

The Evolving U.S. Digital Color On Demand Printing Opportunity - A Vendor Perspective

Focused

Responsive

Credible

Visionary



Focused

Responsive

Credible

Visionary

- **What is the market potential for the various categories of digital color equipment in production environments from those used for proofing to those that produce low, medium, or very high volume?**
- **How do printer providers rate current color products and vendors on product performance and support?**
- **How successful has the new class of entry-level production color products been and how have they changed the market?**
- **What are the current market requirements in terms of equipment speed, substrate handling, and other features?**
- **Which applications are driving digital color volume? Where are they found (vertical industry, horizontal functions)?**



United States

97 Libbey Industrial Parkway
Suite 300
Weymouth, Massachusetts 02189
Telephone: 781.616.2100
Fax: 781.616.2121
www.capv.com

Europe

Sceptre House, 7-9 Castle Street
Luton, Bedfordshire,
United Kingdom LU1 3AJ
Telephone: +44 1582 400120
Fax: +44 1582 411001
www.capv.com

Asia

Hiroo Office Building
1-3-18 Hiroo Shibuya-ku
Tokyo 150-0012 Japan
Phone: +81 3 5475 2663
Fax: +81 3 5475 2710
www.gsm.to



Introduction

Digital full color Print on Demand technology is now more than a decade and a half old, and for the first time we now have a full range of products that fit the requirements of most print providers. The market for digital color is currently generating over 39 billion pages in the U.S. and results in over 41,000 annual hardware placements in production environments. This production market purchases \$4.46 billion in digital color equipment, services, and supplies (excluding paper) and generates over \$22 billion in retail value of print.

Most print providers have some level of digital color printing capability. Studies conducted in the U.S. during 2004 found that 82% of “commercial printers” claimed some capability and 63% of In-Plant printers reported owning some digital color printing equipment.

In an industry that is undergoing a fundamental transformation, digital color printing technology is one trigger that continues to impact the entire business. In February 2002, InfoTrends/CAP Ventures issued its most recent Multi-Client Study on Production Digital Color entitled The Next Generation Digital Color On Demand Printing Opportunity. The industry has changed significantly since that time, and a number of new products and different product categories have emerged that have influenced buyers’ expectations and behavior. This study will build on our previous work to quantify how the market has changed and will provide information on how to best address this market opportunity moving forward.

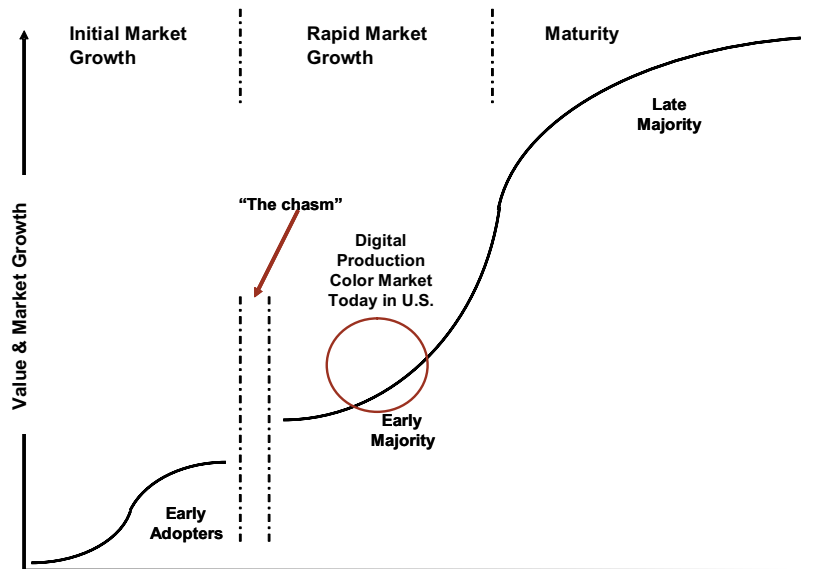
For this market to experience its next phase of success, the adoption rate must increase and page growth must continue.

InfoTrends/CAP Ventures believes that significant opportunities for growth exist in a redefined marketplace. Existing and future color solutions will impact the current market opportunity and fuel future growth. Increasingly, we believe that the placements of these production digital color devices will likely have a significant negative impact on the use of black & white digital devices and offset presses as total investment dollars are finite.

