The Future of Digital Printing

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InfoTrends

Industry analyst firm focused on the consumer imaging, office document technology and production printing & publishing industries.

Focused  Credible  Responsive  Visionary

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Economy
Global Economic Outlook

- 2009 was the first time since the Great Depression that global economic activity contracted.
- During 2010, growth will be slow on a worldwide basis.
- Japan’s manufacturing sector was hit hard, but the country began its recovery earlier in 2009 and will return closer to its natural growth rate of 2% in 2010.
- The U.S. and Europe were in recession for most of 2009. Due to the effects of the financial crisis, they will recover slowly during 2010.
Market Realities for the Printing Industries in 2010

• The recession has hit the global economy hard, and the printing industry was no exception
  - Worldwide printing, publishing, and related industries will perform worse than the overall economy. The U.S. printing industry declined by -3% during 2009.
  - Unemployment and underemployment in printing and related industries will be worse than the global averages
  - Overall revenues and the number of establishments will decline between 2010 and 2013

• Rebuilding will ride on two Strategic Planks:
  • Operational Effectiveness
    ‣ Managing costs by doing all work more efficiently
  • Digital Transformation
    ‣ Digital adoption is accelerating due to the economy, enabling technology, and the high rate of consumer adoption
    ‣ Digital color impressions are forecasted to demonstrate the highest growth across the printing industry between 2009 and 2014
Recovery will be a Result of Proactive Rebuilding and Reinventing

- Thorough investigation and ROI analysis on large capital investments

- Operational creativity in reducing all operational friction – reducing cost and cycle time to drive efficiency

- Prolific content tailored to consumer needs is driving shorter print runs and a faster migration to digital

- Consumers are accelerating the adoption rate of alternate marketing channels—print, Internet, mobile, and social media will converge
Developments in Production Print Communications
What is going on?

• Shift from physical (print) to virtual (electronic) representation
What is going on?

• Shift from centrally created content to user-generated content
What is going on?

- Shift from a few dominant media forms to multitude of media channels
Implications

• New advertising and publishing models are emerging
  ‣ Combine multiple delivery channels: web, print, email, digital TV
  ‣ Self publishing, tailored publishing and user generated content
  ‣ Reverse Publishing – taking existing on-line content into printed form
Book Publisher’s Dilemma

• Every book is a gamble
• Publishers traditionally focus on unit cost
• Cash outlay and inventory control
• Increase the amount of titles in print
• Publishers need to rethink cost and revenue opportunities:
  ‣ Short Run Digital Books
  ‣ True Print On Demand Digital Books
E-Books

Screen Reading Preferences

Q.6: What statement describes your opinion regarding print on screen? (please select one)

- I generally try to avoid reading text on-screen, by printing out the text or using an available printed version: 9.8%
- I prefer reading on-screen documents as they can have integrated multimedia content: 14.1%
- If a text is longer I prefer to read a printed version: 33.6%
- I do not mind reading text on a screen, even when the text is multiple pages: 42.5%

N = 1,341

E-Books
Unresolved Problems

• Still a nascent market

Q.7: Do you now own or do you expect to buy an electronic reader such as Sony Reader or Amazon Kindle?

Printing ... Is it History?

Digital Books & Newspapers

Digital Magazines

Flexible Displays
Offset Printing
Future Directions

• Today offset printing is struggling to adapt to the changing market

Larger formats ➔ Higher Productivity
Higher Automation ➔ More Cost Efficient for Shorter Runs
More On-press Control ➔ Better Quality, Less Waste
Digital Disruption
Moving into More Markets

Performance

Time

Office

Bills

Reports

Memos

Graphics

Photos

Signs

Art

Brochures

Digital Print Technology

Publishing

Magazines

Catalogs

Newspapers

Books

Labels

Packaging

Textiles

Industrial

Specialty

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TransPromo - a dedicated communication channel in a multi-media world

