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PRINTING INSTRUCTIONS FOR THIS GISTICS PUBLICATION

Omit this instruction cover page from the finished print job

PRINTING

Number of pages	**56 pages**
Full color or black & white?	**black & white**
Paper type	**laser/photo white**
Paper size	**11 x 17**
Sides to print	**double-sided**
Collation	**collated**

FINISHING

Stapling	**saddle stitched**
Drilling	none
Folding	none
Binding	**saddle stitched**
Front cover	none
Back cover	none

SPECIAL INSTRUCTIONS

The signature forming the cover should be heavier stock than the rest; 90 lb. cover stock or equivalent.

Printing tips when printing from Acrobat Reader or Acrobat Exchange:

1. Make sure your **Page Setup** specifies the correct page size, "US letter." Page setups often default to settings like "US letter small," which can result in the loss of page elements near the edge of the page. GISTICS publications are built with a margin of ⅜" all around, which should be more than adequate for most laser printers.

2. *Acrobat Reader* and *Exchange* provide an option in their print dialogs called "**Shrink to fit**." If this is checked, pages will usually print smaller than intended by GISTICS. Therefore, leaving this option *unchecked* will produce the best results, especially if the Page Setup is correctly specified as discussed above.

3. GISTICS strongly recommends printing GISTICS publications on printers capable of **600 dpi** or higher. Printing at lower resolutions will result in poor legibility of some text and graphic elements.

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iCorp!

discipline//Virtual Value Chains ▼

category//Smart Media ▼

series//Solution Guide ▼

R.O.I. tech brief

**ECONOMIC PAYBACK ASSESSMENT
FOR NEW TECHNOLOGY**

COLORSYNC PAYBACK ASSESSMENT

Return-on-Investment Calculations for the Deployment of ColorSync by Smart Media Producers

$295 (US)

Version 1.5 Spring 1999

LICENSED FOR
DISTRIBUTION BY

CONTEXT

discipline//category

▶ **Networked Economy**
Business of One
Departmental E-Commerce
Plug-and-Play Mergers and Acquisitions
Real Time 24x7 Relationships

▶ **Digital Branding**
Lifecycle Management
Deep Gravity Well Web Site
Digital Storytelling
Interactive Investor Relations

▼ **Virtual Value Chains**
Brand Factory
Knowledge Refinery
Satisfaction Theaters
Smart Media

▶ **Process Management**
Business Intelligence
Deal Flow Management
Interactive Logistics
Self-Directed Lifelong Learning

enterprise scale

Revenues/ Annual Budget

Fortune 2000
(>$750 million)
Mid-Tier Enterprise
($50 to $750 million)
Small Business
($2 to $50 million)
SOHO (<$2 million)
✔ All

Studio Size

Global (121–2500)
Large (36–120)
Small business (7–35)
Team (2–6)
Solo
✔ All

enterprise focus

Department

Admin/finance
    HR/personnel/training
    Investor relations/legal
Executive committee
IT/DP/MIS
    Consulting
    Databases
    Data center operations
    Development
    Network/Security
    Transaction processing
    User support/
    help desk
    Web site management
Marketing/sales
    Brand/product
    marketing
    Client/account service
    Customer service
    Marcom
    Sales/sales support
    Web site/interactive
    programs
Manufacturing
    Maintenance/repair
All

Corporate In-House

AV media center
Brand management
Corporate
communications
Data management
Design
Documentation
Imaging center
In-house ad agency
Intranet applications
Legal/clearance
Licensing
Marcom
Marketing services
Photography
department
Printing and
reprographics
Publishing services
Sales support
Technical illustrations
Training
✔ All

Media Industries

Advertising
AV production
Animation/CG
Broadcast/cable
Catalog houses
Desktop publishing
Digital audio/music
Duplication/fulfillment
Entertainment
Graphic design
Galleries/museums/
libraries
Imaging services
Interactive design
Internet services
Licensing agency
Marketing services
Multimedia
Photographic services
Printing/prepress
Publishing
Stock media/archives
Talent management
Textile/apparel design
Training/education
Video production/post
Web
✔ All

publication series

▶ **Executive Education**
Business Strategies for the Interactive Corporation

Industry Report

Technology Impact Assessment

White Paper

Best Practice Primer

Executive Summary

▼ **Solution Guides**
Tactics and Prescriptives for Deployment

ROI TechBrief ($295)

ASK How Guide

ASAP Prescriptive

Vendor Profile

QuickStudy

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R.O.I. tech brief

ECONOMIC PAYBACK
ASSESSMENT
FOR NEW
TECHNOLOGY

COLORSYNC PAYBACK ASSESSMENT

Return-on-Investment Calculations for the
Deployment of ColorSync by Smart Media Producers

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Section ▶

COLORSYNC PAYBACK FINDINGS

R.O.I. tech
brief

ECONOMIC PAYBACK ASSESSMENT
FOR NEW TECHNOLOGY

Essential Questions

*How does GISTICS quantify the **economic benefits** of higher productivity among media producers?*

*How does **ColorSync adoption** increase productivity, revenue, profits, and valuation of the media producer firm?*

*How many **media producers in North America** have adopted ColorSync and what benefit have they derived?*

*What **return-on-investment levels** does ColorSync provide?*

*What **critical factors** induce adoption and full benefit?*

Summary

The term *Smart Media* connotes the use of **best practice** in the design, production, and distribution of digital media.

The **business design** of the media producer firm stands as the most significant success factor for maximizing return on investment for most technology deployments.

An **international standard** has emerged for the calibration and control of color for all manner of input devices (scanner, digital cameras), displays (CRT monitors, LCD panels), and output devices (printers, digital copiers, digital presses, offset and web presses).

This standard enables a graphic designer, multimedia publisher, or photographer to **faithfully recreate the true colors** of the original object (car, building, face), or artwork (drawing, painting) in its final form(s) (magazine, newspaper, book, Web page, CD-ROM).