The business processes and opportunities associated with the evolution of this technology will likely change buyers’ expectations and purchasing plans. Understanding the different technologies and the importance of various features related to the application requirements of end-users (customers) will inform purchasing decisions and go-to-market actions.

As the solutions enable new price points and have features that will address a wider range of applications (including non-document printing), this study will examine the new market opportunity for digital color devices in production environments. It will explore that opportunity in terms of price elasticity and application migration. This study will forecast the market opportunity in the various segments for digital color copier/printers and production color printers and will utilize the NAICS classification with a map to traditional SIC, building on our work in this area in late 2004.

Figure 1: Adoption of Production Digital Color Devices



The print buyer research will be critical in developing an understanding of the cost/benefit analysis that they conduct. It will produce industry statistics on the size of the current print market by run length and color content, identifying applications that are driving growth (including the implementation of 1:1 programs and the desirability of mixed jobs that combine black & white and color pages), determining awareness of and plans to run jobs on digital printing systems, ascertaining sensitivity to traditional printing requirements (e.g. print quality, substrates, use of Pantone colors, varnish), and discussing other factors that affect how customers print and their current and future demand for digital printing services.

Project Scope

This study is designed to understand the unique opportunities and requirements for production digital color copying and printing devices across the U.S. in key customer segments.

The study is designed to address a number of issues, including:

- What are overall page volume trends for the various classes of digital color printing equipment?
- Are color placements having an impact on black & white equipment purchases?
- What are existing brand preferences for digital production color equipment and how might print providers' behavior be influenced?
- What is the current state and future prospects for variable data (1:1) color printing?
- What expectations do buyers have in terms of price?
- When will digital color play a larger role in the data center/transaction market?
- How much black & white work is produced on these devices?
- What is the importance of DFEs, workflow, software, and professional services in support of this equipment?
- What is the market opportunity for hybrid offset/digital solutions?
- How does direct imaging offset technology play in this market?
- What is the importance of a hybrid workflow that supports conventional offset and digital printing?
- How do print providers offer unique value? Which providers focus on craft and which ones focus on technological competence?



Product Focus

This project will address the full color digital printing opportunity in production environments. Key product classes will include:

- Convenience color copier/printers with speeds of under 24 ppm
- Production color copier/printers with speeds of 24-40 ppm, 41-59 ppm, and 60+ ppm
- Direct Imaging (DI) presses in 2-up, 4-up, and larger formats
- Production color printers with the above speed segmentations
- Market segmentation from a duty cycle perspective, devices with monthly duty cycles of under 100,000, 100,000- 500,000; 500,000-1 million, and 1 million+

This study will present new segmentation cuts of the data based on market requirements and equipment capabilities.

Market Focus

The study will analyze the opportunities, market potential, and critical requirements across key print provider market segments. The categories of print printers will include:

- Commercial printers
- Digital printers
- Quick printers
- Specialty printers - books, catalogs
- Copy centers
- Prepress trade shops
- Corporate in-plants and Central Reprographics Departments
- Facilities management and outsourcing companies
- In-plant data centers
- Direct mail firms
- Data center service bureaus

Project Objectives

This study is designed to assist vendors and users of digital color printing technology to succeed in a changing market. There are two primary objectives of this study:

- Provide vendors with critical information and recommendations for product development, marketing, sales, distribution, and business planning decisions
- Equip print providers and end-users with tools and information that enable them to effectively and profitably utilize this new color technology and leverage the resultant new opportunities.

To achieve these overall objectives, InfoTrends/CAP Ventures has outlined the following detailed objectives:

1. Segment the market by type of digital color print technology and major printing applications (as described above)

2. Profile current and potential users of on demand digital color print solutions

- Existing digital color capabilities
- Economic crossover points with offset technology
- Interest and purchase plans for additional digital printing equipment
- Perception and preference of alternative products and suppliers
- Print volume history and expectations
- Key applications and application volume trends

3. Establish sales and marketing resources, strategies, and programs

- Customer base and applications
- Organizational factors (customer service, number of shifts per day, sales compensation, training, etc.)
- Digital printing services offered
- Retail pricing trends



