



MARKET SHARE

Worldwide and U.S. ISV Device and Print Management Market Shares, 2014: Large Players Remain Strong

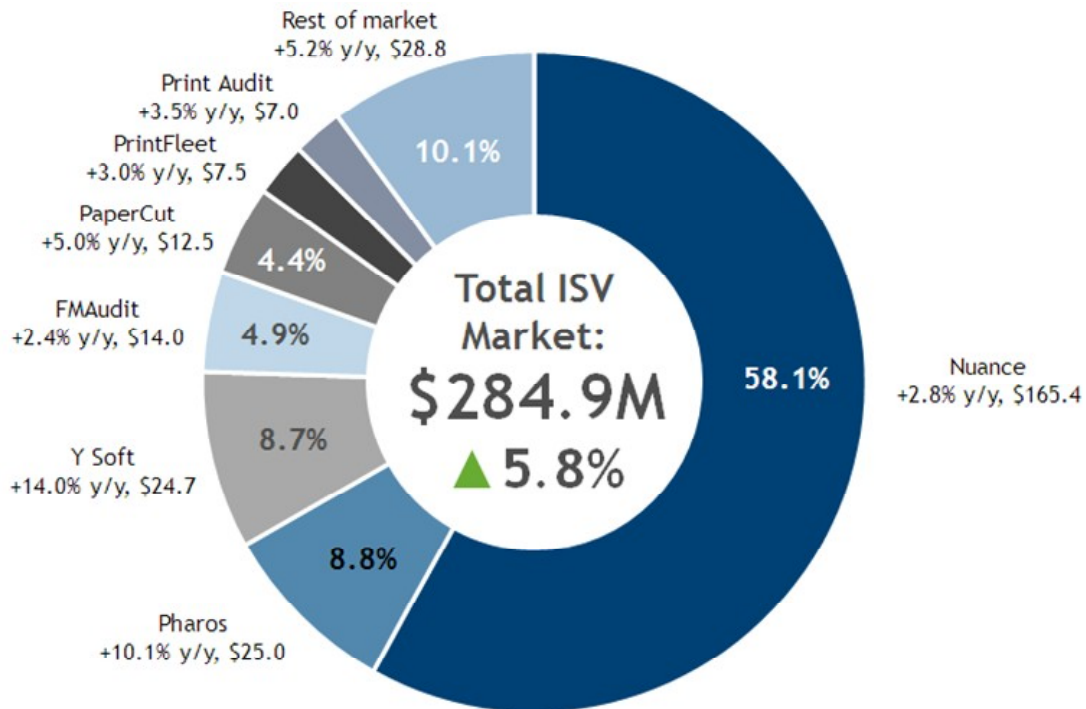
Ron Glaz

Arianna Valentini

IDC MARKET SHARE FIGURE

FIGURE 1

Worldwide ISV Device and Print Management 2014 Share Snapshot



Note: 2014 Share (%), Growth (%), and Revenue (\$M)

Source: IDC, 2015

EXECUTIVE SUMMARY

This IDC study provides the worldwide and U.S. market share data for independent software vendors (ISVs) for the device and print management market for the calendar year of 2014. The total worldwide device and print management market grew from \$546.6 million in 2013 to \$600.5 million in 2014, at a year-over-year growth rate of 9.9%. We estimate that independent software vendors worldwide had revenue of \$284.9 million in 2014, making up 47.4% of the total worldwide market number for device and print management. Market growth reflects growing awareness among decision makers within organizations for security around document solutions. The peaked interest in security is helping drive adoption of pull printing, authentication, and policy management in the print and device management segment.

In *Worldwide Imaging, Printing, and Document Solutions 2014 Top 10 Predictions* (IDC #246666, February 2014), IDC predicted security (along with mobile and cloud) would become table stakes and that the document solutions market will have evolved enough to the point where these solution categories will be represented in each and every imaging, printing, and document solutions (IPDS) vendor offering. According to *Worldwide Document Solutions Software Forecast, 2015-2019* (IDC #255762, April 2015), we found that this prediction has become true with growth in security – specifically authentication, authorization, and security – showing a 15.7% CAGR from 2015 to 2019. Other areas of growth to consider are:

- During qualitative interviews with ISV device and print management vendors, we found that the majority now offer or deploy some sort of mobile-enabled or cloud solution, with more revenue beginning to come from SaaS-deployed business.
- Driven by the scalability of cloud deployment, many ISVs are now moving downstream and servicing the small and medium-sized business (SMB) segment directly or through the dealer channel.
- There has been continued growth in emerging markets such as Asia/Pacific and Latin America for device and print management solutions. This increased demand is coupled with the changing needs of mature markets (i.e., United States and Western Europe) for device and print management solutions that provide improved mobility, cloud, and security offerings.
- It is important to note that device and print management assessment – which includes device management and diagnostics – is slowing down because of software becoming a standard feature within hardcopy devices.

