were filed on the share drive as per policy.

If a folder is in the approved structure/tree and has an official file title - you'll discover its merely jottings, ideas or even brainstorming for the official document which is filed somewhere else.

Consequently, if it is in the 'common area' and has a crappy looking folder with a crappy file title - you'll discover it's the only version of an official document.

Remember one person's 'crap' is another person's 'important' record. And both individual definitions are used as folder titles - 'important crap' sums it up best.

Or how about finding folders with identical titles containing the same documents all identically titled and of the same size, but in fact they are a completely different set of documents and not merely a version of the same folder/documents, which consequently means ICT could not attempt to remove the duplicates because it was way too risky. Same same but different.

That sense of déjà vu just won't go away - I'm sure I've moved this folder, I'm sure I appraised that document, this

looks familiar... But I start taking snapshots of folders and I find ONE set of folders/documents duplicated NINE times, each time down one level.

It is said it's best to laugh than to cry at misfortune, so I begin to develop a type of shorthand in substitution for file naming conventions:

■ Any titles with the words 'drafts', 'final drafts' and 'draft final' - means 'it's a draft'

■ Any titles with the words 'old', 'archive', 'don't use' and 'stuff' - means 'we might need this one day'

■ Any titles with the words 'Final FINAL', 'use this one', 'this is it' - means 'it's final but it could be a final working draft, you just never know'.

■ However, a document with 'FINAL' written in the title will be watermarked 'DRAFT' as nobody really knows for sure if it's a final or a draft or the final draft or the draft final so let's keep it anyway.

■ If a document title contains a person's name/initials, they are passive aggressive about THEIR amendments so don't you DARE think about fixing that title because it's THEIR work and they'll lodge an official complaint.

■ If a folder title contains a person's name in the title, you can be sure that their manager is micro-managing and wants to know everything their staff is doing. So, you'll find multiple copies of the same document in each person's folder as they all work on the same document at the same time for the same meeting! Don't ask which one of these documents is the official record and it's best to file each one safely because you don't want an official

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# RECORDS MANAGEMENT

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■ Staff will spell out commonly known acronyms and then create their own acronyms for common words especially if it can be shortened to 'ass' – assorted, associated, assistant, assurance, assertion, assignment... don't make an ass out of the records assessor please!

Navigating through a blizzard of user files can result in some challenges when you find stuff you shouldn't have. You can see it in their eyes, the PII panic when management realise you have been reading information they have completely forgotten about – yes deep dark unstructured data. However, they don't realise that it's not a breach if I merely *find* the information.

The problem arises when the organisation's new PII policy and procedure means the inadvertently discovered information must now be sent to three managers and possibly even an EA to allow removal, meaning it's now shared more widely than ever before. In my line of work, discretion is an asset – deal with it, don't divulge.

As someone who has undertaken many sentencing projects, remember it's not just about the bytes, it's all about the documents you need to view and how long it will take to view them. Any statistics you are given about the scale of the job won't include the hidden and system files, nor the number of individual documents within zipped files, nor those files stored on USBs or that database they transfer half-way through the project/contract nor the corrupt documents nor documents created on non-compliant software that you can't open and appraise and therefore remains 'uncompleted' and held against you.

You'll push yourself to appraise 40,000 documents in one day, this can be done effectively if it's the same record type with a decent (and correct) file title however if it's different record type with an ambiguous title, you'll need to read the document to appraise it and that is painfully time consuming. They'll suggest you use this new software to search for each document and make the process faster, but you'll still need to open and close the document to appraise it thereby slowing down the process. You cannot and should not sentence by title alone (see point above about ICT and duplicates).

It's metadata madness when all you have is the document properties to use as the metadata and you're asked to set the retention date on the last time the document was opened as indicated by the modification date. However, they don't realise that you need to open the document to appraise it thereby changing the modification date!

So, you've got an official EDRMS. Does that mean it's all simple and straightforward? Well that depends.

Imagine you're faced with a standard operating procedure (SOP) which states that you need to change the RA class to 0 (yes zero) before you can delete the file because the EDRMS doesn't work properly because of "too many band aids". As the EDRMS doesn't work properly, you discover that the box numbers (aka containers) are no longer relevant so you must use a spreadsheet to update the material so they can destroy files via the boxes that they are stored in. And don't forget to change the class to 0 first or we can't destroy the files in the EDRMS. And don't forget to add the correct information to the spreadsheet, so we know which box we're destroying ...

While the files had been appraised, sentenced and boxed prior to the transfer, were they appraised/sentenced by year of disposal? Nope, they were just dumped into

boxes willy nilly and then sent off-site. This means the disposal years are all different for all the various files held within each box and please don't forget to use the spreadsheet for the box numbers.

Then I find out they don't use a barcode reader, so I need to type in the barcodes into a spreadsheet for each file boxed.

"Don't forget to add the file numbers and the titles as well plus disposal year into the spreadsheet which we'll store in a file held in the EDRMS."

Spreadsheets are handy, aren't they?

It's just more metadata madness when all you have as the EDRMS' trigger is the 'last action date' which is set to be any modification to the file. However, I need to modify the metadata to the file as part of sentencing process thereby changing the modification date to today.

Sometimes it gets too much, and I've cried at my desk:

■ in frustration – the document file title was too long and wouldn't open because it was 14 folder levels down. I was able to open it by shortening every title of every folder then opened the document and appraised it as Normal Administrative Procedures (NAP) – all that effort for nothing!

■ in disappointment – I redid what I did and did it again and again and again as back up tapes were the only form of audit, QA and assurance. Thereby entire folders of information were reinstated when a single document went missing. Interestingly staff couldn't remember who wrote the document nor what it was called or where it was stored but knew they saw that document a few months ago somewhere....

■ in exasperation – a decade's worth of records that were quarantined as Retained as National Archives (RNA) were moved into a personal folder by a manager who thought that the information was 'useful to have' which meant these records simply disappeared from the corporate directory. When they were reported missing by myself, the records were reinstated from back-up tapes dated PRIOR to my commencement date thereby wiping out two years of completed sentencing work. (And wait for it, management wondered by my statistics were crap that month.)

■ in irritation – 100K inactive records marked for disposal under NAP were moved in their entirety into a current active folder all because staff member thought 'they might come in handy one day' (they were decades old duplications) in defeat – you've got an EDRMS, can you use it properly – train staff at all levels – PLEASE

■ in sadness – appraising permission forms for the disposal of invalid embryos, a coroner's report, a missing in action telegram, a plea for assistance from a member of the public for their child – Sentencers read everything and we are human after all

It's wasn't a policy, a process or a procedure that destroyed me, rather the never-ending battle against inefficiency that caused the death of this Sentencer.



## Lynda Leigh, ARIM

Lynda is an experienced records and information management specialist of more than 25 years

# Harnessing your data assets - opportunities and threats for Australian companies

**By James North, Corrs Chambers Westgarth**

A fundamental shift is occurring in the global economy with respect to data. As it stands, only 30% of the global economy has been digitised, but 5G wireless networks and other high speed telecommunications solutions will enable the digitisation of the remaining 70%, driving huge increases in data generation.

The exponential growth in the use of internet-connected machines and AI is ushering in the '4th industrial revolution', and every company will effectively become a data company in the short to medium term. This trend can already be seen in a significant number of 'old economy' sectors, including agriculture, mining and engineering.

These developments will require businesses to shift their thinking away from simple questions of strict data privacy compliance and start viewing data as a critical component of enterprise value which provides opportunities (in terms of service improvement and personalisation), but also requires effective management and protection. Implementing best practice data governance will increasingly become a business imperative – both to fully realise its value and to avoid the significant brand damage and loss of social licence to operate that can arise from failures to secure personal data and ensure it is used ethically.

Many data-rich industries are already taking proactive steps in this space. For example, a number of major Australian data companies, including banks, insurers, airlines and data analytics firms have recently formed the Data Institute to work on defining data governance best practice beyond simple questions of compliance.

While social media companies have arguably been somewhat 'late to the party', Facebook's recent calls for increased regulation of privacy and data portability (amongst other things) show how quickly debate on these issues has shifted.