- Consumers may encounter up to 1,500 marketing messages per day¹
- Explosion of new media channels
  - Digital Television
  - Social Web sites (Facebook, YouTube, Twitter)
  - Internet Radio / PodCasts
- Consumer attention is getting scarce!
- Research from InfoTrends shows that, on average, consumers spend an average of 3.5 minutes reviewing monthly statements received in the mail

¹. Chartered Institute of Marketing (UK)
Time Spent Reviewing Monthly Statement

Source: Trans Meets Promo: A European Perspective, InfoTrends, October 2009
Document Owner’s Colour Usage Today: Why Colour is Used on Bills and Statements

Source: Trans Meets Promo: A European Perspective, InfoTrends, October 2009

N = 395
Transaction Document Owners who are using digital colour
Transpromo – Why now?
Enablers

- **Technology Progress**
  - **New high volume digital colour presses**
  - Composition software
  - White space optimisation
  - CRM systems to provide data
  - Enterprise Integrated Marketing Campaign Management solutions to mine and analyse data

- **Market Drivers**
  - Fight for the attention of the consumer
  - Consumers are getting better in filtering out unwanted advertising messages
  - Transpromo is one of the largest untapped potentials for advertising messages
Key Trends in Print Production Software

- Workflow automation
- Integration among multiple solutions for super-efficiency
- Enabling marketing efficiency
Global Print Production Software Market ($Millions) – CAGR*

*CAGR (Compounded Annual Growth Rates)

Tools & Technologies for Automation

Web-to-Print
- Automated estimating
- Automated job notification
- Integration with print MIS/workflow mgmt/shipping/accounting

Print MIS
- Automated estimating
- Automated inventory management
- Integration with Web-to-print/shipping/accounting solutions
- Shop floor data collection and scheduling

Workflow Management
- Automated prepress/color management
- Automated job routing
Integration Among Solutions for Super-Efficiency

Job Creation/Submission ➔ Prepress ➔ Press ➔ Postpress

Job Creation/Submission ➔ Prepress ➔ Press ➔ Postpress
Transitioning to Marketing Services Provider

“Printer”
“Vendor”

- Manufacturing-centric
- Volume-intensive
- Optimized production process

The Gap
- Technology skills
- Tools
- Templates
- Case studies
- “Selling” skills
- Opportunity identification

Commodity

End-To-End Solution Provider
“Partner”

- Web-centric
- Multimedia
- Workflow-centric
- Time-sensitive delivery
- Content delivery systems

Value-Add

The Gap
What are Service Providers Equipped to Deliver?

- Design and creative services: 84.3%
- Digital full color printing: 76.0%
- Document composition: 69.0%
- Color digital prepress: 68.6%
- Direct marketing campaign management: 37.1%
- Customer web site development: 35.4%
- 1:1 variable data marketing campaign management: 34.1%
- Database design and management: 32.3%
- Document management services: 21.8%
- Integrated marketing campaign: 17.5%
- Data mining and analytics: 17.5%
- Multi-media publishing: 16.6%
- Electronic payment service: 10.9%

Source: Trans Meets Promo... Is It More Than Market Hype?, InfoTrends, 2008
Enabling Marketing Efficiency

- Marketers are forced to stretch every marketing dollar and deliver more measured results
- Multi-channel campaigns increase response rates
- Closing-the-loop / data management
- Campaign dashboard / visualization
- Scientific approach to data analytics
They Work! More Channels = More Response

Please provide the average response rate of campaigns that use the following combinations of media channels.

<table>
<thead>
<tr>
<th>Combination</th>
<th>Response Rate</th>
<th>Improvement over print-only campaigns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print, e-mail, and Web landing pages</td>
<td>8.8%</td>
<td>35%</td>
</tr>
<tr>
<td>Print, email, Web landing pages, and mobile marketing</td>
<td>8.7%</td>
<td>34%</td>
</tr>
<tr>
<td>Print and e-mail</td>
<td>8.3%</td>
<td>28%</td>
</tr>
<tr>
<td>Print and Web landing pages</td>
<td>7.7%</td>
<td>19%</td>
</tr>
<tr>
<td>Print only</td>
<td>6.5%</td>
<td></td>
</tr>
</tbody>
</table>

N = 217 marketers

Percentage of Multi-Channel Campaigns that Use Each Medium - Means

What percentage of your multi-channel communications campaigns use the following mediums?