This IDC study provides the worldwide and U.S. market share data for independent software vendors (ISVs) for the device and print management markets for the calendar year of 2014. "In 2014, independent software vendors in the device and print management market continued to grow and serve as important connectors for users who require device-agnostic software solutions. ISVs this year leveraged their technology to meet end-user demands for document solutions that help enable a more efficient, mobile, and cost-conscious work environment. Driving growth in the adoption of document solutions is the continued adoption of 3rd Platform technologies – which IDC defines as cloud, mobile, big data, and social media – by end users." – Arianna Valentini, senior research analyst, Hardcopy Industry Transformation and Page Volume Analysis

ADVICE FOR TECHNOLOGY SUPPLIERS

Buyers in the device and print management market are looking for ways to better improve their security around hardcopy devices and to better enable mobility for workers who are increasingly relying on mobile devices to complete daily office tasks. ISVs that really shaped 2014 in device and print management are those that were able to offer solutions that helped drive end users' needs when it came to enabling cloud deployment, mobility, and security within their print environments.

These buyer adoption trends mean that technology suppliers need to continue to develop solutions that help leverage mobility and cloud technologies for today's needs but also look to how other technologies can help drive business forward in the future. For example, technology suppliers need to be aware of organizations' increasing need for expanded predictive analytics in both their device and print management environments. The ability to use analytics to reduce human errors in document workflows as well as improve productivity and breakdown information silos will be key tools end users will look for in their next investments of document solution software. Tying user analytics to device analytics is one way in which technology suppliers can give buyers quick insight into the inner workings of their organization and individual user behavior.

ISVs find that the majority of their business is in North America, specifically the United States, and Western Europe. While overall device and print management trends point to a slowdown in these markets, ISVs have begun to address the needs of the small and medium-sized businesses in these geographies. Technology suppliers that have not addressed the need for robust solutions in this buyer demographic are highly encouraged to do so. Emerging regions, such as Latin America and some areas of Asia/Pacific, are looking for cloud enablement and analytic-heavy solutions. In these regions, technology suppliers should look to deploy document solutions that have SaaS capabilities and allow for better operational and assessment analytics. It is important to note that, especially in emerging markets, in-country representation and native language capabilities are also keys to success for growth in these geographies.

MARKET SHARE

Worldwide ISV Device and Print Management Market Share and Growth

Table 1 shows worldwide shares and revenue of independent software vendors for the print and device management segment for 2014 beyond what is represented in Figure 1. Figure 2 shows the year-over-year growth of revenue by independent software vendor for 2014. ISVs that have strong global presence and vendor partnership and are investing in 3rd Platform technology enablement for their customers are seeing a higher share of the market.

TABLE 1

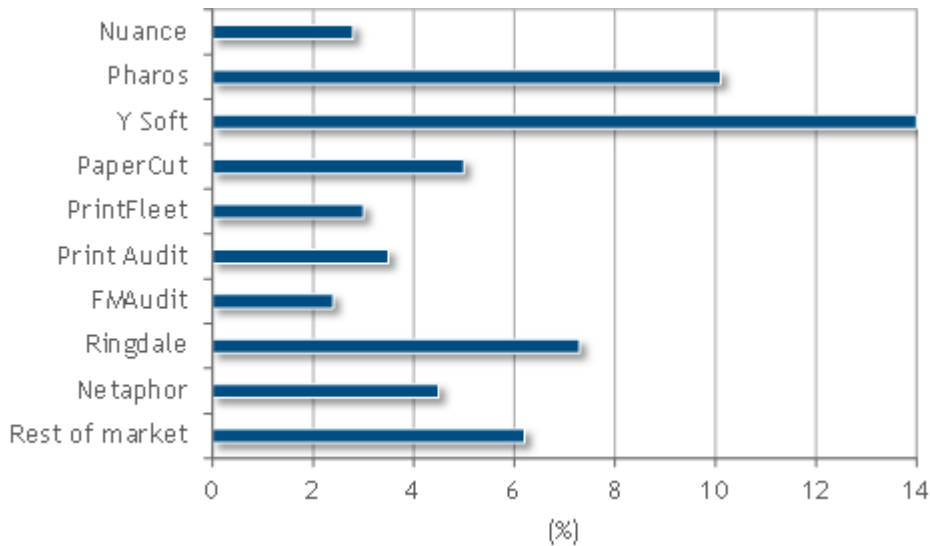
Worldwide Device and Print Management Revenue by ISV, 2014

	Revenue (\$M)	Share (%)
Nuance	165.4	58.1
Pharos	25.0	8.8
Y Soft	24.7	8.7
FMAudit	14.0	4.9
PaperCut	12.5	4.4
PrintFleet	7.5	2.6
Print Audit	7.0	2.5
Ringdale	6.8	2.4
Netaphor	6.0	2.1
Rest of market	16.0	5.6
Total	284.9	100.0

Source: IDC, 2015

FIGURE 2

Worldwide Device and Print Management Revenue Year-over-Year Growth by ISV, 2014



Source: IDC, 2015

Nuance Communications, with its Equitrac, SafeCom, and Output Manager solutions, continues to dominate the independent software vendor market with 58.1% of the share in 2014. Each of Nuance's three software solutions has helped build the company's device and print management offering. Equitrac offers three levels of its suite focused on business-class size and vertical market need: for business users, there is Equitrac Office; for education, there is Equitrac Express; and for legal, it has Equitrac Professional. SafeCom, which was acquired in 2013, is deployed in a modular fashion compared with Equitrac where all offerings are within a suite. SafeCom has a strong presence in Europe and other global enterprises, as well as a strong deployment history with HP. Finally, Output Manager, which was part of a 2014 acquisition by Nuance of Notable Solutions, offers print management for back-office printing. Output Manager can be used for print management with a greater focus on business process output compared with Equitrac and SafeCom, which focus heavily on end-user processes. While Nuance offers variety to the end user for device and print management, the largest share of revenue comes from Equitrac. Nuance's year-over-year growth slowed to 2.8% from 2013 to 2014, however, it still has the largest share in the ISV market.

