



## **RoutXpress Management WhitePaper**

**September 11, 2010**

**The RoutXpress 3.0 Management WhitePaper is organized into four sections:**

- A. Current Print Management: Problems and Opportunities**
- B. Proposed Print Management: Benefits of Managing Print Environments**
- C. How RoutXpress 3.0 Works to Achieve these Benefits**
- D. Cost-Effectiveness Analysis of RoutXpress 3.0 and Managed Print Initiatives using RoutXpress 3.0**

### **A. Current Print Management: Problems and Opportunities**

1. Organizations spend between 1% and 3% of their overall annual revenue on document output costs (print/copy/scan/fax and multifunction devices).
2. Print/copying/multifunction devices are unmanaged. Most organizations have no idea what it costs to buy and support their print fleet, including printers, copiers, scanners, and fax units.
3. Cost of local desktop (inkjet) devices is a “hidden cost.” The cost per copy for local devices is \$.20/black and white copy and \$.45/color copy.
4. Too many vendors and too many different devices make print difficult to manage.
5. The recurring costs of acquiring parts, cartridges, and other supplies is “hidden” and unmanaged. Cartridges are continually replaced, and these “hidden costs” are buried in office supplies’ purchasing. This is a problem in organizations that allow small purchases (under \$500.00) to be charged on credit cards.
6. Purchasing print/copier/scanning/fax/MFP devices may be from different units: Purchasing, IT, individual departmental budgets, so it is difficult to track and to manage print environments.
7. Suboptimization: Print/copying/scan/fax/MFP devices in various departments may be mismatched according to need. Some devices may be under-utilized and others may be over-utilized. Examples: (1) installing a local printer when a copier-based MFP would be a better solution for the applications; (2) acquiring color devices for the desktop.
8. Overlapping technologies: an MFP, a local printer, a fax, and a copier sitting next to each other on the same desktop.
9. No tracking of print/copying to see what the costs are—by user, by filename, by device, and by department.
10. Difficulty in identifying and quantifying the Total Cost of Operation for print/copying/scanning/fax and multi-function devices.

11. Print fleets are difficult to maintain because of multiple vendors, lack of maintenance, lack of optimization.
12. Little motivation to change.

**B. Proposed Print Management: Benefits of Managing Print Environments**

1. Better understanding of the costs, initial and recurring, of print/copying/scanning/fax, and multifunction devices.
2. More effective management of vendor relationships; the ability to develop vendor partnerships which provide economies of scale in purchasing, technical support, supplies management, and maintenance.
3. More effective coordination of purchasing across the organization to achieve economies of scale, mutually beneficial vendor relationships, and proactive print fleet management.
4. Better “fit” between departmental and unit requirements for print/copying/scanning/fax/MFP’s and the acquisition and efficient use of these devices.
5. Reduction of the cost of over-lapping and duplicate technologies (print/copy/scan/fax) and more effective deployment of MFP’s. Ability to eliminate duplicate devices.
6. Ongoing optimization of print fleets, based upon an objective assessment of Total Cost of Operation of print/copy/scan/fax and MFP devices. Ongoing reporting of gains-achieved and cost-reduction through managing print fleets. Example: Switching low-volume printers to high-volume printers in high-volume departments.
7. More effective maintenance, upgrading, and supplies’ management. Automatic replenishment of toner and supplies, which avoids the needless cost of maintaining an inventory of cartridges. Proactive parts management and the ability to acquire needed parts on a just-in-time basis.
8. Reducing time/cost of handling and processing multiple vendor invoices per month (e.g. taking 20 invoices/month down to 1 invoice/month).
9. Better overall management by a central management group, representing Purchasing, Information Technology, or Administrative Services.
10. Overall efficiency and better operations management.

**C. How RoutXpress 3.0 Achieves these Benefits**

- 1. Print Assessment**
- 2. Behavior Modification**
- 3. Print Fleet Management, including Intelligent Routing**
- 4. Print Fleet Accounting**
- 5. Print Audit and Control Management**
- 6. Print Security Management**
- 7. “Green” Culture and Sustainability**

## **1. Print Assessment**

At the initial phase of print management, it is important to conduct an assessment of print activity, including print/copy/scan/fax and MFP output.

### **What RoutXpress 3.0 can do:**

- **Can collect data for print assessment, including tracking all print jobs, by user, by filename, by printer, by department, by time, and by cost.**
- **Can find both network-connected and direct (non-connected) devices. No other package can do this.**

## **2. Behavior Modification**

Many organizations may not want to manage users' print devices at the outset. RoutXpress acts like a call accounting system, which tracks telephone use by time/date, cost, call duration, and user. This changes behavior. A user would not make a 20-minute long distance call to Buenos Aires, because he/she knows that the time/cost of that call is being tracked. Typically, 20% or more of all printing in an organization may have nothing to do with the business. Similarly, a user would be less likely to make personal copies, because the time/cost of printing is being tracked.