A ColorSync-enabled workflow **reduces the number of color-related mistakes** (reworks), client rejections of substandard work (reprints), and dissatisfied clients (lost or delayed sales).

Various levels and types of ColorSync deployment yield different economic benefits; **return-on-investment scenarios** range from 4.53 times per year to 23.41 times per year.

Smart Media producers use six factors when deploying technology, framing management concerns of a successful media producer firm: business design, productivity, revenue, profit, digital assets, and valuation.

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SMART MEDIA SUMMARY

Our use of the term *Smart Media* connotes the systematized application of knowledge and best practice to the work of designing, producing, publishing, distributing, and selling of digital media and all its final expressions and formats.

GISTICS research of best practice of media producer firms reveals a general economic framework of the exceptionally profitable, high-growth, and/or highly valued firm.

Six factors (shown below, *Smart Media Success Factors*) constitute this framework and reflect the principal concerns of management:

The **business design** frames how management can potentially derive a return on investment from the deployment of a new technology or practice. Typically, Smart Media firms will employ a business design that predominantly uses one of these value-capture mechanisms:

- Fees and commissions paid by clients to an agency (advertising, graphic design)
- Production and delivery of materials or finished goods (prepress, printing)
- Sales of published works (books, movies, records)
- Advertising placement fees (broadcast, newspapers, magazines)
- Incremental sales derived from effective branding, promotion, sales support, and/or online sales (end-use customers of media and clients of media producer firms)
- Licensing fees and royalties (fashion labels, sports franchises, cartoon characters, celebrity endorsers, music, entertainment properties, corporate brands)

Productivity depends on getting billable work out the door that meets or exceeds customer standards for quality and satisfaction. Productivity requires process and quality controls, systematization of proven work practices, and flexible production capacities.

Revenue results from the ability to complete projects more quickly, enabling the firm to handle more work without adding costs. Often, shorter production cycle time attracts new business (that competitors have turned down due to slower cycle times), and enables the Smart Media firm to charge price premiums (in exchange for faster turnaround time) and command a firmer hold on the loyalty of clients.

Profit derives from lower production and marketing costs, achieved through a more predictable business process (fewer reworks and make-goods). This alone can attract and hold customers, enabling the Smart Media firm to lower its marketing costs and sell additional higher-margin products and services into a branded account, capturing a higher share of customers' budgets.

Digital assets result from the codification of intellectual capital in the form of reusable media and scripts, reusable designs and templates, automation routines, color profiles, and integrated business processes; when analyzed for economic performance, these forms of intellectual capital become economic assets.

Valuation increases as a function of three factors: consistently higher-than-average profit margins, the demonstrated ability to scale operations to market demand, and financial accounting of digital assets and their ongoing contribution to revenue and profit.

SMART MEDIA SUCCESS FACTORS
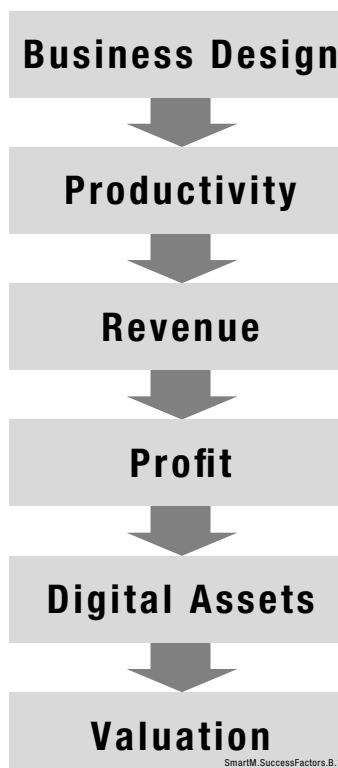
Business Design

↓

Productivity

↓

Revenue

↓

Profit

↓

Digital Assets

↓

Valuation

2   **Smart Media producers use six factors** when deploying technology, framing management concerns of a successful media producer firm: business design, productivity, revenue, profit, digital assets, and valuation.

4   When deploying ColorSync, Smart Media producer firms use six success factors: business design, productivity, revenue, profit, digital assets, and valuation.

5   ICC color management in the form of ColorSync has emerged as the **de facto standard** for the design, entertainment, and publishing industries.

6   The International Color Consortium constitutes a **vendor-neutral standards organization**.

7   **Lost or delayed sales** most affect the level of return on investment for ColorSync.

8   Failure to manage color in the production workflow costs the media producer firm an average of **$635 for every mistake**.

9   Among ColorSync users, the need to **manage color photos** drives full Studio-Workflow adoption.

10   Integrated color management has raised customer expectations to a new level—all firms that produce color work should consider ColorSync **a basic requirement**.

11   **Business motivations** for deployment of ColorSync emphasize competitive differentiation and unique client requirements.

12   **Satisfying customers**, especially those with global brands, mixed media, and international partners, can quickly justify full color management adoption.

13   At a fully burdened annual cost of $146 per device and an average of nineteen devices per workflow, full ColorSync adoption incurs a **significant expense**.

14   Smart Media firms that use ColorSync create and manage their own **ICC device profiles**.

15   The state of the art for integrated color management **continues to evolve**.

16   **Solo contractors** using best practice color management can produce **$518,187 in economic benefits** over three years, returning an investment of $42,689 a total of 11.14 times.

17   A **small team in an advertising group** using best practice color management can produce **$6,193,850 in economic benefits** over three years, returning an investment of $229,170 a total of 26.03 times.

18   A small team using best practice color management can produce **$5,532,207 in economic benefits** over three years, returning an investment of $221,789 a total of 23.94 times.

19   An **internal marketing group** using best practice color management can produce $21,678,475 in economic benefits over three years, returning an investment of $802,096 a total of 26.03 times.