Pharos Systems International and Y Soft are very close in device and print management revenue and share, with shares of 8.8% and 8.7%, respectively. FMAudit, as part of the larger ISV, ECI Software Solutions, is able to leverage the technology of ECI and its parent company's global presence to have a market share of 4.9%; this is coupled with the company's recent move to a subscription-based business model. PaperCut also continues to grow its share at 4.4% by leveraging partnerships with major OEMs and focusing on services to small and medium-sized businesses worldwide.

Ringdale, with its FollowMe solution that focuses on secure print roaming, continued to grow on a worldwide basis with 7.3% year-over-year growth. Netaphor, PrintFleet, and Print Audit all hold smaller shares of the market at 2.1%, 2.6%, and 2.5%, respectively, but all three companies are seeing stable year-over-year growth. When looking to these players, the transition of PrintFleet to a subscription-based cloud model will be one area to keep an eye on as it moved from a per-seat to a per-device charge model.

"Rest of market" contains vendors such as A.N.D. Technologies, Cirrato, Control Systems, EPSOft, PrinterLogic, and Print Tracker; each has a market share under 2% but contributed 13% of overall worldwide revenue in 2014.

Worldwide ISV Assessment and Operations Market Share and Growth

IDC has chosen to segment the components of output device management, document accounting, and print management solution suites as contributing to the assessment or operations phases of device and print management initiatives. Tables 2 and 3 show the worldwide shares and revenue of independent software vendors for assessment and operations for 2014. Figures 3 and 4 show year-over-year growth of revenue by vendor for operations and assessment for 2014.

TABLE 2**Worldwide Assessment Revenue by ISV, 2014**

	Revenue (\$M)	Share (%)
FMAudit	10.7	23.0
Pharos	7.1	15.3
Y Soft	7.0	15.1
Netaphor	6.0	12.9
PrintFleet	5.0	10.8
Print Audit	4.7	10.0
Rest of market	6.0	12.9
Total	46.5	100.0

Source: IDC, 2015

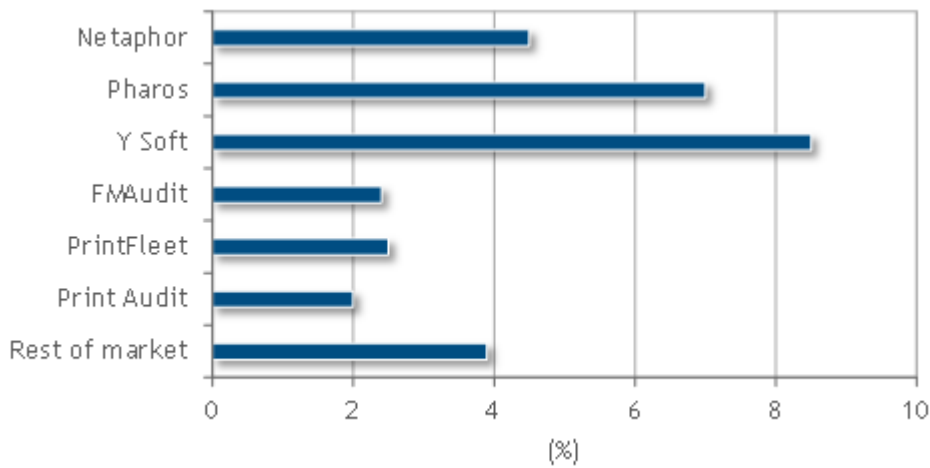
TABLE 3**Worldwide Operations Revenue by ISV, 2014**

	Revenue (\$M)	Share (%)
Nuance	165.4	69.4
Pharos	17.9	7.5
Y Soft	17.7	7.4
PaperCut	12.5	5.2
Ringdale	6.8	2.9
FMAudit	3.3	1.4
PrintFleet	2.5	1.0
Print Audit	2.3	1.0
Rest of market	10.0	4.2
Total	238.4	100.0