- **Print**: 74%
- **Telemarketing**: 43%
- **E-mail marketing**: 43%
- **Web Landing Pages**: 40%
- **Mobile messaging**: 30%


Developments in Office/Workgroup Print Communications
John McCarthy predicted utility computing in the 1960s
Changing Trends & Attitudes Post Recession

- Customer expenditure continues to be under scrutiny
  - Investment must demonstrate short-term savings and/or impact business growth
  - Challenges continue in securing equipment financing
- Increased awareness, and willingness to embrace ‘Green IT’
  - Legislation compelling ‘Green’ compliance
  - Green is recognised as good business
  - Sustainability and trend towards supporting ‘local’
- New opportunities emerging in post recession business world
  - Larger SMEs as well as enterprises are showing interest in contracts, solutions
  - MPS growing rapidly
  - SMEs looking for deeper relationships/partnerships

Business not going back to pre-recession trends
MPS is a fundamental shift in focus and strategy for the print and copy industry players.
Importance of Criteria in Choosing to Engage in MPS

Rate the importance of each of the following criteria in why you chose to engage in Managed Print Services (where 1 is not important and 5 is extremely important)

- Wanted to improve costs
- Wanted to reduce costs which included the optimisation of our fleet of products
- Wanted to consolidate all of my Printer/Copier hardware under one contract
- Wanted to have our SUPPORT of my copier/printers managed one vendor
- Wanted to have SERVICE of my copier/printers managed one vendor
- Wanted to have our supplies managed by one vendor
- Wanted to have ONE Predictable monthly charge for our services

Western European Managed Print Services Study
End-User Survey - U.K., Germany, France
August 2009

N = 439
W. Europe Laser Office Device Placements: 2006 to 2009
W. Europe Managed Print Services Forecast: 2008 to 2013

CAGR 23%

30%

47%

19%

14%
Market Outlook & Conclusions for Paper
Outlook – Print Market

• There is no business as usual with total print volumes stagnating

• Communication is becoming more on demand, personal and on time
  ‣ Digital print and software are the big enablers
  ‣ 30% of printers have web-to-print and further 20% plan to install in the near future

• Digital is becoming ever more pervasive
  ‣ Already 40% of all commercial printers in Europe have digital printing equipment (InfoTrends 2007)
Outlook – Print Market

• Cater for the short run demand

• Innovative PSPs drive growth
  ‣ TransPromo
  ‣ Photo merchandise
  ‣ Multi-channel communications
  ‣ Digital packaging

• Environmental considerations are key
  ‣ Environmental awareness is long term strategy
  ‣ Target is not a complete avoidance but constant improvement
Outlook – Cost pressure on Paper

• Print is in cost competition with other communication media

• Cost pressure on printing papers
  ‣ Lower quality paper but good enough?
  ‣ Offset paper for digital printers
    - About 35% of digital colour print is already done on offset paper today

• Focus is on cost efficient short runs
Outlook – New Markets for Paper (Substrates)

• Print is moving into new markets, mainly due to new possibilities in digital print

• Photoprinting
  ‣ Touch and feel of photo paper, with strong growth in photo merchandise (calendars, books, cards, …)

• Transpromo
  ‣ Driven by speed, cost and quality delivered by high volume colour ink-jet

• 1:1 Publishing
  ‣ Deliver for short run and on demand publishing

• Specialty & industrial printing
  ‣ Textile, packaging, label, floors, walls, …
Outlook - Print as Premium Media

- Print in awareness competition with other communication media
- Target is to achieve a high apparent value
  - Premium advertising
  - High quality books
  - High value direct mail
  - PR & Brand critical materials
- Print and paper used as a differentiator from e-media
- Will promote specialty substrates
  - Higher weights
  - Surface textures, special finishes
  - High brightness, coloured, marbled, …
- Digital papers for digital equipment