20   A **small new media business** using best practice color management can produce $15,122,018 in economic benefits over three years, returning an investment of $853,920 a total of 16.71 times.

21   A **small business in print production** using best practice color management can produce $18,146,459 in economic benefits over three years, returning an investment of $669,496 a total of 26.10 times.

22   A **small business in publishing** using best practice color management can produce $14,517,167 in economic benefits over three years, returning an investment of $535,597 a total of 26.10 times.

24   Sole proprietor and master craftsman saves time and money with ColorSync and **eliminates color frustrations**.

26   ColorSync enables book author to shave $10 off cover price ($100,000 in printing costs) and learn how **direct control of color creates a better book** on Photoshop.

28   **True colors satisfy customers** buying business forms; global printing firm faithfully recreates color logos even when produced by high-volume electronic color publishing system.

30   A **standardized color space** for Simon & Schuster spans a thousand users, ensuring higher consistency of 100,000 scanned images per year.

32   Warner Brothers digitizes 100 background paintings per month for feature animations, using ColorSync to **save two hours of color correction work on every painting**.

When deploying ColorSync, Smart Media producer firms

use six success factors: business design, productivity, revenue, profit, digital assets, and valuation.

SMART MEDIA BEST PRACTICE*

Ongoing GISTICS research of media producer firms since 1992 has examined the critical success factors for profitability, growth, and higher valuations of the media producer firms.

Smart Media distills these best practices; we use a series of models, frameworks, and prescriptives to characterize the best practices of Smart Media.

For a more complete treatment of these Smart Media best practices, visit **www.gistics.com**.

This report, *ColorSync Payback Assessment*, stands as a section of the GISTICS Technology Impact Assessment, *Smart Media Best Practices— 1999*.

BUSINESS DESIGN

Executives and owners deploy ColorSync as part of a *strategic platform* by which to reengineer and systematize business processes for profit, bringing a *new satisfaction* to market and capturing additional *value*.

NEW SATISFACTIONS derive from higher quality production at significantly lower costs and shorter production cycles.

VALUE CAPTURE emphasizes increased profit per project, creation of new digital assets, and scalable workflow and business processes that all lead to higher business valuations.

PRODUCTIVITY

MORE BILLABLE WORK per worker translates into higher revenue and profit.

REVENUE

Smart Media firms use ColorSync to capture new revenues.

MORE PREDICTABLE WORKFLOW enables the firm to accept "impossible" jobs.

FASTER CYCLE TIME attracts opportunistic *orders* and builds *customer preference* (brand of the firm).

PROFIT

ColorSync can dramatically increase profitability of a media producer firm.

FEWER REWORKS AND MAKE-GOODS reduce production costs.

LOWER CONSUMABLES COSTS result from fewer prints needed to ensure true color.

HIGH SHARE OF CUSTOMER JOBS (the result of customer preference for higher quality work at lower price in less time) lowers marketing costs.

DIGITAL ASSETS

ColorSync can ensure a higher level of resale of pre-existing archived media assets.

HIGHER CONFIDENCE IN IMAGE PORTFOLIO by customers and prospective customers translates to higher use and purchase levels.

VALUATION

Smart media firms use color management to increase the value of the firm.

OPERATIONAL SCALABILITY reduces investment risks, making the business more attractive to capital partners.

PROCESS OPTIMIZATION applies process controls to profit-making activities, commanding a premium in a merger or acquisition.

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* For customer proof-points of best practice and affirmation of GISTICS assertions of economic benefit, see the QuickStudies in the next section of this report. These QuickStudies provide verbatim transcripts of comments from successful ColorSync users.

VALUE FULFILLMENT MODEL FOR SMART MEDIA FIRMS

Business design optimization

Profit and valuation enhancement

Digital asset creation

Productivity and revenue growth

SM.ValueFulfill.1.0
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ICC color management in the form of ColorSync has

emerged as the de facto standard for the design, entertainment, and publishing industries.

PLATFORM TECHNOLOGY. The benefits of lower cost, faster production cycles, and higher net profit per project justify ICC* color management deployment at the operating system level.

Apple Macintosh stands as the only platform that has ICC color management deployed within the operating system; this deployment ensures high reliability, broad support from software developers, and industrywide adoption (prepress, print).

SURPRISING RETURNS. Using the most conservative, analytical approach, GISTICS estimates that studios and media production groups who have fully integrated ColorSync into their workflows derive a one-year return on investment of 23 times.

COST OF LOSING CUSTOMERS. For most firms, not losing customers (due to poor quality or project delays) often represents the primary economic value of color management.

NEW MANAGEMENT IMPERATIVE. Managers of media producer firms should consider ColorSync deployment an imperative.
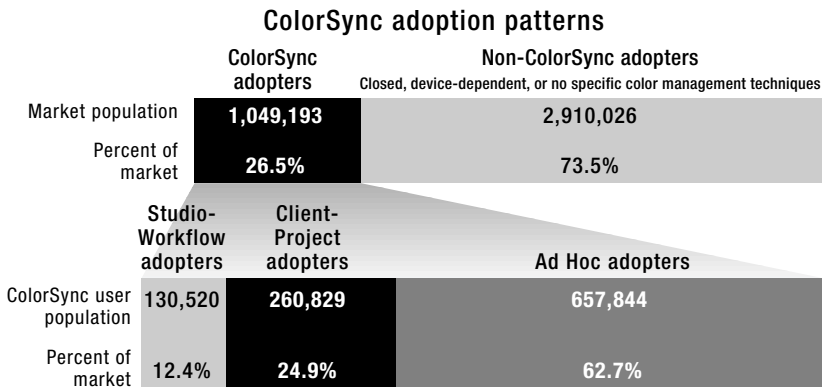
EFFORT REQUIRED. Technical managers at firms that have successfully deployed ColorSync report that ICC color management entails considerable extra effort.

