STATE OF GRAVURE

Our Process's Place in the Sun

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STATE OF GRAVURE

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- ***Panel***
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STATE OF GRAVURE

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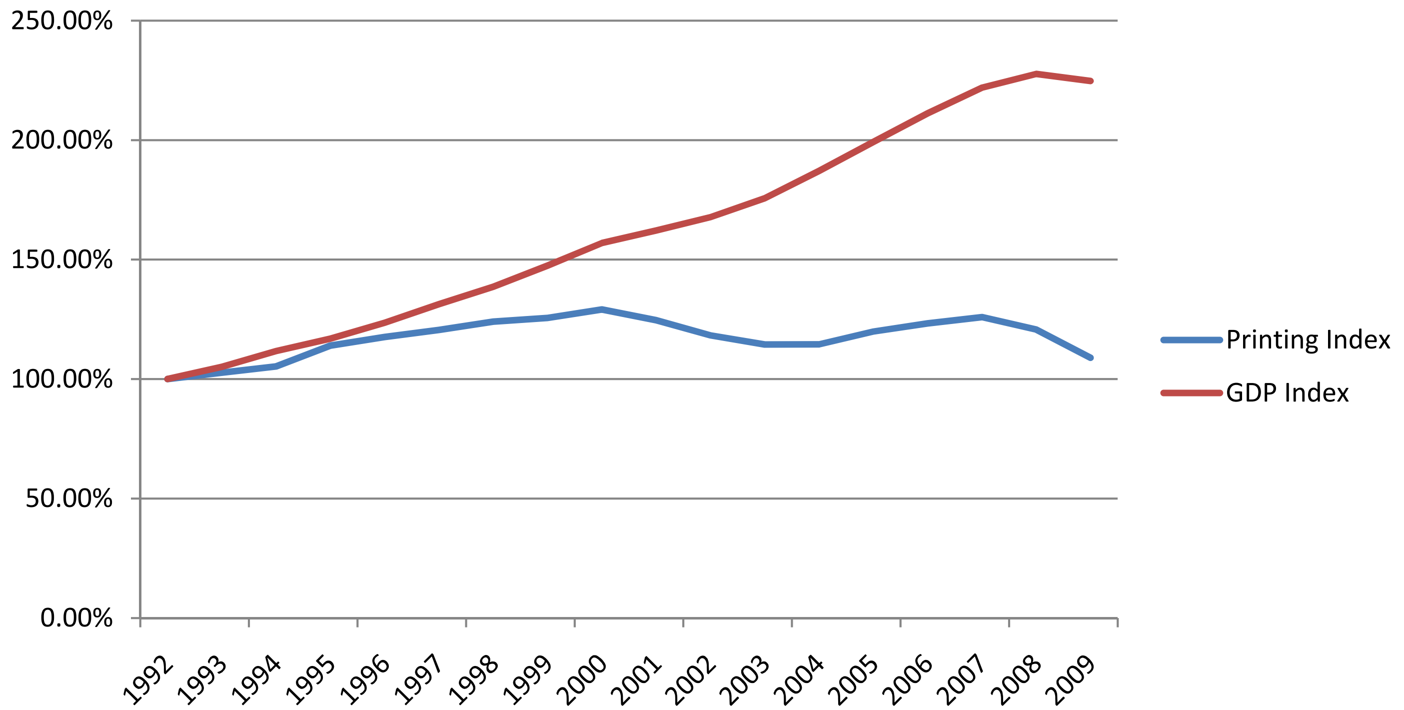
- *Process share of market*
- *Publication / Catalog*
- *Product*
- *Packaging*
- *Other Media Channels*
- *Buyer Trends*
- *Industry Trends*
- *Issues and Outlook*

High Level

Printing shipments vs. Current $ GDP



Source: Bureau of Economic Analysis, US Census Bureau

Process Share of Market

	1997	2002	2007	2008	2009	2010 (e)	2011 (e)	2012 (e)	2014 - 2017 (e)
Litho & DI	46%	42%	42%	40%	39%	38%	36%	34%	31%
Roto	18%	17%	14%+	13%+	13%+	13%+	12%+	11%+	11%
Flexo	18%	19%	22%	22%	22%	23%	24%	23%+	21%
Letterpress	7%	6%							
Screen/ Misc.	3%	3%	2%+	2%+	2%+	2%	2%	1%+	1%+
Hybrid			3%+	3%+	3%+	3%+	4%	4%+	3%+
Digital	8%	13%	17%+	17%+	18%+	20%	21%+	23%	31%