Source: IDC, 2015

FIGURE 3

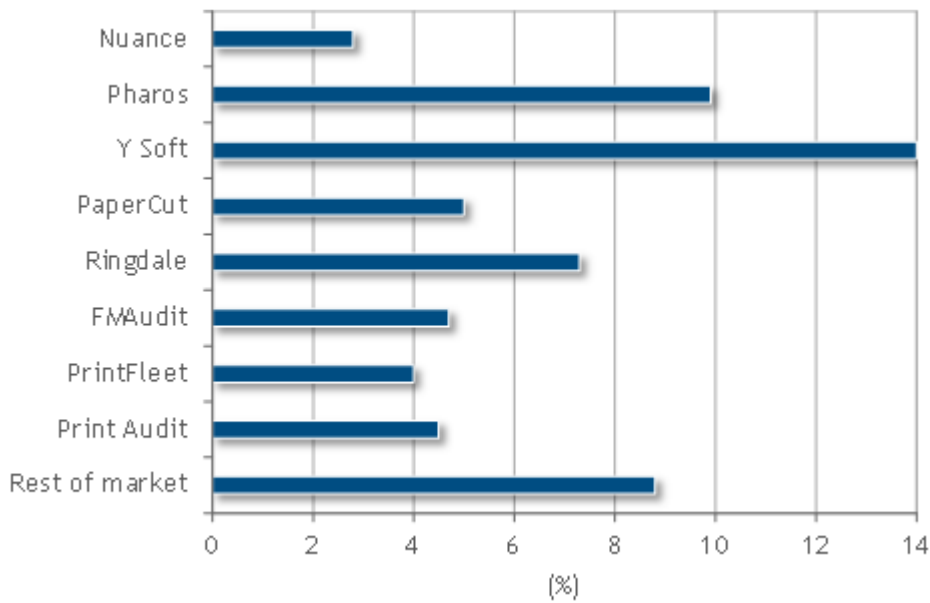
Worldwide Assessment Revenue Year-over-Year Growth by ISV, 2014



Source: IDC, 2015

FIGURE 4

Worldwide Operations Revenue Year-over-Year Growth by ISV, 2014



Source: IDC, 2015

FMAudit, with its big focus on assessment, holds the most share of the worldwide market at 23%. Netaphor, Pharos, and Y Soft make up the rest of the market at 12.9%, 15.3%, and 15.1% market shares, respectively. PrintFleet and Print Audit also still have a significant amount of share in this

market at 10.8% and 10.0%, respectively. That said, the majority of vendors in the assessment category play in both the assessment and the operations segments of print and device management and are seeing higher growth on the operations side.

The assessment segment of the market is in a slowdown as shown in *Worldwide Document Solutions Software Forecast, 2015-2019* (IDC #255762, April 2015), which shows the assessment segment as having a five-year worldwide CAGR of 5.4% in comparison with the operations segment, which is expected to have a worldwide CAGR of 10.1% over the next five years. The slowdown is being caused because MPS deployment requires assessment tools, which means more vendors are including them within the device.

Growth in the operations segment is driven by security solutions such as authorization and authentication. The operations segment is strongly dominated by Nuance, with a 69.4% market share, followed closely by Y Soft and Pharos, which have shares of 7.4% and 7.5%, respectively. We believe that Nuance will continue to have strong share in this market because of its focus on the security of documents as they interact with hardcopy devices.

Making a name for itself in the SMB end of the market globally is PaperCut, which experienced a stable 5.0% year-over-year growth from 2013 to 2014. PaperCut's success has been driven by an attractive pricing model that has helped bring in more SMB customers. Ringdale's FollowMe solution continues to grow, and the company saw an increase to its year-over-year growth to 7.3%; however, it has a smaller vendor share of the overall market.

It is important to note that the "rest of market" vendors offer both assessment and operations features within their solutions. Vendors such as Print Tracker play more toward assessment globally, while A.N.D. Technologies, Cirrato, Control Systems, EPSOft, and Printer Logic lean more toward operations offerings.

U.S. ISV Device and Print Management Market Share and Growth

For many ISVs, despite the overall slowdown for document solutions in the United States, it still remains the largest revenue and share of all regions. Device and print management in the United States (including OEMs) grew from \$242.6 million in 2013 to \$253.9 million in 2014, with a growth rate of 4.7%. ISVs made up 72.5% of the market share of the device and print management market in 2014.

Table 4 and Figure 5 show the shares and revenue of independent software vendors for the device and print management segment for 2014. Figure 6 shows year-over-year growth of revenue by independent software vendor for 2014.

Nuance is the dominant player in the U.S. market as well, with 63.8% share of the device and print management market in 2014. Unlike the worldwide market, Nuance's growth in the United States is up to 5.1% year over year. Pharos is in second place in the U.S. device and print management market, with 8.2% share, followed by Y Soft with 6.0% share and PaperCut with 5.7% share. Other vendors such as FMAudit, PrintFleet, and Print Audit all see the majority of their revenue coming from the United States but have smaller shares than major players. The remaining vendors make up 6.2% share. Driving revenue in the United States is the increasing attention to enabling mobility for U.S. workforces and the refocus of the vendor to the needs of the SMB by deploying solutions on either cloud or hosted solutions.