## How to understand your data

An essential first step in developing any strategic approach to data management is to understand:

- What data your business collects – this may be increasingly difficult to determine as machines start collecting information on your behalf.
- Whether the data is accurate – the results of the application of data analytics tools will only be as good as the data they are based on.
- Whether the data is accessible and able to be analysed – legacy systems and a lack of integration can create data silos, making the task of getting the most out of your data assets challenging.
- Whether the data is secure – risks from malicious actors will rise as internet connected machines increase the number of entry points into a business' IT systems.
- Whether the data belongs to the business – understanding the basis on which data was collected is critical to assessing how it can be used.

Best practice data governance increasingly requires systems and processes that incorporate transparency, accuracy, consumer and customer choice, security/de-identification, stewardship and accountability.

Two important issues that require consideration in this context are:

## 1. Implementation of digital transformation strategies

Digital transformation can remove data silos created by legacy systems, offer single source of truth capability and render data more readily accessible to analytic tools and AI. However, there are also challenges which must be carefully navigated.

Combining data from different sources requires careful consideration of the different permissions and licences that may attach to each data source and the appropriate application of access controls. For example, without proper data governance, under a 'single source of truth' model, data originally sourced from a customer database may be used by another part of the business for a purpose it was not collected for, resulting in privacy breaches and the potential for regulatory investigations.

Further, systems and processes which allow effective oversight of data management issues (including at senior executive and board level) are key. This includes clear reporting lines and allocation of responsibility for data management.

## 2. Ownership of data

Until relatively recently, data collected by companies tended to be viewed as entirely its proprietary material, with only limited qualifications arising from privacy law. We see this paradigm shifting rapidly due to policy developments around the world that call this proprietary model into question. Examples of this include:

- the Consumer Data Right announced by the Australian Government which, over time, will mandate the transfer of data between competitors in designated sectors at the request of consumers;
- the recent announcement that the California Governor is working on 'data dividend' legislation that would see companies charged for the use of information collected from consumers;
- increasing use of the EU's General Data Protection Regulation (GDPR) as a global standard to ensure cross-jurisdictional privacy compliance; and
- a number of regulatory inquiries, including the ongoing Digital Platforms Inquiry conducted by the ACCC in Australia and the recently concluded expert panel review on Competition Policy for the digital era undertaken in the EU, both of which have presented arguments for greater consumer choice in terms of how their data is handled and more open access to data sets that provide certain competitive advantages.

While it is true these policy developments have the potential to change the nature of the rights businesses have in relation to data, it is worth remembering that the Copyright Act still vests ownership of a database in the business (and not in the consumers whose information is included).

The fast approaching end of the global 'techtopia' and 'free' internet raises difficult questions about how the enterprise value of data is best determined. It is likely to drive the need for increasingly sophisticated information management systems which permit greater customisation based on consumer preferences and enable secure data transfers without compromising their integrity.

In this new paradigm, company boards will need the governance structures in place to allow full oversight of, and accountability for, data governance. This can only be achieved with the best practice data management processes and technology.

*James North is Head of Technology, Media and Telecommunications at law firm Corrs Chambers Westgarth. The content of this article is intended to provide a general guide to the subject matter. Specialist advice should be sought about your specific circumstances.*



# A leap ahead to auto-classification of records at Auckland Transport

**By Gerard Rooijakkers**

**Early results of a project to automate classification of more than 8 million documents at Auckland Transport are amazing and give us confidence that the objective of automating the addition of retention tags will be achieved.**

The autoclassification system is being built by New Zealand's Pingar using its text analytics and machine learning technology. Australia's Synercon is developing the Ontology/Taxonomy and Retention rules.

Auckland Transport (AT) is a very dynamic council-controlled organisation in New Zealand. The main functions and activities are focused on keeping Aucklanders moving in a city that is growing fast.

Since its inception in 2010 – as part of the amalgamation of councils in what was then the Auckland Region – the organisation has grown too and with approximately 2100 employees and some 500 contracted staffing the administration of its daily affairs (almost 100% digital) has been ballooning as well.

As a Council-controlled organisation (CCO) in New Zealand, Auckland Transport is required to meet statutory obligations as set in:

- the Local Government Act 2002,
- the Public Records Act 2005
- and Local Government Official Information and Meetings Act.

As a CCO, AT needs to be transparent and accountable, which requires adequate and accurate records management. Managing our information (that is both structured and unstructured data) created, received, aggregated, rendered in the conduct of its operations, AT's daily operations.

AT's unstructured data is captured in multiple MS SharePoint environments whilst we use several other main business systems to capture other data e.g. financial records in SAP and infringement and licence data in Pathway, customers in Customer Relations Management.

AT collaborates with many across the transport sector, with customers, contractors, commuters, communities. To give you an impression of the scale of our collaboration platform and the information that is being exchanged in the process:

- We are dealing with some 8000 contractors
- We run 100+ programmes and 3500+ projects
- Use some 800+ business applications
- Use 100+ document types

- Have 18 functions & 80+ business activities

- We process millions of AT Hop transactions a week generating Tb of data

- Capture and manage CCTV footage across Auckland for the purpose of managing traffic flow, public safety and protecting AT's properties

Managing information is an essential activity at Auckland Transport. Corporate Information Management is embedded in Business Technology.

SharePoint is AT's appointed document management system. Team sites are being configured and managed in O365. Project Sites are configured in Fulcrum/Connect which is externally managed by LeapThought.

The volume of information is ballooning and in the various MS SP environments we have approx. 8 million documents and counting. Approximately 4 million documents in SP and 4 million documents in OneDrive. This has created some challenges in findability of information.

The SP Team Sites and Project sites have been configured in 2010 with the understanding that staff would enter some mandatory metadata fields when saving documents in SP team/project sites. Every AT staff member receives SharePoint training, which includes the importance of good record-keeping.

However, an audit in 2017 showed that this was not quite happening as anticipated. It confirmed earlier experiences of search issues or rather information retrieval issues. We knew the information was somewhere in our document management system but due to insufficient metadata attached to the individual documents other than the standard MS generated metadata it failed metadata that covered the content of the documents.

Hence search results were far from optimal. Simply said staff were not always adding meaningful metadata in the mandatory fields or were circumventing it by saving documents in OneDrive. Leaving metadata and file naming to humans is discovered to be the weakest link in a further well-appointed document management system.

The way forward to improve records management and achieve much better compliance is to use auto-classification and include retention and disposal tagging to assist and support AT's approved life cycle management schedules. An additional benefit is a far more user-friendly experience when saving files, searching for documents and being assured that the correct up-to-date information is retrievable from the document management system.

So, with in our mind that artificial intelligence could help us out we started on a journey to compile a business case for auto-classification, a road paved with exploring opportunities to successfully implement it and retrospectively auto-tagging 8 million documents. That is the first phase of an ambitious plan to use

autoclassification and including retention and disposal tagging to achieve life cycle management as part of our compliance programme.

AT's information management philosophy is to use artificial intelligence and machine learning. It means the development of an AT-wide Ontology with related business specific taxonomies. Much work forming an essential part of the project - aptly named - Haystack.

We have embarked on an innovative road trip to manage our information in an automated way different from the traditional EDRMS option. We understand that the human in our digital information world is the weakest link when it comes to adhering to record-keeping practices. They are inclined to see any admin part of their job as not being an integral part of their work.

To alleviate this pain point we have opted for the auto-tagging of documents in a consistent and organised manner as it will not only improve the retrievability of information, it will also allow us to apply proper records management including the application of retention and disposal rules to fulfil a much better life cycle management of information.

We have introduced the auto-tagging in an agile manner with limited disturbance of an already fully engaged organisation. The interim results are - without being classified as a Trumpian achievement - great. It's not only assisting and supporting our records management compliance but has revealed a far better insight in how AT does business with its customers, the ratepayers and its contractors. We envisage far more opportunities to enable AT's business units to do their business better.

We look at other employment opportunities for this technology and its artificial intelligence beyond unstructured data. The aggregation of information which is currently hidden/obscured in silos, as well as the application for Building Information Modelling, management of images, CCTV footage and data and navigating to relevant information from GIS.