DEVICE PROFILES. Profiling and regular recalibration of color display and output devices remain the principal tasks.

FEWER MAKE-GOODS AND REWORKS. Department managers at these same firms indicate a significant reduction in the number of quality defects that lead to **rework** (items that failed internal quality standards) as well as more expensive reprints and make-goods (projects rejected by customers).

CAREER OPPORTUNITIES. Media design professionals should consider ICC color management a new basic skill and mastery of integrated color studio workflow a career opportunity.

USER BODY AND SUMMARY OF COLORSYNC BENEFITS

ColorSync adoption patterns

	ColorSync adopters	Non-ColorSync adopters Closed, device-dependent, or no specific color management techniques	
Market population	**1,049,193**	**2,910,026**	
Percent of market	**26.5%**	**73.5%**	

	Studio-Workflow adopters	Client-Project adopters	Ad Hoc adopters
ColorSync user population	130,520	260,829	657,844
Percent of market	12.4%	24.9%	62.7%

* International Color Consortium

The International Color Consortium constitutes a vendor-neutral standards organization.

In 1993, eight industry vendors established the International Color Consortium for the purpose of creating, promoting, and encouraging the standardization and evolution of an open, vendor-neutral, cross-platform color-management system architecture and components. Founding ICC members included Adobe Systems, Inc., Agfa, Apple Computer, Eastman Kodak, Microsoft, Silicon Graphics, Sun Microsystems, and Taligent Inc. (which has since resigned). The ICC welcomes corporate members that work in fields related to color management. Interested parties may contact the ICC at 703.264.7200.

Currently, ICC members include the following:

Acer Peripherals	Management Graphics
Adobe Systems	MGI Software
Agfa	Microsoft
Alwan Color Expertise	Minolta
Apple Computer	NEC Corporation
Barco Display Systems	Okidata
Binuscan	Onyx Graphics
Canon Information Systems	Pantone
Colorage	PhotoDisc
Color Savvy Systems	Polaroid
Color Solutions	Praxisoft
Computer and Software Technology Laboratory	R. R. Donnelley & Sons
Corbis	Radius Inc.
Cymbolic Sciences	Royal Information Electronics Co.
DaiNippon Screen	Scanview
DuPont Color Proofing	Scitex
Dynalab	Seiko Epson Corporation
FOGRA	Sharp Laboratories of America
Fuji Photo Group	Shira Inc.
Fuji Xerox Co.	Silicon Graphics
Fujitsu Laboratories	Sonnetech Ltd.
Genoa Technology	Sony Corporation
GretagMacbeth	SunSoft
Harlequin Group plc	Tektronix
Heidelberg	Toppan Printing Co.
Hewlett Packard	Toyo Ink Manufacturing Co.
Imation	ViewSonic Corporation
Industrial Technology Research Institute	WaveMark Technologies
Intel Corporation	WayTech Development
Just Normlicht	X-rite
Kodak	Xerox
Konica	Xinet
Lexmark International	Xionics
LOGO	

IMPACT ON PROJECT REWORKS AND ROI FOR COLORSYNC, BY ADOPTER GROUP

ColorSync impact on project reworks

Adopter group	Actual reworks	Reworks averted
Studio-Workflow adoption	1,869,046	16,328,052
Client-Project adoption	12,243,313	28,293,947
Ad Hoc adoption	58,692,842	31,610,062

Millions of reworks (scale: 0, 20, 40, 60, 80)

Legend: Actual reworks (black), Reworks averted (gray)

Return on investment for ColorSync

Adopter group	ROI
Studio-Workflow adoption	23.41 times
Client-Project adoption	10.37
Ad Hoc adoption	4.53

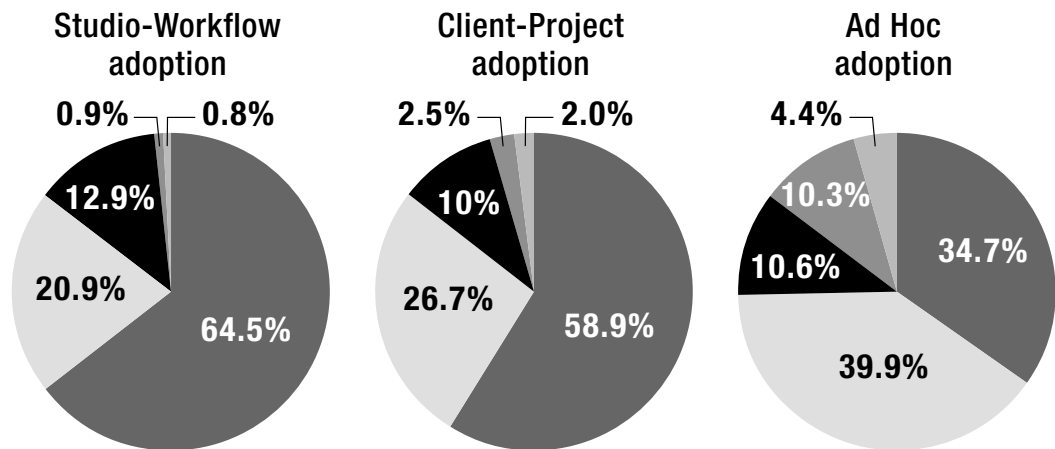Scale: 0, 5, 10, 15, 20

SMART MEDIA FIRM PAYBACK

Color-related defects can produce a cascade of effects:

- Multiple iterations (reworks) steal production capacity, resulting in less billable work.
- High rework incidences affect morale, causing management distraction.
- Lower-quality work erodes customer confidence, often requiring price concessions.
- Some customers refuse to pay; reprinting (make-goods) not only involves extra costs, but also delays production of other billable projects.
- Delayed projects reduce revenue and profit per worker, resulting in lower business valuation.