Process Share of Market

NOTES to the chart on preceding slide

Statistical Notes: * The data for 2008 was finalized as of 7/31/09. The data for 2009 is preliminary revised 3/19/10. All percentage estimates are rounded to the nearest whole number and may not total 100% as a result of rounding. All process market share actual volume and forecasts include mono-color, spot and process color printing. Estimates are calculated as a percent of producing printer sales dollars, less substrate value thereby eliminating process relative volume bias caused by differing and fluctuating values of substrates. The calculations were in 2008/2009 dollars. In addition to printers' sales dollars less paper and non-print services, the market share analysis is also based on extensive trend data, paper, ink, and plate consumption data, market information, surveys, supplier provided information, manufacturer annual reports/SEC filings, and an analysis of the underlying technologies as well as product type applications

Print markets included: all informational, commercial and inplant printing (except office copying and non-graphic arts desktop computer output); custom-produced office products (i.e., stationery, envelopes, social); all package printing except brown box corrugated and direct printing on metal cans and plastic containers.

Markets excluded: Business data processing (i.e., non-graphic arts) computer output (including transactional, in-office printing and MFP output); decorative printing including metal decorating, wallpaper, gift wrap; general office products; brown box corrugated and direct printing on metal cans and plastic containers; rigid materials; printing on goods such as wood, laminates, auto parts, etc.; all fabric printing; and wide format digital printing. The analysis is for printing, excluding content preparation and starts with the use of an electronic file or reproduction copy for print and excludes postpress operations.

Publication

- ***Circulation / Length of Run***
- ***Advertising / Editorial***
- ***Frequency***

Last 10 Years:

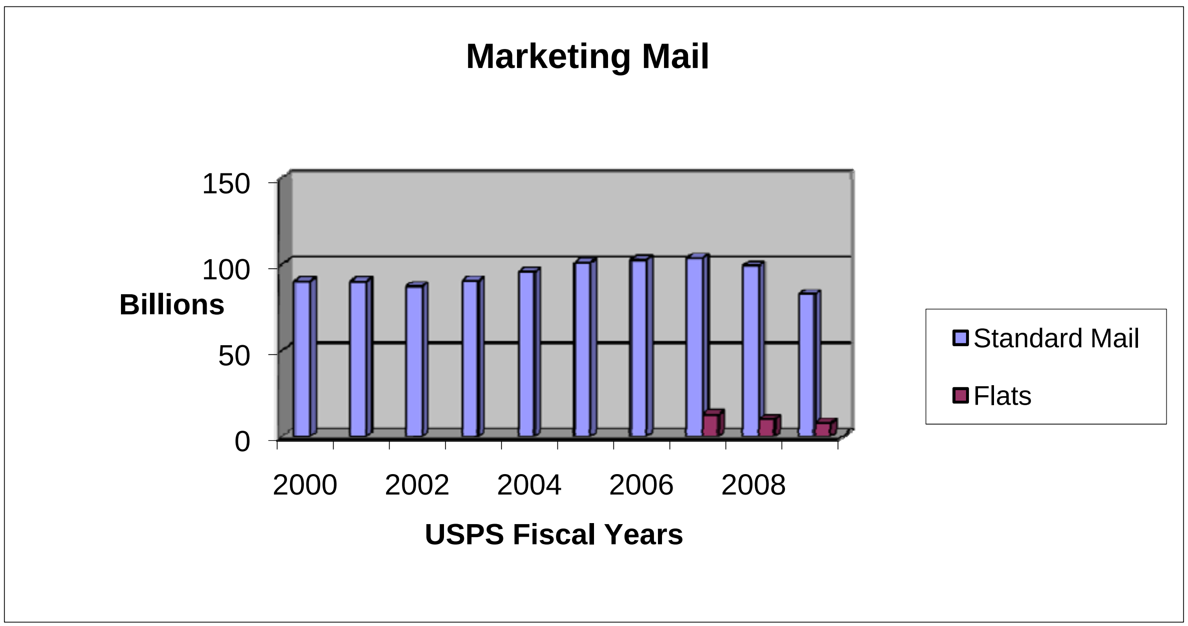
Market Basket Titles:
Edit Ratios stable
Ads ⇓ ½ % per Year CAGR
Circulation ⇓ 3% per Year CAGR
Frequencies ⇓
Offset losses equal or greater

Some “adds” – some dramatic losses

Source: MIN, ABC – 1998 to 1999

Catalog

North American Annual Circulation (billions)		CAGR
2005	23.9	-3 ¼% to -4 ½%
2010 (preliminary forecast)	19.0 – 20.3	