TABLE 4

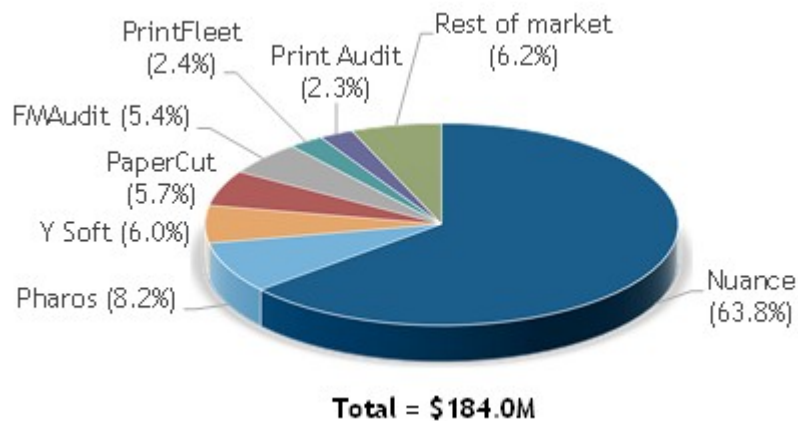
U.S. Device and Print Management Revenue by ISV, 2014

	Revenue (\$M)	Share (%)
Nuance	117.4	63.8
Pharos	15.0	8.2
Y Soft	11.1	6.0
PaperCut	10.5	5.7
FMAudit	10.0	5.4
PrintFleet	4.5	2.4
Print Audit	4.2	2.3
Ringdale	3.0	1.6
Netaphor	2.6	1.4
Rest of market	5.6	3.1
Total	184.0	100.0

Source: IDC, 2015

FIGURE 5

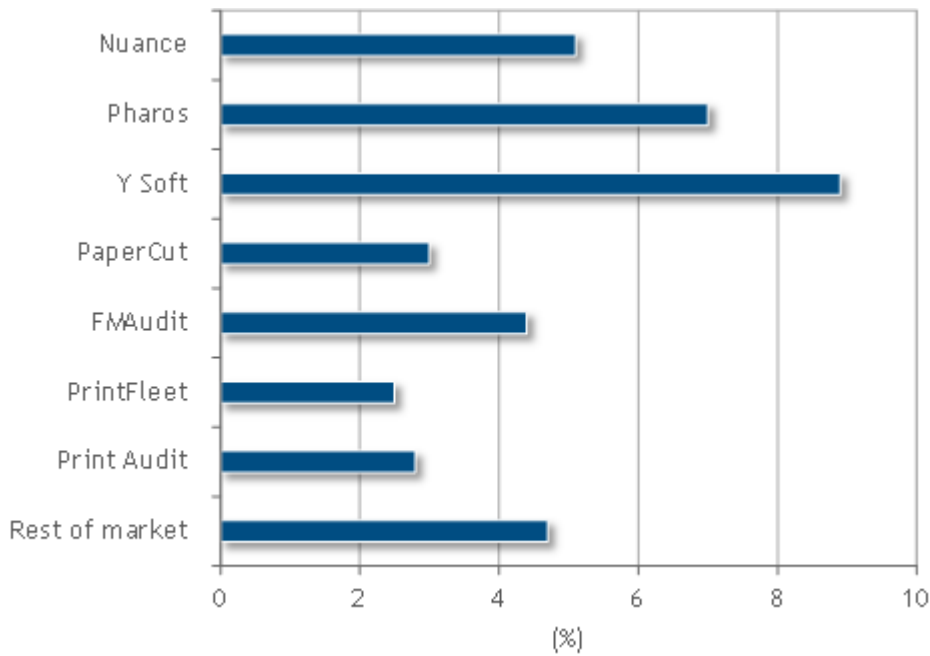
U.S. Device and Print Management Revenue Share by ISV, 2014



Source: IDC, 2015

FIGURE 6

U.S. Device and Print Management Revenue Year-over-Year Growth by ISV, 2014



Source: IDC, 2015

U.S. ISV Assessment and Operations Market Share and Growth

Tables 5 and 6 show U.S. shares and revenue of independent software vendors for assessment and operations, respectively, for 2014. Figures 7 and 8 show year-over-year growth of revenue by vendor in the United States for assessment and operations, respectively, for 2014.

TABLE 5**U.S. Assessment Revenue by ISV, 2014**

	Revenue (\$M)	Share (%)
FMAudit	8.5	29.4
Pharos	4.0	13.9
Y Soft	3.4	11.7
Print Audit	3.0	10.4
PrintFleet	2.9	10.0
Netaphor	2.6	9.0
Rest of market	4.5	15.6
Total	28.9	100.0

Source: IDC, 2015

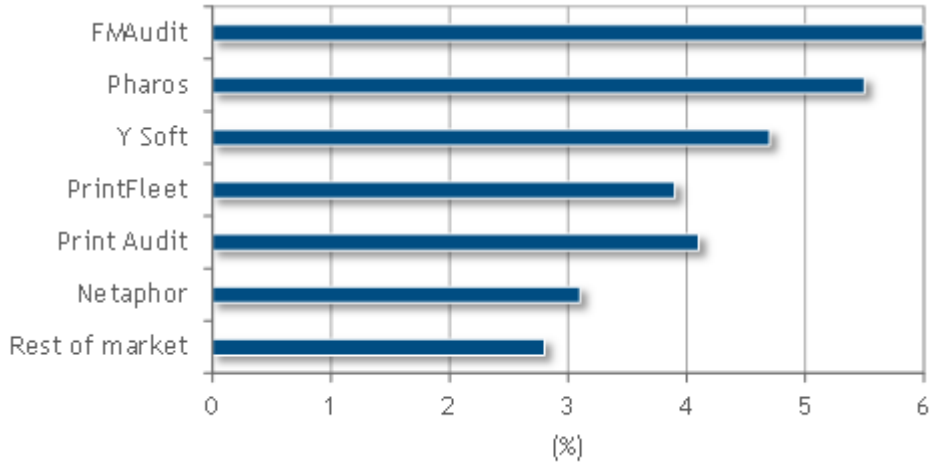
TABLE 6**U.S. Operations Revenue by ISV, 2014**