The analysis and reporting we can derive from the box of Pandora will assist management to make well-informed decisions as the information provided is assured to be up to date, the correct version and complete. In the end the auto-classification will account for big efficiency gains.

Search results have been improved as we now have all 8 million documents tagged and running the retention tagging process based on AT's approved retention schedule. We are also continuously improving the tagging and enhancing the Ontology and taxonomies (as part of quality assurance).

As Auckland Council will be the receiver of archival records (records that will be retained in perpetuity) from CCO's as the custodian of council records, we are currently developing a process for the transfer of these archival records in PDF/A format. We anticipate that this will take some time to master as well as for council to have their digital archive sorted.



**Gerard Rooijackers**

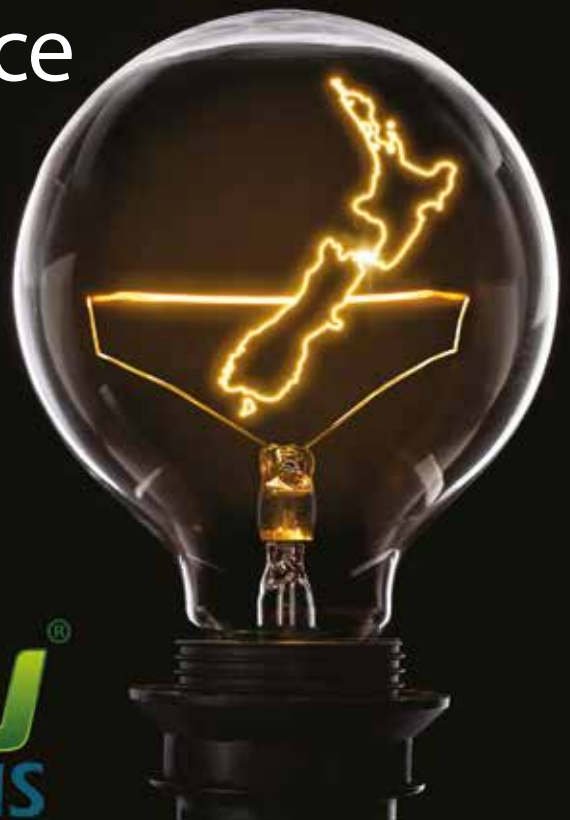
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# How to Leverage Unstructured Data

By Philip Dodds and Lecia Pearce

A few years ago, talk of using unstructured data sources in the enterprise was relatively rare, but that is rapidly changing. The reason, a thirst for data. In today's world, data is used to both run the day-to-day business and to drive it forward. Data assists you in finding new customers, guides you in predicting growth, and aids you in uncovering new opportunities.

Incorporating unstructured sources with traditional structured data will help you find missing data, validate the data you have, and capture whole new sources of data to drive your organization forward.

Validation against unstructured sources can be a powerful tool, since it is often those sources which were the point of origination of the data (i.e. legal contracts and mortgage documents). This capability can be critical when businesses are attempting to satisfy regulatory requirements. Augmenting existing structured data with information from rich, unstructured sources allows businesses to add concepts that were traditionally not available, such as user sentiment.

Driven by these two main motivations, businesses have started looking to this once useless collection of PDFs, Excel files and Word documents as sources of valid and critical information. As they investigate ways to make this data accessible, it has become apparent that the standard technology toolkit is missing some capabilities needed to drive this adoption. To leverage these unstructured sources, businesses must transition from the world of traditional Enterprise Document Management to a much richer and more complex world; one where a range of capabilities come into play.

## Scoping the Problem

Before we go any further, let's clarify the term "unstructured data". When we think about unstructured data what do we mean?

Unstructured data typically refers to information that was not captured in a form native to a computer. A diverse group of items falls under that umbrella, including:

- Documents
- Social Media
- Narrative or description fields
- Emails

Though the list goes on, these types of data are extremely common in most organizations (often accounting for ~80% of the storage).

So why would you want to access this information?

In general, unstructured data lives at the edge of an enterprise's data ecosystem. It's data collected at the beginning of a process (a credit approval), gathered as your enterprise touches upon client interactions (emails, support tickets, complaints), or captured in your outbound reporting (regulatory or fiscal).

These edges are best thought of as spaces where rigid



structure can be problematic to the process, thus people are interacting in a semi-formal or informal way.

Most of this data would then be linked back to the enterprise's systems. However, due to the cost of managing structured data, this ingestion has typically only occurred on information that is critical in order to justify the cost.

With the rise of the data-driven enterprise, business users want access to more information and more insights. The growth in machine learning (ML) and processing capacity has allowed us to start reaching into those unstructured sources to identify the data as needed.

Whether that leveraging a FICO score for use in a risk model, validating the details of contracts, or assessing risk based on non-disclosure agreements, there is now a need to make these rich unstructured sources addressable so that we can incorporate them into the data ecosystem.

As you identify reasons to extract this rich data, you must consider the capabilities required to do so.

The list of capabilities outlined here is not exhaustive, but does highlight the key parts of an architecture that will allow you to journey into the world of addressing unstructured data.

## Parsing

Unstructured data does not come in a single format. Documents have a range of technical formats (PDF, Word, Excel, images, text files, emails, etc.) and each format is a combination of content (text, images, tables, etc.) and metadata (file name, author, modification date, etc.). The most basic document parsing involves accessing the native formats and extracting this content and metadata.

Often, people will start this work with tools like Apache Tika. However, these tools typically have limited value, because understanding a document often requires layout and structure, not just the text. The way that we understand information presented in documents is very complex.

Documents use a wide range of presentations to convey conceptual information, from the narrative structure of a contract, to the structured form of a credit application, to a mix of both. Information can be presented in a rich



form (a mortgage document) or a very terse form (a credit approval memorandum).

Before parsing the information, you need to consider your specific use-case. If you are simply determining the sentiment of the text or trying to find dates to understand temporal information, then extracting raw text and omitting the layout of the document may be fine. However, if you want a very specific piece of information, the specific layout might be needed to allow you to find it.

For example, labels exist on forms in order to specify information associated with that label value. If there are multiple values of the same type (i.e. dates), extracting all values without the context of the source labels may be worthless.

Labels are often placed to the left of their values, but may also be placed above or below their values. Extracting all text from a document without taking this placement in mind may also render the data useless. It is also common to find differing layouts within the same document (labels to the left, at the top, or in tables). Treating the entire document in one uniform fashion may result in more meaningless data.

## Normalization

Since documents come in different formats, it's useful to normalize these formats into a more unified one. There are two approaches you can take: Converting all formats to a single format (possibly converting everything into HTML) or creating an abstract format that isn't one of the native formats.

The approach you decide to use will be driven by the amount of value you believe there is in creating a new format. For example, you might want to support capabilities like annotation, lineage, or spatial structuring, which would lead you to a new format.

There are pros and cons to each approach, and your decision may shift as the needs of your organization evolve and as you find yourself needing to support new capabilities. In either case, you'll need to develop a strategy to store these normalized forms, since you will need to track lineage of data back to the normalized form rather than the original document.

## Navigation and Pre-processing

Any real attempt to get information from a document will quickly move beyond using only the normalized form, and you will likely find additional processing and preparation must be applied.

For example, you may need to identify and annotate the structure of the document (headers, footers, sections, outlines, etc.). You may also find that a pre-processing step needs to modify a normalized form (removing irrelevant data or labelling entities for a later step).

Rather than perform parsing and pre-processing into a single action, it's best to separate this type of pre-processing (document enrichment) into a multitude of steps that can be applied to the document. This approach allows you to combine steps across various document formats as needed.

## Pipelines

Pipelines are a natural way to model the combination of the capabilities above into a meaningful and controlled approach. They provide the ability to represent connections between documents, processing steps and data, in a way that easily communicates your

problem-solving approach to non-technical users.

Pipelines also allow you to track evolution of your processing. Once you successfully identify and extract the data specified in your original requirements, you'll often discover additional data gathering opportunities against the same source, which generates new requirements. This phenomenon shows how rich unstructured data can be.