- Chronic make-goods and project delays often cause customers to leave, causing higher marketing costs that steal profit.
- Delays of critical projects often cause clients to lose sales (such as a brochure delivered too late for a trade show), ensuing damaged reputations and lawsuits.
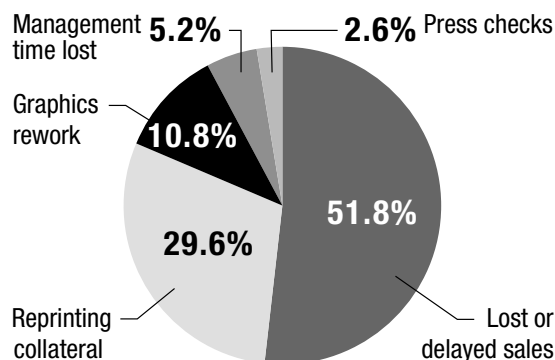
Not all business have these types of cascading effects; if color defects do not have an impact on sales, subtract those percentages (as shown in chart) when calculating a return on investment for your firm.

COLORSYNC BENEFIT PROPORTIONS BY LEVEL OF ADOPTION

Studio-Workflow adoption

0.9%   0.8%
12.9%
20.9%
64.5%

Client-Project adoption

2.5%   2.0%
10%
26.7%
58.9%

Ad Hoc adoption

4.4%
10.3%
10.6%
34.7%
39.9%

Overall averages *and legend*

Management time lost **5.2%**
Graphics rework
10.8%
2.6% Press checks
51.8%
29.6%
Reprinting collateral
Lost or delayed sales

Failure to manage color in the production workflow
costs the media producer firm an average of $635 for every mistake.

COST IMPACT OF DEFECTS. Business managers of design, entertainment, and publishing firms understand well the *cascading costs that result from quality defects*.

DOWNSTREAM COSTS GREATER. The further downstream a defect travels, the more time and money it takes to fix.

DISSATISFIED CUSTOMERS. In some cases, these defects damage customer relationships and create financial losses several times larger than the net profit of dozens of successfully completed projects.

WORKFLOW PROCESS IMPROVEMENT. Technical managers at Smart Media producer firms that have successfully deployed ColorSync report that integrated color management represents an immediate opportunity to improve workflow processes.

NO LONGER A COMPETITIVE ADVANTAGE. Department managers at these firms generally acknowledge that customers now consider color management a basic requirement for doing business.

BEYOND SINGLE USERS. Individual users who try to recalibrate their color space for each project encounter great difficulties and generally create far more mistakes.

LARGE ANNUAL DIFFERENCES IN MISTAKE COSTS. While the cost of Studio-Workflow adopters stands significantly higher than other lower adoption level groups, the Studio-Workflow group makes far fewer mistakes:

14.32 annual mistakes per user among Studio-Workflow adopters at $1,185 per mistake, totalling $16,955

46.94 annual mistakes per user among Client-Project adopters at $669 per mistake, totalling $31,403

89.22 annual mistakes per user among Ad Hoc adopters at $560 per mistake, totalling $50,052

These data indicate that an Ad Hoc group will have a six times greater chance of creating a fatal mistake: loss of a client due to dissatisfaction with quality.

BOTTOM LINE. These data emphasize a set of general conclusions:

- Larger firms lead in Studio-Workflow adoption.
- Larger firms handle larger, more complex, and more expensive projects.
- Color mistakes at larger firms generally have a larger financial consequence.
- Smaller firms generally cannot afford reprinting costs; they often decline projects as a result.

PROJECTED AVERAGE COST PER COLOR MISTAKE

Projected average cost per color mistake

Graphics rework: $322, $140, $81, $126

Reprinting: 519, 373, 304, 343

Press checks: 21, 28, 33, 30

Lost management time: 23, 35, 79, 60

Lost or delayed sales: 300, 93, 63, 76

$1,185 Total — Studio-Workflow adoption
$669 Total — Client-Project adoption
$560 Total — Ad Hoc adoption
$635 Total — Overall average

$0   100   200   300   400 $500

Among ColorSync users, the need to manage color photos
drives full Studio-Workflow adoption.

PHOTOS ARE MOST SENSITIVE TO BAD COLOR.
Executives of media producing firms that handle
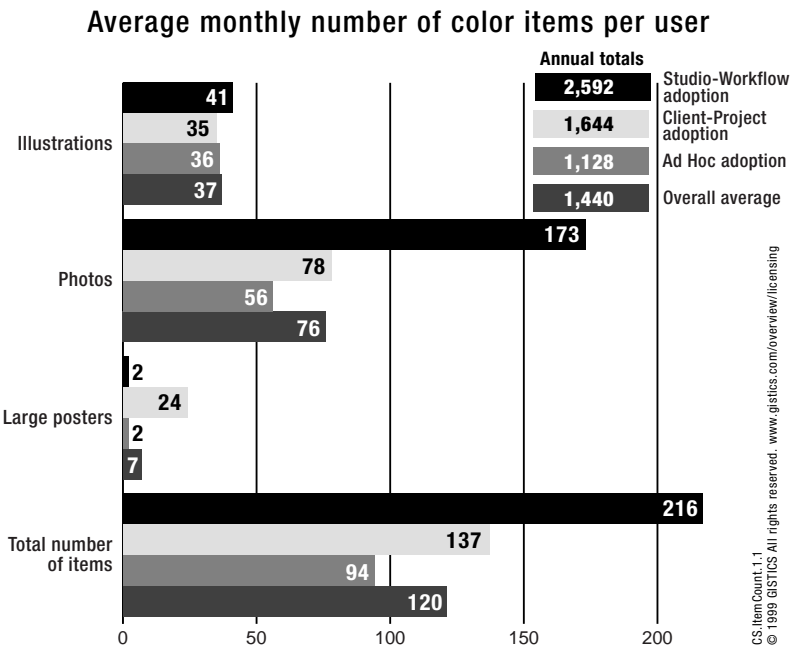a large volume of photos should consider
adoption of ColorSync.