	Revenue (\$M)	Share (%)
Nuance	117.4	75.7
Pharos	11.0	7.1
PaperCut	10.5	6.8
Y Soft	7.7	5.0
Ringdale	3.0	1.9
FMAudit	1.5	1.0
PrintFleet	1.6	1.0
Print Audit	1.2	0.8
Rest of market	1.1	0.7
Total	155.1	100.0

Source: IDC, 2015

FIGURE 7

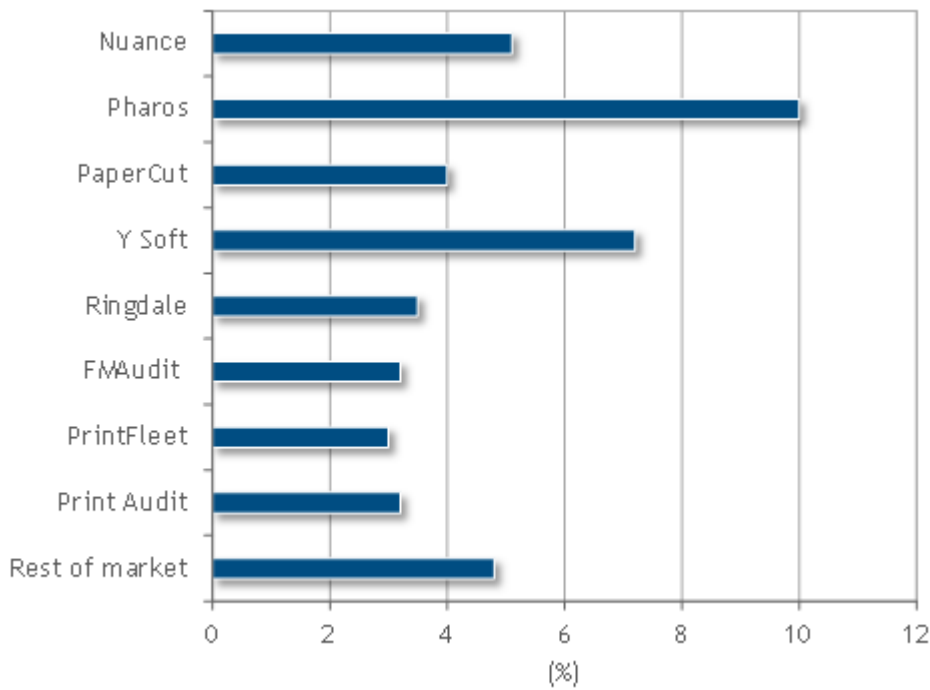
U.S. Assessment Revenue Year-over-Year Growth by ISV, 2014



Source: IDC, 2015

FIGURE 8

U.S. Operations Revenue Year-over-Year Growth by ISV, 2014



Source: IDC, 2015

In the U.S. assessment segment of the market, FMAudit has the majority of the share with 29.4% of the market and is experiencing better year-over-year growth at 6.0% because the United States is one of its major markets. Pharos has a stronger share at 13.9% than Y Soft (11.7%) – given the strength of Y Soft in the rest of the world, especially Europe, and Pharos in the United States, these two businesses would make a good pair to either partner or acquire the other for the purpose of market share growth.

Again, as in the rest of the world, we see stable year-over-year growth and share from PrintFleet and Print Audit, which both serve as competitors to FMAudit for the direct-to-market channel in the United States. Netaphor also has a 9.0% share in the market, which is being driven by its cloud offerings geared toward SMBs and enterprises.

Like the global market, in the assessment segment of the market, other smaller ISVs make up the rest of the share of the market at 15.6%. Just as in the worldwide view, the overall assessment market is slowing down mainly because of the infrequency of upgrades/new MFPs and the inclusion of assessment software solutions in hardware devices and had year-over-year growth of 2.8%. We expect to see more competition in the market as time goes because many ISVs are focusing on a strategy that uses cloud deployment and targets U.S. SMBs.

The operations segment of the U.S. market follows global market trends and is being driven by investments in solutions that focus on security. Again, Nuance is the top vendor in the operations side, with a 75.7% share of the market. Pharos is the second biggest, with a share of 7.1% of the operations segment. PaperCut, driven by its low price point for the SMB market, also has a 6.8% share in the operations segment in the United States. Y Soft, despite being weaker in the United States, is expected to grow in 2015, but it currently makes up 5.0% of the operations segment.

FMAudit, PrintFleet, and Print Audit each has less than 2% share in the operations segment of the market in the United States, mostly because of their solutions leaning more toward the assessment segment of the device and print management market. While Ringdale currently has a smaller share in the market, it will likely see increased growth, because, unlike the vendors listed previously, its focus is only on the operations segment of the market via print security.

In the operations segment in the United States, the "rest of market" is seeing year-over-year growth of 4.8% despite being in demand, which is reflective of the overall slowdown of the U.S. device and print management market.