4. Identify critical digital color product requirements by environment and market segment

Engine		
Speed/throughput	Print quality	Print width
Paper/substrate compatibility	Roll vs. sheet	Uptime/productivity/monthly volume
Front end		
RIP performance	Color management tools	Cluster requirements
Scanning requirements	PDL, data stream support	Document management
Variable data/image	Job ticket/order entry	Internet printing capabilities
Requirements for MIS integration	Print driver requirements	Ease of use
Feeding and Finishing		
Roll Feed	Perfect binding and other finishing	Bypass requirements
Trimming/scoring/folding/stitching	Protective coating	In-line vs. off-line booklet making
Paper/Substrates		
Grades (uncoated, coated/glossy)	Specialty	Weights
	Sizes	Pre-printed stock

5. Size and forecast the 2005 – 2009 market for digital color printing equipment, supplies, and service

- Equipment (by segment)
 - Shipments
 - Installed base
 - Print volume
 - Revenue
- Supplies
 - Service
 - Retail value of print

6. Provide a profile of successful sales/distributor organizations

7. Provide market development recommendations and tools that can be implemented by existing and prospective on demand printing equipment users. Key elements will include:

- Developing and implement a marketing strategy
 - Identifying the opportunity by vertical industry
 - Identifying and developing applications for demand printing by vertical industry
 - Educating print customers about digital color print on demand benefits
 - Promoting services and reaching prospects



- Selling new digital printing services
 - Short run printing
 - Just-in-time printing
 - Distribute and print
- Variable information
- Transaction documents
- Fulfillment opportunities

8. Reviewing the new economic model for distributors and buyers of this equipment

- Cost of providing service & support
- Opportunities for integration and solutions services
- Margin analysis
- Sales compensation strategies
- Provide TCO analysis based on budgeted hourly rates and equipment costs
- Market focus
- Specialist and System Engineering Support
- Prepress expertise required
- Workflow expertise
- Professional services expertise including integration
- Market coverage and distribution model
- Product offerings
- Vertical market focus

This study will examine the impact of digital color printing solutions on various applications including promotional, transactional, publication, and non-document related output.

Document Types

Promotional documents have the primary purpose of selling, attracting, and promoting a product, service, company, event, or cause. Examples include brochures, catalogs, coupons, credit card solicitations, and direct mail.

Published documents are used to inform, notify, educate, and explain information and procedures. Examples include parts lists, pricing schedules, directories, technical manuals, financial prospectuses, user guides, newsletters, and service and support documentation.

Transaction documents are used to invoice, notify, and summarize activities that occur in the organization and have been captured by the computer system. Examples include statements, invoices, evidence of coverage, contracts, and policies.

Non-Document printing is distinguished by not being a document and having another focus such as packaging, labels, signage, or photographic output.

This study will examine the changing cost crossover points with offset lithography and other traditional print technologies and evaluate the attractiveness of digital color solutions for variable data applications that are currently printed in black & white or using digital highlight color.

With the advent of new color technology that has gained greater market acceptance, paper manufacturers and distributors will witness increased demand for new, premium grades of coated and uncoated stocks that will run effectively on this technology. This study will evaluate where future digital color volume will emerge from and utilize the quadrant model to define the opportunity and identify the marketplace challenges. It will also address the issues of price elasticity, market assumptions, beliefs, and expectations.

Despite the success of products from manufacturers such as Canon, HP/Indigo, Kodak Versamark, Konica Minolta, Kyocera, NexPress, Océ, Ricoh, Toshiba, Xeikon, and Xerox, many printers have not grown their digital color volume as fast as they would like. While it is improving, the total number of pages produced on digital color devices currently represents a very small fraction of the total color printing market. This study will focus on the economics related to the opportunity in terms of capital and annuity income.



Target Audience

There are two primary audiences for this study. The first audience consists of the vendors and distributors of digital color on demand printing equipment and supplies - the technology providers.

Technology providers

- Color Copier/Printer and Color Printing equipment manufacturers and distributors including DI
- Software, workflow solutions, and professional services firms
- Enterprise content, document, and knowledge management systems developers
- Controller/RIP developers
- Paper manufacturers and distributors

The second audience consists of the users of these technologies - the print providers.