DIGITAL ASSET MANAGERS. Technical managers at
Smart Media firms that have successfully
deployed ColorSync throughout their studio
workflows rely on a standalone database
(FileMaker, Oracle) or a database embedded
within a media asset and workflow management
system to house and track ColorSync profiles.

KNOWLEDGE IMPORTED. Department managers at
these firms often import expertise, engaging a
consultant or a service firm to set up color
workflows and train an in-house expert.

NEEDS CONSTANT MAINTENANCE. Successful firms
usually have a graphic-arts specialist dedicated to
the ongoing maintenance of the color workflow.

RECALIBRATION OF DEVICES. This maintenance
entails recalibrating devices on a regular basis
(daily or weekly) and calibrating newly acquired
displays and output devices.

AVERAGE MONTHLY AND YEARLY NUMBER OF COLOR ITEMS PRODUCED BY EACH USER

Average monthly number of color items per user

	Annual totals	
	2,592	Studio-Workflow adoption
	1,644	Client-Project adoption
	1,128	Ad Hoc adoption
	1,440	Overall average

Illustrations: 41, 35, 36, 37

Photos: 173, 78, 56, 76

Large posters: 2, 24, 2, 7

Total number of items: 216, 137, 94, 120

Integrated color management has raised customer expectations to a new level—all firms that produce color work should consider ColorSync a basic requirement.

GREATEST RETURNS. Full Studio-Workflow deployment of ColorSync yields the highest return on investment.

MANY ROI VARIABLES. The actual return on investment will vary according to the number of users, projects, and color items, as well as customer expectations and the color registration requirements of the creative design.

BRAND DIFFERENTIATION. Successful Studio-Workflow adopters use ColorSync to win business from competitors that lack effective, branded color management.

CONTROL THE CLIENT'S COLOR SPACE. Business managers at Smart Media firms now pursue a strategy of moving their color management practice upstream into their clients' operations.

VENDOR LOYALTY. This strategy means that clients (wedded to a vendor's color space) who take their work elsewhere may run the risk of introducing new color defects from workflows not managed by a single vendor's color management practice.

IN-PLANT CUSTOMER SEMINARS. Technical managers at ColorSync adopter firms often host in-plant training for marketing and sales staff as well as selected customers.

SMART CUSTOMERS DEMAND SMART MEDIA. In general, the more informed customers become about color management, the more they appreciate key vendors who have made it an integrated practice.

RETURN-ON-INVESTMENT BENCHMARKS FOR COLORSYNC

	Studio-workflow adoption	Client-Project adoption	Ad Hoc adoption	Overall average
Total number of users	130,520	260,829	657,844	
Annual average number of color items	2,606	1,639	1,131	1,441
Annual number of reworks per person	14.32	46.94	89.22	69.39
Annual number of reworks averted per person	125.10	108.48	48.05	72.66
Actual rework rate	0.55%	2.86%	7.89%	5.72%
Cost per rework	$989	$622	$569	$635
Annual total rework cost	$14,165	$29,204	$50,770	$40,855
Lost opportunity cost per problem	$2,540	$1,190	$1,053	$1,272
Annual cost of lost opportunities	$36,368	$55,858	$93,949	$77,316
Soft investments (labor)	$9,306	$9,869	$3,459	$5,780
Direct investments	$3,988	$2,623	$2,120	$2,478
Total investment per person	$13,295	$12,493	$5,579	$8,258
Benefit per averted rework	$2,488	$1,194	$526	$936
Annual net benefits	$311,233	$129,550	$25,275	$86,771
Annual return on investment	23.41	10.37	4.53	8.33

Business motivations for deployment of ColorSync
emphasize competitive differentiation and unique client requirements.

BRAND MEDIASPACE. A commanding percentage—86 percent—of total revenues for the media producer industry represent one principal client activity: building brands.*

BRANDING ENHANCEMENT PAYS. Thus, paying clients will sponsor anything that measurably enhances the creation and management of their brands.

COMPETITIVE DIFFERENTIATION. The Smart Media firm uses color management throughout its operations (Studio-Workflow adoption) to differentiate itself in competitive markets.

STUDIO BRAND. Executive and business managers at Smart Media firms often educate their clients as a way of promoting their color management expertise—an aspect of a studio's brand.

CUSTOMERS WILL PAY FOR SOLUTIONS. In some cases, a studio will find a client to subsidize an integrated-color workflow solution for the client's projects (Client-Project adoption).
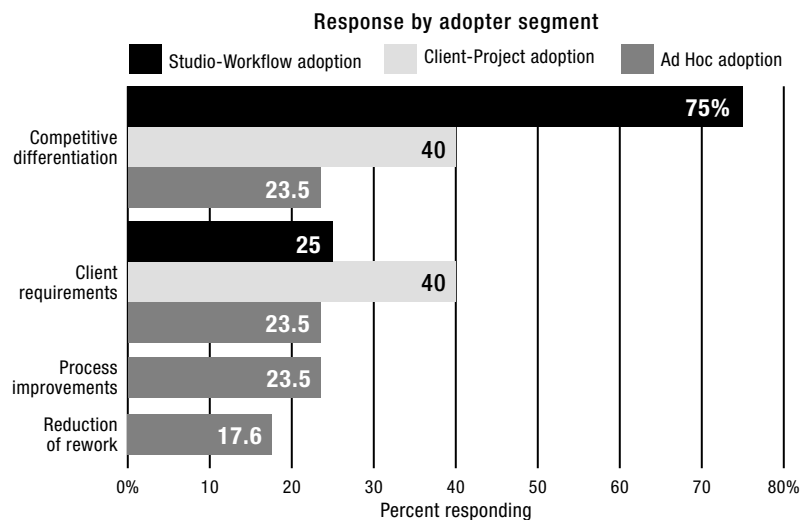
WINNER TAKES ALL (OR MOST). When two or more Smart Media firms compete in the same market, the winning studio often convinces the upstream client to adopt one color management practice (the winner's).