WHO SHAPED THE YEAR

In the ISV device and print management segment, 2014 saw the continuation of several historical trends in respect to the vendors that remain the top players within the segment. In 2014, Nuance remained the top player in the ISV market segment and continued to acquire solutions to drive its business forward. With its acquisition of capture provider Notable Solutions, Nuance gained the Output Manager solution, which even with a focus on back-office printing and business output management enables Nuance to offer device and print management solutions to verticals that may struggle to find a solution that fits with the types of files that need to be printed. Nuance also demonstrated a commitment to driving device and print management security by continuing efforts to make customers more aware of security offerings in respect to not only their hardcopy devices but their business processes.

In addition to Nuance, the Czech Republic-based company Y Soft also continued to make its mark on the device and print management ISV segment by making a larger effort to gain shares in the United States. In November 2014, Y Soft announced new features to its solution YSoft SafeQ 5, which included upgraded permissions for visitors on business networks for mobile printing. Y Soft also has seen great success in selling SafeQ as a module-based solution, allowing for users to have flexibility when it comes to scale of investment.

PaperCut, another major player in the market, also continued to have a larger market presence in the ISV market segment by focusing its efforts on the needs of the small business. PaperCut spent 2014 with a focus on enabling customers to more cost-effectively manage from an environmental perspective and had a high focus on document security.

The focus on security was a constant trend in 2014, with most ISVs focusing on bringing end users improved authentication, tracking, and pull printing features for their organizations. In addition, we saw many ISVs offer cloud-deployed or document storage to cloud solutions that allowed end users to send documents from MFPs to their preferred cloud storage application such as Google Drive or Box.

Finally, many ISVs have chosen to take a vertical market focus/strategy to their solution offerings. Vendors such as Pharos continued to grow in their core vertical markets, in this case education, but are expanding into the enterprise by offering a cloud-deployed version of their solution for scalability. Almost all ISVs noted during interviews seeing growth ongoing with a vertical market-focused strategy, especially when it comes to addressing industry-specific needs for device and print management in vertical markets such as healthcare, financial, and insurance.

MARKET CONTEXT

One of the major market-specific trends that is helping drive buyer adoption and impact vendor rankings is the continued need for buyers to use device and print management as a way to achieve cost reductions in their print environments. Reducing costs includes lessening the load of IT infrastructure for device and print management solutions, which in turn is helping ISVs with cloud-deployed solutions that can offer live data, services, and mobility, allowing them to differentiate themselves among prospective buyers. In addition, affecting device and print management is the increasing demand for automated and flexible business processes that allow buyers to respond to changing office conditions (i.e., increased use of mobile devices for the print and capture of documents).

Drivers and inhibitors for this market are similar to what are found in the *Worldwide Document Solutions Software Forecast, 2015-2019* (IDC #255762, April 2015).

Drivers

- **Cloud:** Cloud services and spending are expected to have double-digit growth over the next five-year forecast period - driving needs for device and print management software to also be cloud enabled. In addition, the penetration of cloud services allows IT organizations to shift their focus from maintenance to new services. Technology suppliers that can provide device and print management solutions that work with cloud-deployed business apps or provide operational insight via cloud user data will likely see an increased market share.

- **Mobility:** As mobility and BYOD increases, organizations will need to address new document management and security challenges that are associated with mobility in the workplace. The rise in mobility means that technology suppliers have the opportunity to offer device and print management solutions that go beyond the submission of print jobs, such as the ability to that enable mobile workflows for the collaboration and organization of documents.
- **Security:** Security for device and print management goes beyond access for employee-liable devices; we believe that organizations will take a harder look at their hardcopy devices as a networked security risk over the next forecast period. Buyers will look for device and print management solutions that offer authorization, authentication, and predictive analytics for altering to threats related to abnormal user behavior. Investment in such solutions will likely drive device and print management revenue the most over the forecast period.

Inhibitors

- **Economy:** Economic growth was patchy in 2014, with a strong rebound in the United States after the first-quarter downturn, while other regions were mixed. Japan lost some momentum after a sales tax increase, while Europe is still a mixed bag and sanctions against Russia have been disruptive for the region (but mainly for Russia). Growth continues to cool in China, but so far, the economy has steered clear of "hard landing" scenarios. As a result, slower-than-expected or uncertain global economic growth could lead to decreased spending on software in general.
- **OEM expanded offerings:** This inhibitor for growth is unique for ISVs in the device and print management market. ISVs have served as the connector to many OEM solutions; however, we have seen that many OEMs are now starting to acquire vendor-agnostic device and print management ISVs or develop their own holistic solutions for customers. ISVs could see a stunt in growth as OEMs begin to offer more comprehensive device and print management solutions under their own branding.

If technology suppliers in the device and print management market cannot rise to the challenge of providing solutions that offer some form of mobility, cloud deployment, or security, they will likely see a slowdown in their overall market growth. Overall, the device and print management market is slowing down as a result of more businesses not upgrading their hardcopy devices as frequently as once predicted, replacement infrequency, and the decline in demand in mature markets. In addition, market slowdown has been affected by device management and job accounting software becoming standard features within hardcopy devices. That said, technology suppliers that can meet the demands for pull printing, authentication, and policy management will likely continue to push market growth forward.