Source: William C. Lamparter, Printcom Consulting, 2009, USPS

Flyers / Inserts / Circulars

US Newspaper Circulation (billions)	Daily	Sunday	**CAGR**
1998	56.2	60.1	-1 ½%
			to
2008	48.6	49.1	-2 %

- Digital coupons quintuple in two years to $858 million (45 million users in ‘09)
- Newspaper Inserts “Under Siege” – poor economy helped inserts volume a bit – otherwise newspapers were hammered in ‘09 (Above the Line ad spend in newspapers – 26%)

Source: Newspaper Association of America, © MediaPost Communications, © The Poynter Institute, Winterberry Group

Product

Golden Cylinder Awards offer glimpse into niche applications

Water-based inks: Hallmark, American Greetings

Automotive, swimming pools (residential)

- Ingenious, Innovative
- Largely Below the Radar

Packaging

Kevin Karstedt will fill us in, but if I were to comment:

- Still robust sector (of course there are always challenges); surely now bigger than 30 – 40% of the domestic gravure market
- Stronger penetration of laser engraving in N.A.
- Commands the attention of Offset press manufacturers as never before.
- Share of wallet struggle with larger Flexo, but holds the high ground on quality, competes overall on long run efficiency, consistency, global brand integrity and availability
- Digital is Coming

Printed Electronics

Bill Ray and others will fill us in, but if I were to guess:

- Infancy. Continuing research, but probably tough to allocate R&D $ in a “recovering” economy. How much will it take?

- Successes will be well-guarded intellectual property, certainly at the outset

- Future: new and emerging markets based on path finding at Daetwyler, WMU, Clemson, elsewhere

Other Media Channels

Much action in the marketplace of Content Distribution, Ideas and Advertising – Marketing messaging

- Fragmentation / Explosion of broadcast TV-Radio. Overall measured results under pressure

- Internet-based delivery of same content (Music long gone)

- Marketer emphases: Email (+9% to $1.4 Bn in ‘10), SEO (+6% to $15.6 Bn), Mobile (+ 27% to $2.2 Bn), Online Display (+ 9% to $9.3 Bn), Social Media (+ 13% to $1.2 Bn)

Source: Winterberry Group, 2010 “Outlook 2010”

Buyer Trends

Existing Customers: fighting for their own survival. Somewhat (of necessity) besotted with *Neu Technology und Komminikation*. **Potential Customers:** Convinced otherwise (Condé Nast) or unaware or out of the norm (Philips, Motorola)

- Gravure quality imperative, but increasingly challenged by others
- Raw speed very favorable, but challenged
- Thank you: Ballard shells, wide range of substrates, no thank you: Adobe
- Cost of first salable impression – still a problem
- 70” and 96” presses (for larger list, see Cylinder Award winners last 10 years) fully depreciated: both good and bad
- Size flexibility a big plus, especially catalog and packaging
- Traditional Buyer ranks depleted; Spreadsheet buyers, production management and brokerage firms – not unknown

Industry Trends

At the risk of over simplifying

- **Environment, Sustainability** – more than ever important to customer base, government, shareholders – the list of stakeholders is long
- **And Then There Were Two** – RRD and Quad, Sun and Flint – examples surely elsewhere. Consolidation and right-sizing in each sector. Look at Paper.
- **Prepress – Premedia Lock Step** with other processes – Direct to Image Carrier, stochastic, soft proofing, virtual and press-side proofing, workflow, end-to-end color management, color control
- **Laser** – Type, Vignettes, but image carrier and capital $ outlay work to be done
- **Printed Electronics** – similarly long gestation period as inkjet (early ‘60s)? As CTP (early ’70s). Let’s hope not
- **Timely Delivery Products** – safe with OnShoring, but Lean needed for survival
- **Presses** – Well maintained but aging fleet

Issues and Outlook

Repetitive…and then some

- **THE High Quality Process** – on any commercially available substrate
- **Mandate for Print Provider Competitiveness** – we must be the efficient and profitable process of choice
- **Amidst an ever wider array of Choices!** We'll never be the only game in town, though P.E. could be a game changer
- **Bought by** knowledgeable Long Timers
- And <u>**Not**</u> **Bought or Specified by** media planners and others still in knickers – need for advocacy, awareness, "hip" drum-beating, results measurement and excitement
- **Partner with Digital** – find and form common cause
- **Printed Electronics** – tap into capital to push over the top
- **Replace the Cohort** who will retire when the Recovery is finally a Bull Market. Loss of institutional and technical knowledge, across the value chain, is a significant risk – *great* market for (too few) graduates of our schools

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