I have seen waves of new requirements originating from a single set of documents as capabilities start to bear fruit.

## Don't forget the Process

While all of these capabilities are being aligned in your organization, one thing to bear in mind is these efforts must be placed in a well-defined process. All of this work should be captured and tracked in a development process allowing it to be controlled and managed.

**With the rise of the data-driven enterprise, business users want access to more information and more insights.**

Often people approach data projects—and ML specifically—as something beyond normal development. While there are some differences, you should not abandon those traits that help ensure quality in a software project.

Ensure you have version control in place. Work to build out testing to validate your work. Manage your deliverable so you are not just digging deeper into your data, but providing visible and usable results early and often.

You will need to build trust from a business community that will not be familiar with the technology. This will be much easier with tooling that allows you to show how the document was processed and where the data was found.

It's still early days in the enterprise adoption of these new data sources. While exciting, these times are not without risk. Making use of these unstructured data sources will require some re-alignment in most organizations.

It's also worth emphasizing that this isn't only an IT initiative. Business SMEs are critical to making sense of the data sources. There are no schema or definitions to describe the documents that you will need to address. The ML tools currently available are constantly evolving.

With this ongoing evolution in mind, you should separate some concerns. Focus on building an infrastructure that can work with a range of documents and models, to ensure your solution does not suddenly become obsolete because of a new ML breakthrough.

The world of unstructured data will no doubt change in the coming years, but one thing is fairly certain: it is not going away. Gartner predicts 80% of the data in the enterprise is unstructured, and that volume is growing at an incredible rate. While managing that data is a problem, harnessing it to drive your business is an equally massive opportunity.

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ABBYY is a leading global provider of technologies and solutions that help businesses to action information. The company sets the standard in content capture and innovative language-based technologies that integrate across the information lifecycle. ABBYY solutions are relied on to optimize business processes, mitigate risk, accelerate decision making and drive revenue. Thousands of companies process more than 9.3 billion pages of documents and forms annually using ABBYY technologies. ABBYY solutions and products are used by many of the largest international enterprises and government organizations, as well as SMBs and individuals.

ABBYY technologies are licensed by world-leading hardware and software vendors to provide Image Pre-Processing, OCR, Data Capture and Format conversion capabilities for their products.

ABBYY technologies and products, available on a number of platforms (mobile, desktop and server) and a variety of operating systems (Windows, Linux, Mac, iOS, Android, etc.), include FineReader, PDF Transformer, FlexiCapture, Recognition Server, Mobile Imaging SDK, Lingvo, and Compreno-based Semantic technologies.



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Esker is a global leader in cloud-based document process automation solutions. Esker's solutions are compatible with all geographic, regulatory and technology environments, helping over 11,000 companies around the world improve efficiency, visibility, and cost-savings associated with the processing and exchange of information.

Founded in 1985, Esker operates in North America, Latin America, Europe and Asia Pacific with global headquarters in Lyon, France and U.S. headquarters in Madison, Wisconsin and AUS/NZ headquarters in Sydney, Australia since 1997. Esker's solutions span the order-to-cash and purchase-to-pay cycles – allowing organisations to automate virtually any business process:

- Order Processing: automated entry and routing of incoming customer orders
- Accounts Receivable: automated sending and archiving of paper and e-invoices
- Collections Management: streamlined post-sale collection interactions
- Accounts Payable: automated entry and routing of incoming supplier invoices
- Purchasing: electronic processing and delivery of supply chain documents

## OPEX®

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OPEX is a recognised global technology leader in document imaging, high-speed mailroom automation and material handling.

Since 1973, OPEX systems have provided performance enhancing workflow solutions and cost-effective results to thousands of organisations worldwide.

OPEX systems are designed for a wide variety of industries including financial services, insurance, healthcare, government, retail, non-profits, utilities, telecommunication, service bureaus, educational institutions, and fulfillment operations.

OPEX has developed innovative prep reducing scanners that address the root causes of workflow issues our customers face. Minimising preparation, paper handling, and other manual tasks not only improves efficiency, but also results in superior transaction integrity and information security.

As documents are removed from envelopes/folders and scanned, operators can view each image to ensure it is properly captured.

This prevents time-consuming and costly re-scanning later in the process. Moving image capture upstream also reduces information management risks.



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DocsCorp is a leading provider of productivity software for document management professionals worldwide.

Our offices and products span the globe with over 500,000 users in 67 countries. Our clients are well known and respected global brands that rely on DocsCorp for their technology needs.

Our mission is to provide document professionals who use enterprise content management systems with integrated, easy-to-use software and services that extend document processing, review, manipulation and publishing workflows inside and outside their environment to drive business efficiency and to increase the value of their existing technology investment.

Our solutions include:

- contentCrawler - intelligently assesses image-based documents in content repositories for batch conversion to text-searchable PDFs, making every document searchable and retrievable
- compareDocs - delivers unparalleled levels of efficiency and accuracy in the document comparison process
- cleanDocs - provides a high level of confidence that metadata is cleansed from confidential or sensitive documents before being sent externally.



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ELO Digital is a truly global ECM company with Australian expertise! Servicing more than 1,000,000 users in over 40 countries, ELO has become the natural choice in ECM.

With more than 30,000 live projects the ELO product suite provides process enhancements, stability and compliance.

The Australian based subsidiary engages with Certified Business Partners to deliver 1st class solutions for Records Management, Document Management, Accounts Payable processing, Workflow Management, Mobile access and much more.

ELO provides consultancy, development and support services from its offices in Australia – we are local and global.

ELO's solutions can be deployed onsite, in the cloud or as a hybrid solution either as a CAPEX or OPEX such as subscriptions, SaaS.

ELO is fully scalable from as little as 5 users to large enterprises in excess of 10,000 users. ELO is a Federal, State and Local Government supplier compliant with Australian standards as well as GDPR and FDA requirements. Contact ELO or one of its certified partners to get more information.



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Kapish is a member of the Citadel Group (ASX: CGL). Citadel solve complex problems and lower risk to our clients through our tailored advisory, implementation and managed services capabilities. With over 250 staff nationwide and an ability to 'reach back' and draw on the expertise of over 1,500 people, we are specialists at integrating know-how, systems and people to provide information securely on an anywhere-anytime-any device basis.

Servicing both large and small, public and private sector organisations across all industries, our team of highly qualified staff have global experience working with all versions of Micro Focus Content Manager (CM). It is this experience coupled with our extensive range of software solutions that enable our customers and their projects to be delivered faster, more cost effectively and with more success.

At Kapish we are passionate about all things Content Manager. As a Tier 1, Micro Focus Platinum Business Partner, we aim to provide our customers with the best software, services and support for all versions of the Electronic Document and Records Management System, Content Manager. Quite simply, our products for CM make record-keeping a breeze



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FileBound is a cloud-native document management system with advanced workflow capabilities that automates the flow of enterprise work. FileBound is able to be deployed in organisations of all sizes and features capture, document management, workflow, electronic forms, analytics, mobile access (IOS and Android) and much more. It presents in a single, easy-to-use application that manages business processes from beginning to end and reliably connects people and information.

FileBound provides organisational efficiencies, drives out manual paper-based processes to decrease costs, increase productivity and support compliance with internal and external mandates.

FileBound users have the flexibility to create a variety of solutions from complex AP automations to simple document archival and retrieval processes.



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EzeScan is one of Australia's most popular production capture applications and software of choice for many Records and Information Managers.

This award winning technology has been developed by Outback Imaging, an Australian Research and Development company operating since 2002. Solutions range from centralised records capture, highly automated forms and invoice processing to decentralised enterprise digitisation platforms which uniquely align business processes with digitisation standards, compliance and governance requirements.

With advanced indexing functionality and native integration with many ECM/EDRMS, EzeScan delivers a fast, cost effective method to transform your manual business processes into intelligent digital workflows.

EzeScan benefits include:  
 initiate intelligent automated processes;  
 accelerate document delivery;  
 minimise manual document handling;  
 capture critical information on-the-fly; and  
 ensure standards compliance.