### **What RoutXpress 3.0 can do:**

- **If users know that RoutXpress 3.0 will track all print jobs, by date/time, by filename, and by cost, users will be less likely to abuse document output. A user would not print 100 invitations on a color printer, because he/she knows that the time/cost of that output is being tracked.**
- **With end-user awareness of the cost of printing/copying, these costs can go down as much as 50% in the first year alone.**
- **Users can see the cost impact of using high-cost desktop devices vs. MFP's.**

## **3. Print Fleet Management, including Intelligent Routing**

Once the cost-reduction opportunity becomes clear, organizations may want to use some of the advanced features of RoutXpress 3.0 to more effectively manage their print fleets. Intelligent routing is striking the balance between personal productivity and the convenience that a desktop device affords

and the lesser cost of using a few central, shared MFP's. A rule of thumb is: let the small jobs print at the desktop, but route documents to shared MFP's when volumes generate savings.

Based upon the cost-reduction targets, management may want to deploy plans for least-cost-routing of print jobs, re-routing print from malfunctioning devices, and charging back for print use. In some environments (e.g. healthcare), printing must be confirmed. If a print device goes down, print jobs must be re-routed to the next-available printer. For example, if a printer in the E/R goes down, then a print job must be routed automatically to an alternate printer. Technical support professionals cannot be on-duty 24/7 – 365 days/year, so automatic print routing to a functioning printer is a must.

**What RoutXpress 3.0 can do:**

- **Tracks all print jobs, by user, by printer, by department, by date/time, and cost.**
- **Re-directs expensive print jobs to the most cost-effective printing device.**
- **Re-routes print jobs to the next-best printer when a printer mal-functions.**
- **Can re-route print jobs, based upon rules, (e.g. if the job exceeds size or cost limits).**
- **Supports “must print” applications.**

**4. Print Fleet Accounting**

Many organizations want to recover their print costs by tracking and billing print costs to internal people or to external clients and customers. This is particularly true for law firms, medical service providers, higher education institutions, and business output service providers. They need a cost-recovery strategy for print.

**What RoutXpress 3.0 can do:**

- **Can be used to track print costs, by client, and to bill clients based upon print usage.**
- **Provides detailed reporting, by user, by device, by date/time, and cost.**
- **Provides detailed print accounting reports.**

**5. Print Audit and Control Management**

Print Audit and Control management is a major issue for all organizations. HIPAA, Sarbanes Oxley, and various Federal, State, and local government statutes mandate maintaining an audit trail for compliance purposes. This may be as simple as having a record that a prescription was routed from a physician's

office and printed out at a pharmacy printer. Having an audit trail of print is becoming more and more critical to healthcare institutions, legal entities, government organizations, and large business organizations.

**What RoutXpress 3.0 can do:**

- **Provide a print audit trail providing a record of print origin, print destination, with date/time and device tracking information.**
- **Provide a historical record of print audit trails (e.g. all print, by department).**
- **Provide reporting features, ( e.g. tracking specific print audit trails (from department to department, etc.).**

**6. Print Security Management**

Print Security Management is increasingly important. While sophisticated access rights and security procedures have been implemented in most organizations, the print environment has been left relatively unmanaged. What is to prevent a disgruntled salesperson from printing out an entire prospect database from a Customer Relationship Management System, when the individual could not copy these data onto an external storage device.

Confidential records, including financial, HR, and marketing records, can be printed out by unauthorized users on local output devices—which little or no tracking of these print jobs. With HIPAA compliance initiatives in effect at most healthcare institutions, an unauthorized individual printing out confidential medical records can represent a real threat to information security.

**What can RoutXpress 3.0 do:**

- **Provides a complete audit trail of print jobs which can be used to identify and to track unauthorized document printing.**
- **Provides rules to prevent printing by unauthorized users.**
- **Provides documentation to support compliance reporting (HIPAA, Sarbanes Oxley).**

**7. “Green” Culture and Sustainability**

The “green” cultural initiatives across American business are growing in importance. The need to minimize needless waste of paper, toner, and other print resources is gaining visibility, and evidence of moving toward a “green” culture is of value to customers, employees, and suppliers.

**What RoutXpress 3.0 can do:**

- **Provides incentives to adopt a “green” culture by minimizing the cost of print.**
- **Provides an awareness of the cost of print, by user, by printer, by department, by date/time, and cost.**
- **Knows whether a print job is duplexed or not, encouraging paper savings.**
- **Provides intelligent print routing to minimize needless print cost.**
- **Provides reporting to identify cost-reduction from “green” print initiatives.**

**D. Cost-Effectiveness Analysis of RoutXpress 3.0 and Managed Print Initiatives using RoutXpress 3.0**

The cost-effectiveness case for RoutXpress 3.0 will be presented in two tables. The first table, **RoutXpress 3.0 Cost Effectiveness Analysis**, demonstrates substantial savings gained by:

1. Reduction of volume of both black/white and color prints because of cost-consciousness and print management.
2. Re-directing of both black/white print and color print jobs from local printers to networked printers and MFP’s because of assessment, optimization, and deployment.
3. Reduction of volume and cost of both black/white and local prints because of re-routing of print jobs to more cost-effective printers and improved cost consciousness.