Significant Market Developments

In 2014, the document solutions market saw the ever-growing impact of 3rd Platform technology on the market. Increased end-user adoption of mobility, cloud deployment, and greater emphasis on the importance of secure document solutions for hardcopy devices helped grow the market in several key areas. In addition, some areas of the market such as device management saw a slowdown of growth as such technology became more of a table stakes offering to end users.

This past year saw growing end-user concerns about the vulnerability of networked hardcopy devices as entry points to cyberattacks. In late 2013 and 2014, we saw technology suppliers make important initiatives to provide better security solutions for hardcopy devices. Many technology suppliers either partnered with established security providers or announced their own print security offerings to better protect hardcopy devices and the organizations they reside in. In addition, mobility was also a topic of discussion in the context of not only a security discussion but improving the ability for mobile-heavy

users in organizations to have access to more robust print capabilities. We expect security and mobility to continue being important topics of discussion and investment in the year ahead.

No matter the technologies affecting their work environments, end users are still looking for ways to reduce the cost associated with print by managing user access to print devices and volumes. This is occurring in parallel with technology suppliers that are looking to increase security around print and scan pages. The meeting of the two will result in continued innovation and robust solutions that can travel across multiple devices, deployments, and locations while allowing technology suppliers to continue providing the core offerings they are known for.

METHODOLOGY

The information presented in this study is based upon key findings from a broad range of data sources, including:

- In-depth interviews with hardcopy manufacturers and solution providers
- Financial statements of independent and major device and print management vendors

To the extent possible, revenue has been converted from local currency to U.S. dollars; therefore, the impact of any significant currency fluctuation is limited to the region in which that revenue is generated.

Note: All numbers in this document may not be exact due to rounding. IDC reserves the right to adjust historical data if sources later supply better and/or more granular information.

MARKET DEFINITION

This market share document is based on the 2014 IDC's taxonomy for document solutions and consists of the device and print management (DPM), mobile printing solutions, and enterprise output management segments. Table 7 shows the segmented components of output device management, document accounting, and print management solution suites as contributing to the assessment or operations phases of a device and print management initiatives. For more information on the full taxonomy, see *Output Device and Print Management: Today's Market and the Evolution to a Predictive Approach* (IDC #247918, April 2014).

TABLE 7

Solution Suite Component Categories: Assessment and Operations

Subsegment	Name	Description
Assessment	Device survey	Tool is used to take a snapshot of the fleet. It can include device inventory and paper tracking for a short fixed period (e.g., three months). The tool can be Web based, USB based, or agent based.
	Fleet management	Server-based comprehensive software provides the ability to do device discovery and maintenance. Software can include features such as firmware upgrade and supplies monitoring, paper availability, and device alerts.
	Mapping tool	Data visualization tool provides identifier for device location in the field. The tool can provide details such as floor, building, and operational details.
	TCO tool	Tool provides an element of operational cost in either current state or future state. Data can be derived from a combination of hardware cost, supplies cost, and maintenance cost (break/fix, electricity).
	Proposal generator	Tool assimilates various pieces of assessment data to create a managed print service (MPS) or basic print service (BPS) proposal. Proposal generator may provide customization for the provider in terms of logo, pricing, margins, length of contract, and so forth.
Operations	Authentication	Tool identifies an end user using common network user credentials, usually based on a username and password, but may include card reader and/or biometric functionality. The tool may be used for tracking and pull printing and to determine access and/or present a customized user interface.
	Document accounting	Functionality provides the ability to track pages to provide either chargeback or internal costing. Data may be aggregated at various intervals (day, week, month) and superimposed on a cost or profit model.
	Policy management	Functionality can either enforce or modify user behavior toward organizational goals such as duplexing, most efficient job routing, cost control quotas, and color control (also called rules-based printing).
	Pull print	Functionality can include a combination of "follow-me printing" (release print job at any device) and/or secure print (release print job on a designated device) after authentication.
	Print for pay	Functionality permits users to pay for use in environments such as education and kiosks (airport). Systems can accept credit cards, external payment systems (PayPal), or preloaded quota cards.
	Integration management	The tool integrates with billing systems such as enterprise ERP (SAP, Oracle) or dealer ERP (Microsoft Dynamics) systems.

Source: IDC, 2015

RELATED RESEARCH

- *Worldwide Document Imaging Scanner Forecast, 2015-2019* (IDC #256050, May 2015)
- *Worldwide Document Solutions Software Forecast, 2015-2019* (IDC #255762, April 2015)
- *IDC's Forecast Scenario Assumptions for the ICT Markets and Historical Market Values and Exchange Rates, Version 1, 2015* (IDC #255833, April 2015)
- *Worldwide Output Management Software 2015-2019 Forecast* (IDC #254782, March 2015)
- *Worldwide Imaging, Printing, and Document Solutions 2015 Top 10 Predictions* (IDC #254103, February 2015)
- *Worldwide and U.S. Managed Print and Document Services and Basic Print Services 2014-2018 Forecast Update: Segmentation by Region* (IDC #252687, December 2014)
- *Worldwide Output Management Software 2013 Vendor Shares* (IDC #248771, May 2014)
- *Output Device and Print Management: Today's Market and the Evolution to a Predictive Approach* (IDC #247918, April 2014)

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