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Epson is a global innovation leader dedicated to exceeding expectations with solutions for markets as diverse as the office, home, commerce and industry.

Epson's advances in scanning technology deliver the perfect balance of speed and reliability for image reproduction of unbeatable quality.

From compact mobile scanners to A3 flatbed scanners that operate at speeds up to 70ppm, the range is designed for a variety of demanding organisations where fast and easy document management is required.

Combine that with high productivity software that allows networking and 'scan to' options including the cloud, its versatile functions dramatically expand data usability and online document workflow.



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UpFlow is a channel-first provider of Document Capture, RPA, Document Management, Workflow, Electronic Forms and Integration software products and services.

UpFlow distributes and resells products such as PSiCapture, Flow Integration Platform, Ratchet-X RPA, Doc Mgt and FileBound.

PSiCapture is an innovative document capture platform engineered to combine automation, efficiency, stability and Enterprise-class scalability. PSiCapture provides unmatched integration with just about any ECM or ERP platform [e.g. SharePoint, Xero, Trim, Objective etc.] and allows the utmost in flexibility for deployment in large or small organisations.

Ratchet-X is a mid-market Robotic Process Automation solution that provides attended or unattended Bots for the automaton of enterprise work.

Flow is a fully featured Integration Platform that can connect an exhaustive list line-of-business systems with each other.

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If you want to add high quality business automation products to your list of products and services then contact UpFlow today.



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Alaris, a Kodak Alaris business, is a leading provider of information capture solutions that simplify business processes.

Digital Transformation is the need of the hour for many organisations, and it starts with information and data capture.

We exist to help the world make sense of information with smart, connected solutions powered by decades of image science innovation.

Alaris drives automation through every business process dependent on document and data capture so that you can get the right information to the right place at the right time.

Our award-winning range of scanners, software and services are available worldwide, and through our network of channel partners. For more information, please visit [AlarisWorld.com](http://AlarisWorld.com).

# Bring capture to mobile apps

ABBYY has introduced a new software development kit (SDK) designed to provide easy mobile capture for apps offered by financial services, insurance, transportation and logistics, healthcare, and other industries. ABBYY Mobile Capture makes it easy for users to simply capture data via the smartphone or tablet camera to be used within an app or extracted and sent to back-end processes for self-service scenarios.

The AI-enabled SDK frees the mobile user from manual data entry, creating a frictionless user experience for all onboarding and data entry scenarios including sign-up, registration, and document input. The SDK aims to support digital transformation and robotic process automation (RPA) strategies.

Forcing mobile users to go through lengthy registration processes, requiring them to manually type information from documents into apps, is not only error prone and time consuming, but also one of the most disliked activities, according to a recent research study commissioned by ABBYY. From a business standpoint, the inability to automate data input slows down transactions, creates unreliable onboarding processes and impedes transparency and operational visibility.

Mobile Capture allows the user to enter all the necessary information into an app by simply pointing their camera at the document or text. The app will then automatically and in realtime extract text and data from documents and objects and capture the best quality image for further back-end processing.

It works for 63 languages on any background and includes out-of-the-box recognition of over 160 types of IDs, bank cards, MRZ, and IBAN.

Contact ABBYY at [sales@abbyy.com.au](mailto:sales@abbyy.com.au) or on (02) 9004 7401.

## ActivePDF Xtractor

ActivePDF has announced the release of Xtractor 9.1.0, its PDF data extraction tool, adding new functionality and an overall improved user experience.

The latest 9.1.0 version of Xtractor uses 85% less code, provides twice as many API calls, and runs up to 64-times faster than Xtractor 8.10.

High-security industries such as government agencies and financial institutions use Xtractor to extract high volumes of text, images, location coordinates, and metadata from PDF files in mere minutes. Once extracted, the data is immediately available for automation, editing, indexing, and more.

Xtractor 9.1.0 new and updated features include:

- **Bookmarks:** Xtractor 9.1.0 now extracts the bookmark destinations with PDF files.
- **Permission:** Extracts document permissions, such as print resolution and information regarding whether form field pages, documents, or annotations can be modified or copied.
- **Text & Search Phrases:** Xtractor 9.1.0 can now extract text above and below a search phrase.

<https://www.activepdf.com>

# DocuWare 7.1 enhances Invoice Processing

DocuWare has released DocuWare 7.1, the latest version of its flagship document management and workflow software. Highlights include improved workflow capabilities, a new Workflow User License, and automatic processing by line item on invoices. Now, several tasks can be processed at the same time, steps can be filtered for a better overview and notification emails sent to multiple recipients simultaneously.

The new Workflow User License enables employees who require only read-only access to archived documents to complete their key tasks within a workflow, using a "lighter" version of the full license. These users can also fill out and save forms with this license. This new option allows teams to involve a greater number of relevant staffs in workflows in a much more cost-effective manner.

The new version also features automated invoice processing based on individual line items. With version 7.1, split posting – the assignment of these individual line items to different cost centres for multiple approvals, is effortless.

Improved Intelligent Indexing recognizes individual entries and transfers them as metadata into a new field. The accuracy of these entries forms the basis for controlling the invoice workflow.

"The new features help companies of all sizes and industries to work more efficiently and save even more time," says Dr. Michael Berger, Co-president of DocuWare Group.

DocuWare Version 7.1 is available in cloud and on-premises versions, both set ups offer identical functionalities.

<https://start.docuware.com/>

## AvePoint speeds Cloud File Migration

AvePoint has announced a new cloud file migration technology as part of its AvePoint Migration Platform (AMP). The company says it has reached speeds of 100 terabytes per day, making it the industry's fastest solution for migrating Dropbox, Box, GDrive, OneDrive and other cloud files.

The hosted migration software-as-a-service solution also enables users to pre-scan their files and folders, automate the project by defining mappings and leverage built-in progress reports. Cloud-to-cloud migrations have become increasingly frequent as more organizations adopt cloud.

Other new features for the AvePoint Migration Platform (AMP) include support for SharePoint 2019, user experience enhancements, sophisticated PowerBi dashboards to monitor throttling and performance, the ability to configure a migration database for access to detailed project insights and additional features to pause, restart, or rerun only failed objects, and more.

The AvePoint Migration Platform supports more than 15 sources including: Box, Dropbox, Google Drive, Gmail, on-premises file shares, SharePoint, Slack, Teams/Groups, Other Office 365 instances, eRooms, Documentum, LiveLink, Lotus Notes, QuickPlace/Quickr, HP Trip, IBM File Connection and more.

<https://www.avepoint.com/services/migration/>

# Why Future Proofing Document Scanners Matters

By Petra Beck, Director Customer & Market Intelligence, Kodak Alaris

The pressure to automate business processes and eliminate manual tasks continues to grow as businesses and government organizations scramble to meet their digital transformation goals. Document-centric processes are under intense scrutiny by C-level executives, and for good reason, since paper-based information directly impacts customer satisfaction and business profitability.

Responding not only to the need for reduced business process complexity, but even more for getting ahead of ever-changing business requirements, an organization's technology infrastructure plays an essential role. But it is often overlooked.

The rate of change is accelerating in literally all industries. This keeps IT and business operations managers on their toes, constantly needing to adapt workflows to meet changing requirements. As they look for solutions to enable the automation and optimization of business workflows, there is always the risk of choosing the wrong technology, which would limit their future capabilities.

New technologies like intelligent workflows and robotic process automation coupled with the shift from thick to thin client applications and the growing adoption of cloud-based business applications present significant opportunities to advance digital transformation initiatives. That said, they can also render recent technology investments obsolete if they do not support these technologies.

Not only are productivity-enabling technologies changing, but the deployment of these technologies is changing too. The traditional technology stack consisting of devices and software layers has been disrupted; job functions can be done anywhere. Changing business requirements coupled with rapid technology advances create new opportunities for document scanning solutions that offer increased flexibility and adaptability.

### Future-proof architecture

Scanner vendors need to anticipate customer requirements and develop technology that provides organizations with solutions that address tomorrow's needs. One key example is System on a Chip ("SoC") integrated circuits, now integrated into the Alaris product line, which handle mission-critical image processing functions and a combination of new software routines to deliver flexible solutions with cloud connectivity, security and superior ease-of-use.