**Table 1: RoutXpress 3.0 Cost Effectiveness Analysis**

<b>Current Costs</b>	<b>Current</b>
Black/white networked 700 devices @ .01/page x 10,000 pgs/mo	\$70,000.00
Color networked devices 300 devices @ .08/page x 7000 pgs/mo	\$168,000.00
Black/white local printers 500 devices @.20/page x 2500/pgs/mo	\$250,000.00
Color local printers 250 devices @ .45/page x 1500 pages/mo	\$168,750.00
<b>Current Total Print Costs</b>	<b>\$656,750.00</b>

<b>After RoutXpress 3.0</b>	<b>New Costs</b>
Black/white networked 700 devices @ .01/page x 7500 pgs/mo	\$52,500.00
Color networked devices 300 devices @ .08/page x 3500 pgs/mo	\$84,000.00
Black/white re-routed to networked 400 devices @ .01/page x 2000 pgs/mo	\$8,000.00
Color re-routed to networked 200 devices @ .08/page x 750 pgs/mo	\$12,000.00
Black/white local printers 100 devices @.20/page x 500/pgs/mo	\$10,000.00
Color local printers 50 devices @ .45/page x 250 pages/mo	\$5,625.00
<b>After RoutXpress 3.0 Print Costs</b>	<b>\$172,125.00</b>

<b>COST SAVINGS WITH ROUTXPRESS 3.0</b>	<b>\$484,625.00</b>
---	---------------------

As you can see from Table 1, the savings from RoutXpress 3.0 and implementation of managed print is \$484,625.00/month. Different scenarios can be depicted using the actual numbers of devices and print volumes within a specific organization. The significant cost-reduction is achieved by re-directing print to more cost-effective networked printers and away from more costly local printers.

**Table 1 Assumptions:**

- Black/white/networked reduced from 10,000 to 9500 prints
- Color/networked reduced from 7000 to 4250 prints
- 400 black/white local printers are re-routed to networked
- 200 color local printers are re-routed to networked

Reduced volume on black/white local printers to 500 pg/month

Reduced volume on color local printers to 250 pg/month

The same analysis is shown in Table 2, **RoutXpress 3.0 Cost-Analysis Detail**. Table 2 includes specific data on the number of devices, the cost/page, the pages/month and the overall costs (Current vs. After-RoutXpress 3.0).

### RoutXpress 3.0 Cost-Analysis Detail

<b>Current System</b>	<b># devices</b>	<b>cost/page</b>	<b>pages/month</b>	<b>current cost</b>
<b>Networked devices</b>				
Black/white	700	0.01	10,000	\$70,000.00
Color	300	0.08	7,000	\$168,000.00
<b>Local printers</b>				
Black/white	500	0.20	2,500	\$250,000.00
Color	250	0.45	1,500	\$168,750.00
Cost of local (ink)				
<b>Current Total Cost</b>	<b>1,750</b>		<b>21,000</b>	<b>\$656,750.00</b>
<b>After Routxpress</b>	<b># devices</b>	<b>cost/page</b>	<b>pages/month</b>	<b>current cost</b>
<b>Networked devices</b>				
Black/white	700	0.01	7,500	\$52,500.00
Color	300	0.08	3,500	\$84,000.00
Total networked				\$136,500.00
<b>Re-route to networked</b>				
Black/white	400	0.01	2,000	\$8,000.00
Color	200	0.08	750	\$12,000.00
Total re-routed				\$20,000.00
<b>Total networked</b>				
Black/white	1,100	0.01	9,500	\$60,500.00
Color	500	0.08	4,250	\$96,000.00
Total networked			13,750	<b>\$156,500.00</b>
<b>Local printers</b>				
Black/white	100	0.20	500	\$10,000.00
Color	50	0.45	250	\$5,625.00
Total cost local			750	<b>\$15,625.00</b>
<b>New Total Cost</b>			<b>14,500</b>	<b>\$172,125.00</b>
<b>COST-SAVINGS</b>				<b>\$484,625.00</b>

**Templates:**

RoutXpress 3.0 Cost-Effectiveness Templates are available upon request at [sales@apwi.com](mailto:sales@apwi.com). In conducting a cost-effectiveness analysis, an organization can build in its own number of devices, costs, and print volumes. In general, cost-reduction will be achieved by re-routing print jobs to more cost-effective print devices and raising the cost-consciousness of end-users through the ability to track the date/time and cost of printing. Other benefits to be achieved are more effective audit and control, information security, the use of alternate/backup printers, and the commitment to a “green” culture.

For more information:

**American Printware Inc.**

**27126B Paseo Espada, Suite 724**

**San Juan Capistrano, CA 92675**

**(949) 488-2222**

**[www.apwi.com](http://www.apwi.com)**

**Sales: [sales@apwi.com](mailto:sales@apwi.com)**

**For a free download, please contact:**

**[support@apwi.com](mailto:support@apwi.com)**