TRAINING AS MARKETING. Technical managers at Smart Media firms offer client-orientation seminars and device-profiling workshops to both internal staff and sophisticated users at client organizations.

PROACTIVE PROBLEM SOLVING. Managers have found that the more education and experience clients have in the color management practice, the more often they can preemptively solve color-related workflow issues.

TACTICAL BENEFITS AS WELL. Department managers who must deal with individual users and projects tend to emphasize the tactical benefits of ColorSync production—process improvements and reduction of reworks.

PRIMARY BUSINESS MOTIVATIONS FOR COLORSYNC DEPLOYMENT

Response by adopter segment

- Studio-Workflow adoption
- Client-Project adoption
- Ad Hoc adoption

Competitive differentiation
- 75%
- 40
- 23.5

Client requirements
- 25
- 40
- 23.5

Process improvements
- 23.5

Reduction of rework
- 17.6

0% 10 20 30 40 50 60 70 80%

Percent responding

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Composite response

Competitive differentiation — 34%
Client requirements — 27.8
Process improvements — 14.7
Reduction of rework — 11

0% 5 10 15 20 25 30 35%

Percent responding
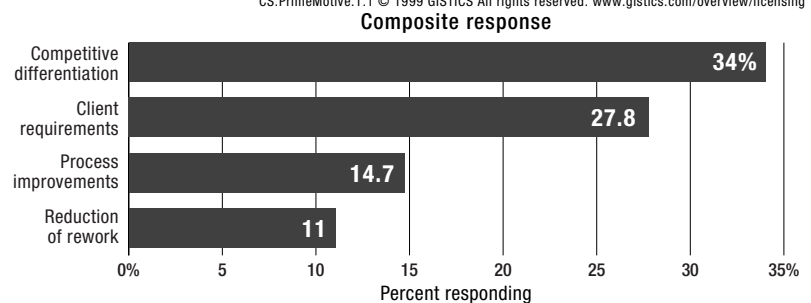
* See GISTICS paper, *Media Asset Management—Best Practice Primer for Media Producing Firms*

Satisfying customers, especially those with global brands, mixed media, and international partners, can quickly justify full color management adoption.

SMART MEDIA RATIONALES

Executives and managers at Smart Media firms justify their investment in ColorSync in these ways:
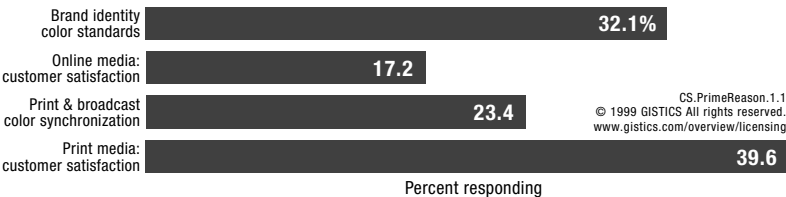
IMPROVED CUSTOMER SATISFACTION results from *fewer reworks and make-goods,* the ability to assure a higher-quality work product, and *faster production cycle times* that may include electronic publishing solutions.

PROCESS IMPROVEMENTS include early warnings of defect-causing equipment or operators and reinforcement of a *process control mindset.* Together these facilitate other profit-producing practices such as remote proofing and variable data publishing.

HIGHER SHARE OF CUSTOMER PURCHASES reflects the Smart Media producer firm's enhanced capability to manage *more complex, mixed-media projects* (offset and web print formats, as well as online, multimedia, and Web graphics) and provides a justification to manage the color space of customer sites. Once wired for integrated color management by a designated media producer firm, customers will *remain loyal due to high switching costs* such as the expense and hassle of reprofiling monitors and output devices.

JUSTIFICATIONS FOR FULL COLORSYNC ADOPTION

Primary justifications for ColorSync adoption

	Percent responding
Brand identity color standards	32.1%
Online media: customer satisfaction	17.2
Print & broadcast color synchronization	23.4
Print media: customer satisfaction	39.6

Secondary justifications for ColorSync adoption
Percent responding
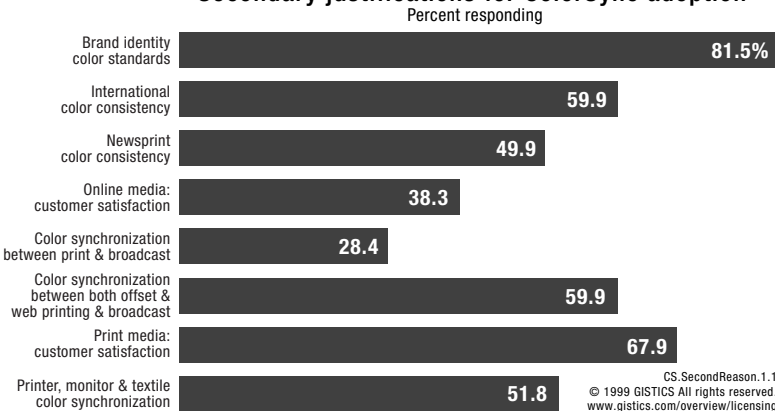
Brand identity color standards	81.5%
International color consistency	59.9
Newsprint color consistency	49.9
Online media: customer satisfaction	38.3
Color synchronization between print & broadcast	28.4
Color synchronization between both offset & web printing & broadcast	59.9
Print media: customer satisfaction	67.9
Printer, monitor & textile color synchronization	51.8

At a fully burdened annual cost of $146 per device and

an average of nineteen devices per workflow, full ColorSync adoption incurs a significant expense.