Unlike conventional ASIC platforms, SoC is programmable and therefore adaptable and scalable to future requirements. Investing in this architecture creates a future proof asset that remains adaptable, scalable and

offers cost savings for many years to come.

SoC extends the scanner's capabilities by combining components like CPUs, accelerators, and memory, traditionally in separate chips, into one. The result is a scanner packing enough power to deliver significant business value beyond high-quality images.

### What Kind of Business Value?

We're glad you asked. The first benefit is in the scanner's ability to operate independently. In many cases, this simply means not being connected via a USB cable to an adjacent PC. But in the age of "edge devices," this can be extended to include documents' points-of-origin like warehouses, shipping docks, remote locations, and anyplace inhospitable to a PC, but with access to a wireless connection.

The next benefit is ease of use. Unforeseen costs invade the hardware lifecycle from setup time, to firmware updates, to the deployment of new on-screen options. Alaris' focus is firmly on user interfaces and making sure knowledge workers can get jobs done faster, with fewer mouse clicks, or fewer touches on a touch screen. Our easy setup sheet allows the pre-configuration of network settings before the scanner is unboxed and enables end users to set devices up with the press of a button and no IT involvement. Once connected, driver-less integration with a web API enables integrators to manage the scanner without having to install any drivers on a PC - a huge benefit for enterprises. Alaris scanners save valuable time in exception handling. The SoC architecture, combined with Alaris' powerful Capture Pro Software, enables verification of data on forms at the point of capture. If a signature is missing or a box unchecked, the end user is notified immediately, not after the document is routed to its destination and the exception relayed by a human on the other end, delaying the business process.

Finally, SoC delivers a security benefit unique to Alaris scanners, but gaining more visibility across every industry: data handling. In competitor's scanners, images are captured but then take a detour to a PC or server to produce the finished image file before being routed to their ultimate destination. These detours are potential points of attack for outsiders looking to steal data. Additionally, document data can often linger in scanner or MFP memory long after the scan. When sensitive data is involved, more vulnerabilities can mean costly compromises. Alaris solves all of the above by finishing files on the scanner and securely transmitting them directly to their endpoints, whether e-mail, secure FTP, or a cloud application. Then data is wiped from the scanner's memory immediately after jobs are complete, ensuring data remains safe.

*Petra Beck is the Director Worldwide Customer & Market Intelligence Strategy for Alaris, a Kodak Alaris business.*

# pdfToolbox fixes OpenType font issues

callas software has released a minor update for its pdfToolbox product line. The update includes fixes for problems discovered in the field and a number of small improvements to the product in response to customer requests. In addition, callas software included a way to fix problems discovered with OpenType SVG fonts.

Recently designers have begun using colourful OpenType SVG fonts more frequently, but according by one of callas' partners agileStreams, these can cause real production problems.

The underlying cause of those problems goes back to the way the PDF specification is written, which results in multiple possible interpretations. Because of the severity of the problem, callas software wanted to quickly implement a fix. In pdfToolbox 10.2, a new Fixup merges the characters from an OpenType SVG font into the page content in an intelligent way. This fixes the problem without complicating the PDF file.

The update also makes the conversion of TIFF to PDF and PSD to PDF more robust: better support for 16-bit TIFF files, alpha channels, metadata, spot colour channels. It makes the use of TIFF and PSD with pdfToolbox more reliable.

The compare mode between two PDF files has also been improved to add the ability to compare only within certain page boxes and to set the comparison anchor point. This enables the use of PDF file comparison even if two PDF files have different sizes.

Other improvements include new QuickCheck items for content stream length (to judge page complexity very quickly), DPart items and support for variables during batch processes in pdfToolbox Desktop.

The update to pdfToolbox 10.2 is free of charge for pdfToolbox 10 users.

<https://www.callassoftware.com/en/>

# iOS App offers Handwriting Recognition

Penquills (formerly PhatWare Corporation) has launched an iOS application that provides word processing, note-taking, and document management including handwriting recognition technology.

The app allows users to take notes by hand, and these notes are converted into digital text with Penquills's handwriting recognition software. Write emails in Gmail and text messages by hand. Once the app has been downloaded, users can write in their own handwriting and have it converted to text in any iOS app that allows text input.

Penquills's handwriting recognition technology has a spell-checker with its own custom dictionary, a context analyser, auto-corrector, and a Shorthand feature that fills-in frequently used words and phrases.

Penquills is now optimized for iOS 11 and 12 and includes a custom keyboard that offers handwriting recognition input in any iPad and iPhone app. A "today" screen extension allowing quick access to recent documents, and improved iCloud integration for easy document sharing between devices.

Penquills, which builds upon the original WritePad app, adds rich text editing which can be combined with images, custom drawings, and text. The app integrates with various system resources including email, contacts, maps, iCloud, social networks, and more.

Penquills creates HTML and PDF documents and can open text, Microsoft Word, RTF, HTML and text files for editing. The app offers superior integration with online language translators to support collaboration with users across the world.

Advanced shorthand features enable users to format text using written commands. Users can scribble shorthand commands to change the font, paragraph, and formatting in addition to inserting user-defined text blocks, invoking translators, maps and other system resources.

To enable collaboration, Penquills HTML documents can be synchronized with Box, Dropbox, Evernote, Google Drive, iCloud, and Microsoft OneDrive.

<https://www.penquills.com/ios-apps>

# How to audit Amazon Web Services (AWS)

ISACA, the international professional association focused on IT governance, has launched a new tool to new support IT auditors in their assessments of AWS deployments - including the use of AWS services, access to the AWS environment, management and interrelationships of AWS services.

By 2020, it is estimated that 41 percent of enterprise workloads will be hosted on public cloud platforms. One of the leading platforms in this space, Amazon Web Services (AWS), has the ability to help teams become more agile; however, without proper knowledge of AWS configurations and potential hazards, enterprises may also open themselves to new risks.

Amazon Web Services (AWS) Audit Program covers AWS applications, functions and containers, and across the domains of governance, network configuration and management, asset configuration and management, logical access control, data encryption controls, logging and event management, security incident response and disaster recovery.

IT audit professionals can follow detailed testing steps outlined for controls across these domains in this audit program spreadsheet to assist in their auditing process, but they are encouraged to customize the document for their unique enterprise needs. The program is free to members, and \$US25 for non-members.

[www.isaca.org/Knowledge-Center/Research/Pages/Audit-Assurance-Programs.aspx](http://www.isaca.org/Knowledge-Center/Research/Pages/Audit-Assurance-Programs.aspx)

# ControlSuite Improves Document Security

Kofax has announced ControlSuite, a new print and capture software solution that simplifies and enables the central management and governance of content flowing through multi-function printer (MFP) fleets, mobile & desktop devices, email, and print streams.

Kofax ControlSuite actively manages, secures and governs virtually every aspect of the distribution in documents via printing, scanning, routing and storing throughout the enterprise - across any combination of hybrid systems,

technologies and devices, including mixed MFP environments. Kofax ControlSuite is a unified platform that enables a single installation, configuration and management of print, capture and output management. Its modular architecture contains next-generation versions of Kofax Equitrac 6, Kofax AutoStore 8 and Kofax Output Manager 5.

Equitrac 6 expands upon its robust print management capabilities with new mobile print release capabilities, Micro Card Reader Smartphone authentication, enhanced security capabilities, a new web-based administration console and basic scan to email or file.

AutoStore 8 augments its rich capture capabilities with new authentication services, Micro Card Reader Smartphone authentication, enhanced mobile capture capabilities, healthcare workflow with HL7 and CDA support and new data extraction capabilities with OpenForms 360.

Output Manager 5 has enriched its output management capabilities with new Micro Card Reader Smartphone authentication, a new Epic connector to service healthcare, an enhanced mobile app, advanced deployment options and basic scan to email or file.

## Strengthening Office 365 Email Security

Content search capability has been added to the Office 365 administration solution, O365 Manager Plus. The new capability notifies administrators when official emails contain personally identifiable information (PII), classified information, and malicious content that may jeopardize the compliance and security of the enterprise.