Print providers

- Commercial printers
- Digital printing specialists
- Fulfillment firms
- Quick printers
- Copy centers
- Book printers
- Direct mail firms
- Prepress service bureaus
- Electronic printing service bureaus
- Corporate in-plants
- Corporate graphics environments
- Facilities management firms
- Corporate data centers



Market Research

The intent of the market research is to gain perspectives and develop data from the entire print production chain - from technology developers to print providers to print customers and potential users of this technology. During a period of industry transformation, market knowledge is critical to continued success.

Discussions with technology developers are critical to understanding the current market size and product developments. Research with print providers will identify critical success factors, unmet product requirements, purchasing plans, and other items that will drive vendors' product, marketing, and sales activities. Finally, by researching the print customer and end-user, the study will identify critical applications and develop insights on how to build volume on various classes of digital printing systems.

Desk Research

The desk research will include in-depth interviews with industry leaders, the review of published material on the printing and publishing industry, and the examination of existing InfoTrends/CAP Ventures research on related subjects.

- Review published material
 - Government statistics
 - Trade publications studies
 - Industry associations
 - Other published material
- Examine existing InfoTrends/CAP Ventures research
 - U.S. Print on Demand Market Forecast
 - Converging Digital Peripherals Market Forecast
 - Consumables Forecasts and previously published studies

The project team will review published information to develop a foundation on current market size, key industry segments, and overall industry growth trends. Previous research from InfoTrends/CAP Ventures will help identify potential applications, barriers and enablers to market development, and success factors employed by leading users.

Primary Research

The study will include primary and secondary research and will build on previous market research conducted by InfoTrends/CAP Ventures. In-depth discussions will be held with technologists, equipment vendors, and leading users of this technology.

Over 300 interviews with print providers, including:

- Commercial printers
- Digital printing specialists
- Fulfillment firms
- Quick printers
- Copy centers
- Book printers
- Direct mail firms
- Prepress service bureaus
- Electronic printing service bureaus
- Corporate in-plants
- Corporate graphics environments
- Facilities management firms
- Corporate data centers

Over 200 interviews with print customers in key vertical industries and market segments including:

Advertising/design and key verticals industries such as manufacturing, financial services, retail/wholesale, and professional services.

Over 20 personal interviews with industry leaders and influential users, which will provide insight on current investments, primary customer segments and applications, organizational issues, pricing strategies, future purchase plans, sales and marketing programs, and other critical factors in building a business.

Over 20 in-depth personal and telephone interviews with technologists and developers of solutions, including:

- Copying, printing, and prepress vendors and distributors
- Software and services providers
- Paper manufacturers and distributors

The vendor interviews will be critical in assessing market penetration, sales volume, installed base, distribution channels, pricing trends, product development directions, and perceptions on unmet market needs and emerging opportunities. The distributor interviews will provide insights on local market issues, volume potential, sales cycles, pricing and margins, service and support issues, and other factors influencing the rate of growth.

Analysis and Project Deliverables

The analysis will include separate project reports designed to address the issues for vendors (i.e. equipment manufacturers, paper vendors, distributors) as well as the issues of technology users, corporate end-users, quick printers, commercial printers, direct mailers, specialty printers, data center printers, prepress houses, in-plant print shops, facilities management businesses, and outsourcing companies.

Production Digital Color Solution Vendors

There will be a combination of reports including tabulated data, presentation material, and data for senior management, product managers and planners, and sales and marketing executives. The material will include:

- An executive summary that addresses key issues, findings, and overall recommendations
- A detailed written report (approximately 150 pages) with text, charts, and graphs addressing the objectives of the study. Key elements of the report will include:
 - Market segmentation by type of print provider and major applications supported
 - Brand preference
 - Identification of critical print requirements concerning workflow and services
 - Assessment of awareness, interest, and purchase intentions for competing/complementary classes of equipment
 - Market size and forecast for digital color equipment, supplies, and service by environment
 - Assessment of the impact on the market from changes in key product capabilities and price points
 - Market development recommendations and tools that can be implemented by existing and prospective digital color printing equipment buyers
- A set of PowerPoint presentations for internal communication of the research results
- A data book of the survey research tabulation for additional analysis of key questions and market segments





Print Providers

A separate version of the report will be published for print providers and will focus more on the requirements of end-users (print buyers). Key elements of the report will include:

- Profile of the leading on digital printing products and suppliers
- Segmentation of the market for digital color printing
 - Vertical industries
 - Company size
 - Applications
- Size and forecast the market for digital color print services and related services
 - Prepress services
 - Printing by color content and run length
 - Other digital document services
 - Other services offered
- Assess the impact on the market from changes in key product capabilities and price points
 - Print quality
 - Paper (grades, weights, format)
 - Variable information
 - Speed/throughput/monthly volume
 - Equipment pricing
 - Operational costs/Total cost per page
- Discuss key elements of a digital color business plan, including:
 - Existing digital production capabilities
 - Initial investments and ongoing capital spending
 - Customer base and applications
 - Sales and marketing resources, strategies and programs
 - Print volume requirements
 - Key applications
 - Digital printing services offered
 - Pricing strategies
 - Organizational factors (customer service, number of shifts per day, sales compensation, training, etc.)
- Distribute and print opportunities
 - Implementing marketing programs
 - Opportunities in 1:1 and variable data
 - Selling new digital printing services
 - Identifying and developing applications for demand printing by key vertical industries

Project Schedule

InfoTrends/CAP Ventures intends to begin this project in May. Based on the following schedule, the project will be completed with material distributed by the end of September 2005. Throughout the project, InfoTrends/CAP Ventures will issue regular updates on the project status and will provide interim reports where applicable.



Milestone	Weeks
Desk research	1 - 4
Interviews with industry leaders and equipment, service, and supplies vendors	3 - 6
Interviews with printers and end-users	5 - 12
Data analysis and report development	10 - 16
Report delivery	18

Project Fees

The project fee for equipment and systems vendors, paper manufacturers, distributors, and other technology providers is \$13,995 for early subscribers and \$14,995 for those purchasing after May 31, 2005. Early subscribers will have the ability to contribute to the surveys and will receive previously published reports. A personal presentation is available for \$2,500 plus travel expenses.

Terms and Conditions

Liability for Advice

Although reasonable efforts will be made by InfoTrends/CAP Ventures to ensure the completeness and accuracy of the information contained in written and oral reports in connection with the proposed study, no liability can be accepted by InfoTrends/CAP Ventures for the results of any actions taken by the Client in connection with such information, opinions, or advice.

Copyrights & Confidentiality

InfoTrends/CAP Ventures retains all Copyrights. Reproduction of any material can be made only with the written consent of InfoTrends/CAP Ventures. InfoTrends/CAP Ventures will use its best efforts to ensure that any confidential information obtained about the Client and its business during the course of the proposed study is not, unless agreed otherwise in advance, disclosed to any third party without the prior written permission of the Client. InfoTrends/CAP Ventures retains the right to re-use any non-proprietary information as part of its ongoing analysis of the office automation and printing and publishing industry.

Timely Delivery

InfoTrends/CAP Ventures will take all reasonable steps to ensure that the time scales called for by the proposed study are met in accordance with the agreed schedule, but no liability can be accepted for the consequences of delays, howsoever caused.



The Evolving Digital Color On Demand Printing Opportunity

Technology provider

Primary business is printing equipment manufacturers, prepress systems vendors, controller/RIP developers, paper manufacturers, and equipment and supplies distributors

- Early subscriber (before 5/31/05) \$13,995
- Subscriber (after 5/31/05) \$14,995
- Personal presentation \$2,500 plus travel expenses

.....
(Please print, or attach your business card)

Purchase order number

Signature

Name

Title

Company

Street Address

City, State, Zip

Telephone

Fax

E-mail



United States

97 Libbey Industrial Parkway
Suite 300
Weymouth, Massachusetts 02189
Telephone: 781.616.2100
Fax: 781.616.2121
www.capv.com

Europe

Sceptre House, 7-9 Castle Street
Luton, Bedfordshire,
United Kingdom LU1 3AJ
Telephone: +44 1582 400120
Fax: +44 1582 411001
www.capv.com

Asia

Hiroo Office Building
1-3-18 Hiroo Shibuya-ku
Tokyo 150-0012 Japan
Phone: +81 3 5475 2663
Fax: +81 3 5475 2710
www.gsm.to