Despite the availability of newer forms of communication, over 205 billion emails are sent every day, and email remains the most common form of organizational communication in the digital world.

This explains why emails are the most targeted entity by intruders. With more than 135 million active Office 365 users, and a growing number of organizations adopting Office 365 for business communication, the need to fortify Office 365 has never been more important.

"With more email moving through Office 365, and our dependency on connectivity swelling, it is high time to focus on our defense strategies against cyber attacks," said Parthiban Paramasivam, product manager at ManageEngine.

"That's why we have equipped O365 Manager Plus with the advanced mailbox content search feature to help you secure your email setup while ensuring compliance to HIPAA, GDPR, and other government and industry mandates."

O365 Manager Plus can analyze internet message headers, which provide technical details on the actual sender's email address, the platform used to compose the email, and the servers it has passed through. This allows IT admins to identify phishing emails sent by an attacker masquerading as a legitimate person.

Mail attachments are one of the most common ways to deliver malware to end user systems. O365 Manager Plus can identify all emails with attachments and notify IT admins when such emails are sent or received.

<https://www.manageengine.com/office365-management-reporting/download.html>

## User and Policy Driven Cloud Archiving

Data storage solution provider Komprise has announced two major product updates: Support for both user and policy driven archiving, and the launch of its standalone NAS migration solution.

As data growth continues to explode, businesses are looking for simple, efficient ways to manage the exponential costs of storing this data. Komprise enables customers to slash data storage and backup costs by finding cold data across their Network Attached Storage (NAS), and based on policies typically set by IT, offloading this data from expensive storage and backups into cost-efficient secondary storage.

In some cases, business users may want to archive some data themselves outside of a policy which is why Komprise has added user driven transparent archiving.

Unlike the traditional data management approach of choosing between policy-driven or user-driven paradigms, Komprise Intelligent Data Management 2.9 now supports both approaches. This empowers business users to leverage their knowledge of data relevance to help manage data.

Users can analyze data growth, designate projects to be archived, and access archived data exactly as if it were still on the primary storage. Users can also do a "bulk recall" of projects that are ready to become active again.

Storage administrators and business users can now work together to modernize data management. Komprise continues to deliver transparent archiving to both approaches so users access the moved data exactly as before from its original location without business disruption. Komprise has also launched Komprise NAS Migration 1.0, a standalone NAS migration product that enables customers to also use Komprise on standalone data centre consolidation/migration projects.

<https://www.komprise.com>

## PDFfiller adds esignature integration

PDFfiller, an all-in-one online PDF editor, e-signature and form builder, now allows its users to create and manage complex e-signature workflows with SignNow. Users can instantly send document groups to multiple signers, assign specific fields, set signing orders and create custom notifications.

With a few clicks, users can send multiple documents to multiple signers, set a signing order and expiration date, request payments and assign fields and roles to each signer.

SignNow fully complies with industry-leading security standards, ensuring client data and documents are encrypted and protected. Users can also set a password to access their documents, request signer identification via SMS or phone call and download document histories with court-admissible audit logs.

PDFfiller's web-based solution is seamlessly integrated with Salesforce, Microsoft Dynamics 365, Slack, Google Suite, Dropbox and Quip. The PDFfiller mobile app is available for iOS and Android.

<https://www.pdfFiller.com/>

# PDF Agent for Relativity Review

Sky Discovery, in partnership with Hillogic, an Australian based I.T software development company, have launched an industry first PDF agent for Relativity that allows PDFing documents for discovery on the fly. Australian federal and state practice notes default to exchanging in a PDF format.

This unique solution will automatically convert documents to PDF as they are tagged as discoverable and stamps them in accordance with the practice notes.

Jeff Jarrett, Director of Projects explains that this will be a game changer in the eDiscovery market and states "As native file review has become the standard workflow for eDiscovery matters, one of the major pain points our clients face is a very tight turnaround on tasks such as producing discovery or hyperlinking affidavits, as PDFing has to occur historically at the pointy tail end.

"Within the PDF Agent solution, Relativity converts and stamps any document marked relevant by the legal team within seconds. This removes the time and cost associated with urgent PDFing entirely, eliminating the prior pain point entirely."

Anderson Hind, Director of Technology, said, "The PDF Agent is something we are really excited about as it eliminates another of those manual, time expensive, labour intensive and risk prone tasks that are performed daily in eDiscovery.

Key features include:

- Automatically convert documents to PDF as they become discoverable based on a customisable rules. For example, when a document is tagged as discoverable in Relativity it will automatically be converted to PDF.
- Ability to define a set of documents to PDF.
- Setup rules on how to treat specific document types.
- Redaction workflow ensures consistency in PDF/Image versions of documents.
- Setup templates to paginate documents in compliance with your discovery obligations.
- Have access to the discoverable PDF version and the native version at the same time.
- Reduce the amount of PDF conversion, saving time and cost by only converting those files which will be produced.

<https://www.relativity.com/ediscovery-software/app-hub/pdf-agent/>

## ABBYY enhances M-Files integration

ABBYY has released a FlexiCapture Connector for the M-Files ECM platform that will more tightly integrate its intelligent data extraction and recognition capabilities. ABBYY has also become an M-Files Certified Application Partner (CAP).

"Our enhanced partnership with M-Files is further evidence of the growing need for intelligent document processing solutions that enable business agility and support strategic digital transformation initiatives in enterprises," said Bruce Orcutt, senior vice president of product marketing at ABBYY.

The strengthened alliance also makes it easier to integrate ABBYY's Capture-as-a-Service functionality into M-Files, enabling users to take advantage of their classification, extraction, and transformation services at any point in a document's lifecycle.

Additionally, M-Files will be able to leverage ABBYY's Text Analytics for Contracts, a SaaS platform providing contract discovery and analytics in its Intelligent Information Management platform.

ABBYY Text Analytics for Contracts integrates ABBYY's powerful recognition, advanced linguistics, data capture and natural language processing capabilities to automatically identify and extract business intelligence from contracts and leases and speed up content migration and compliance.

Contact ABBYY at [sales@abby.com.au](mailto:sales@abby.com.au) or on (02) 9004 7401

## Knowledge On Demand for O365

Available through the Microsoft AppSource marketplace, EdCast's Knowledge Cloud promises to deliver the ability for all Office 365 users to gain one-click access to knowledge on-demand.

Organizations can use the Knowledge Cloud to address sales enablement, training and upskilling needs in ways that are integrated into the flow of work with Office 365, now commercially used by 120 million people around the world.

Additional features available through the EdCast application for Office 365 include:

- AI-Powered Knowledge: Personalized content from internal, external and subject matter expert sources
- Engagement (Mobile-first and In-app): Collaboration capabilities available across dynamic groups
- Customization: Branded and tailored to the client and to the unique needs of their employees
- Analytics: Advanced reporting to assess and measure performance, manage certifications, and empower discretionary learning and training

## Governance tool for Office365 and Teams

ShareGate, a software company specializing in cloud computing solutions, has announced the public release of ShareGate Apricot, a governance tool designed to help IT professionals efficiently deploy Office 365.

The Montreal -based brand's newest offering lets IT collaborate with trusted users to prevent the sprawl of Office 365 Groups and Teams.

With ShareGate Apricot, Office 365 admins can easily:

- Monitor and detect unused Office 365 groups and teams based on activity
- Collaborate with group owners to archive obsolete content
- Automate team and group lifecycle management

[www.sharegate.com](http://www.sharegate.com)



# TechnologyOne to CM integration

Information Management and Governance (IMG) specialist, iCognition, has completed a successful implementation of its new TechnologyOne to Micro Focus Content Manager (CM) integration at Hutt City Council, NZ. iCognition has added this product to its RM Solutions suite under the name of RM TechOne Connector.

"This TechnologyOne to Content Manager integration is unique, as very few Content Manager vendors have successfully implemented an integration between TechOne Cloud and an external content management system," said Dom Mammoliti, National Sales Director.

"We had an excellent customer who developed a strong relationship with both iCognition and TechOne to ensure the delivery of a robust and efficient integration."

Hutt City Council uses Technology One - Property and Rating (P&R) to manage building consents and other application processes. The integration to CM allows documents to be created through P&R and transferred to CM for management as records.

A link is made available within TechnologyOne to allow users to open CM to access folders or documents in context of the TechnologyOne business process.

Other functions of the integration are:

- New properties or applications created in P&R have the corresponding container created within CM.
- Fields in CM are populated with the corresponding data from P&R.
- New documents created in P&R are saved into the appropriate container in CM based on the Application of which it forms a part.

"RM TechOne Connector is now in production at Hutt City Council and working well," said Mr Mammoliti. "The Council is very pleased with the result, which has taken a massive amount of effort from all parties. RM TechOne Connector product is now a released product in the market, and we encourage organisations using TechOne and CM to contact us to discuss how we can deliver compliance and regulation for their TechOne solution".

[www.icognition.com.au](http://www.icognition.com.au)

## Metadata Management for Microsoft BI

Octopai has announced the availability of its cloud-based metadata management automation to enable Microsoft users to locate crucial data and track its movement process across the entire Microsoft business intelligence stack.

One of the biggest challenges for any organisation directly impacting business intelligence users is discoverability. The inability to find, understand and discover where relevant data is located, and furthermore, understand its movement process within the entire Microsoft stack, including SSIS, MS-SQL, Tabular, OLAP, SSRS and PowerBI hinders BI users from producing accurate reports quickly.

Microsoft users are often forced to compromise on resources and quality of delivery in order to meet business deadlines because current metadata management solutions are either designed to be on-premises and/or

require a high level of customisation, causing these solutions to both lack agility and be very costly.

Octopai provides exactly the opposite. The company's cloud-based solution offers Microsoft customers the ability to discover data and visualise complete data lineage in 5 seconds with a single click of a button.

Requiring less than 1 hour for setup, Octopai offers actionable insights into the Microsoft BI Stack in under 24 hours. Octopai adds its Microsoft full stack service to its already existing full service for Oracle, as well as IBM, SAP, and Informatica tools. The company's Microsoft solution is available on the Microsoft Azure Marketplace and can be hosted either on the cloud or as an on-premise solution.

[www.Octopai.com](http://www.Octopai.com)

## PDF templates for enterprise apps

iText Group has launched a template engine that is designed to reduce the time-consuming complexities that many developers face when creating and maintaining data-driven PDF templates.

The browser-based application and a Java back-end enables seamless integration of HTML5, CSS, PDF 2.0 and global language/ligature support into document workflows.

iText DITO allows anyone to design, configure and connect data from HTML input forms and PDF output templates, in any company house style, to the appropriate back-end data and logic, ensuring correct business results. Modifications can be made to templates, without changing a single line of code.

The applications of iText DITO are various: for instance, credit card statements, airline boarding passes, utility bills, application forms, medical records, invoices and many more.

<https://itextpdf.com/en/products/itext-dito>

## AutoCAD integration in OneDrive/SharePoint

Microsoft has announced Autodesk AutoCAD integration in OneDrive and SharePoint, allowing the opening and editing of DWG files in the AutoCAD desktop application, the AutoCAD mobile app, and the new AutoCAD web app.

"For many teams focused on architecture, engineering, and manufacturing, computer-aided design (CAD) drawings are key to their workflow.

"By storing CAD drawings and DWG files in OneDrive and SharePoint, teams get the benefit of industry leading mobile and desktop applications, enterprise-grade compliance, and innovative collaboration capabilities.

By tightly integrating tools and files together, tasks get simpler, you can stay in your flow, and you can integrate your data with business processes. For these teams, deeper connections between key business tools to files can transform how they work," it notes on the OneDrive blog. Microsoft says the announcement is just the beginning of the collaboration between the company and Autodesk, and other new features should be integrated soon.

## APPS & APPLIANCES

# FlexiCapture Cloud adds REST API and Realtime Capture

ABBYY has announced a series of innovations to ABBYY FlexiCapture, its AI-enabled enterprise platform to automate document processing workflows and convert unstructured content into structured data.

The updates include the launch of the ABBYY FlexiCapture Cloud REST API (Representational State Transfer Application Programming Interface) and the introduction of the new Real-Time Capture technology for realtime document processing in the cloud.

The REST API makes it easy for applications and services to submit content to FlexiCapture Cloud in the region of choice on Microsoft Azure and receive realtime responses related to data, context, entities, and relationships. It enables users to extract meaning from documents, continuously train the system, and develop custom verification processes.

Real-Time Capture released in beta makes FlexiCapture Cloud suitable for use cases where immediate response and return of structured data are important, such as customer onboarding, new account opening, and mortgage origination.

ABBYY provides cloud maintenance and upgrades, guarantees security and compliance, and offers 24-hour customer support included in the subscription.

## LeanIX teams up with Citadel Group

LeanIX, a provider of Software-as-a-Service solutions in Enterprise Architecture Management (EAM), has announced expanded operations in Australia, including offering local data hosting capabilities through Microsoft Azure's data centre in New South Wales and a new strategic partnership with Citadel Group.

The expanded footprint allows LeanIX to provide enhanced regional focus and a dedicated on-the-ground team of Enterprise Architecture (EA) consultants.

As part of the partnership, LeanIX customers in Australia now have access to key capabilities and services through Citadel. Through LeanIX's leading product suite, combined with Citadel's expertise in the Enterprise Architecture space, local customers will now have the ability to source software locally through the newly established partnership.

[www.leanix.net](http://www.leanix.net)

## Livetiles and Search365 in Search Partnership

LiveTiles, a global software company headquartered in New York, has announced the strategic partnership with leading IT service provider to the Australian Government and Financial Services clients, Search365. Search365 traces its roots to the team that worked on the FAST Search capability for Microsoft.

LiveTiles has entered into a partnership with Search365, where LiveTiles will be combining its technology with the

Search365 Knowledge Miner for creating a sophisticated information discovery tool that is capable of realtime file search and response.

Through the AI-powered Knowledge Miner, LiveTiles' Bots will be able to carry out instantaneous, personalized as well as actionable responses to the user's request by directly fetching the relevant information from relevant data sources.

Based on the ability of the Knowledge Miner to deliver a response that reflects the most recent changes to source data, the users can rely more on Bots to provide a correct answer from the relevant document whenever required.

The companies say the addressable market for a product that combines LiveTiles' intelligent workplace offering with Search365's Knowledge Miner is extremely large and spans any industry that has a core focus on Compliance and Risk Management.

Both parties will jointly pursue opportunities within government, financial services and other highly regulated industries under the partnership. Already, the partnership is experiencing early success with pilots underway with leading Australian Financial Services and Government clients.

## Box enhances workflow automation

Cloud content management company Box Inc. is revamping its workflow automation tool Box Relay, making it easier for companies to automate business processes.

The new version of Box Relay is available in Beta and will be launched in June. It features a new workflow engine, simplified user experience, and an enhanced menu of triggers, conditions, and outcomes to make it easier to automate processes around content and improve efficiency without intensive IT support.

"Enterprise workflows built around content like document reviews and approvals and employee on-boarding and off-boarding need to be re-imagined. They're disconnected from the apps teams use every day, locked behind IT, and don't support external collaboration," said Jeetu Patel, Chief Product Officer of Box.

The new workflow engine provides an extensive list of 'if this then that' (IFTTT) triggers and outputs to support various multi-step processes, including both sequential and parallel workflows. The new Box Relay also supports conditional logic, providing the ability to route content based on metadata attributes, such as date, dropdown, multi-select, or open text fields.

External collaboration is made easier as customers, vendors or partners can be assigned tasks, so the process does not break down when content flows across or between organizations. Users can also view a list of pending tasks and receive real-time push notifications on task assignments all from their mobile device.

Support for integration with other enterprise workflow platforms includes business process systems like Salesforce, Pega and Nintex. With the completely rewritten Box Relay, the company is trying to move beyond its main business of providing storage and content management services and become a major player in the emerging workflow market.

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