R.O.I. tech brief

PAYBACK ASSESSMENT

Apple Publishing
Technologies

section

COLORSYNC PAYBACK
FINDINGS

topic

NUMBER OF DEVICES
CALIBRATED, AVERAGE COST,
COLOR MANAGEMENT TOOL
PROVIDERS

keywords

COLOR MONITORS, LARGE
FORMAT PRINTERS, COLOR
PRINTERS, OFFSET AND WEB
PRESSES, DIGITAL CAMERAS,
OTHER DEVICES, VIDEO
MONITORS, DIGITAL PHOTO
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J. BYRAM, M. MOON

contributor(s)

source document

MEDIA ASSET MANAGEMENT
MARKET REPORT—1999

MAJOR INVESTMENT. Business managers at media producing firms should plan to invest several thousand dollars upgrading to an integrated Studio-Workflow solution.

Adoption will entail the following:

- Professional calibration of display and output devices
- Purchase of color profiling devices
- Replacement of RGB monitors that do not support ICC color calibration
- Training for a small team in ICC color management practices

DEVICE STANDARDS. Technical managers at Smart Media firms now enforce companywide *procurement standards* for color display and

output devices, eliminating vendors and devices known for problematic color calibration.

MARKETING AND SALES. In some cases, technical managers have extended their control of the color space to administrative and field sales platforms and portables, especially if they rely on Acrobat PDFs and other remote proofing solutions.

COLOR CZARS. Department managers often designate a single individual as the color czar who manages a cross-departmental team of color specialists and customer service representatives.

ALL FOR ONE. Individual users at Smart Media firms now accept that color has become a shared resource for the entire workflow. It no longer constitutes a personal preference.

COLOR MANAGEMENT TOOL PROVIDERS

PROFILING SOFTWARE

AGFA BAYER
COLORTUNE
978.658.5600
www.agfahome.com

CANDELA
COLOR SYNERGY
800.944.1355
www.candelacolor.com

COLOR PARTNERSHIP
OPTICAL
800.554.8688
www.colorpar.com

COLOR SAVVY
SAVVYPROFILE SUITE
513.748.9160
www.colorsavvy.com

COLOR SOLUTIONS
COLORBLIND
760.436.6593
www.color.com

DELTA E
DELTA E PROFILER
510.237.5913
www.delta-e.com

GRETAGMACBETH
PROFILEMAKER
800.622.2384
www.gretagmacbeth.com

HEIDELBERG CPS
SCANOPEN ICC
VIEWOPEN ICC
PRINTOPEN ICC
888.546.6265
www.linocolor.com

IMATION
RAINBOW SPECTRAL PROFILER
800.238.1303
www.imation.com

EASTMAN KODAK CO.
COLORFLOW
800.242.2424
www.kodak.com

MONACO SYSTEMS
MONACO PROFILER
978.749.9944
www.monacosys.com

PANTONE
PANTONE PERSONAL COLOR CALIBRATOR
888.726.8663
www.pantone.com

PRAXISOFT
COMPASSPROFILE
800.557.7294
www.praxisoft.com

SONNETECH
COLORIFIC
415.957.9940
www.colorific.com

MEASUREMENT INSTRUMENTS

GRETAGMACBETH
SPECTROLINO/SPECTROSCAN SPECTROPHOTOMETER
800.622.2384
www.gretagmacbeth.com

X-RITE INC.
DTP41 AUTOSCAN SPECTROPHOTOMETER
DTP92 TRUE CIE COLORIMETER FOR MONITOR CALIBRATION
DIGITAL SWATCHBOOK SPECTROPHOTOMETER
COLORTRON II SPECTROPHOTOMETER
616.534.7663
888.826.3059
www.x-rite.com

COLOR SAVVY
COLORMOUSETOO! SPECTROPHOTOMETER
513.748.9160
www.colorsavvy.com

NUMBER OF DEVICES CALIBRATED, AVERAGE COST

Device	Average number
Color monitors	11.39
Large-format printers	6.49
Color printers	0.51
Offset and web printers	0.31
Digital cameras	0.24
Other devices	0.20
Video monitors	0.16
Digital photo copiers	0.11
Total number of calibrated devices	19.46

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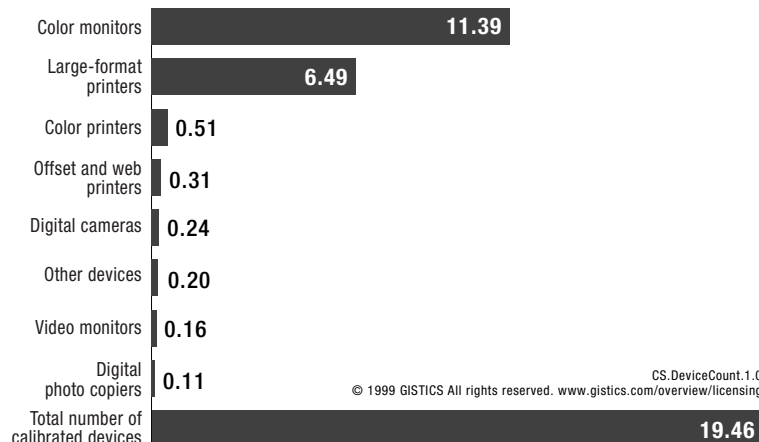
Average number of devices calibrated annually per respondent
Average cost per device: $146

Smart Media firms that use ColorSync create and manage their own ICC device profiles.

INTERNATIONAL STANDARD. Successful users of ColorSync rely on internally developed International Color Consortium profiles—sets of numerical values used to *minutely readjust color display and output quality*.

SELF-SUFFICIENT. Business managers at Smart Media producer firms dedicate *internal resources* for the development of ICC profiles.

PHASED DEPLOYMENT. Technical managers at Smart Media firms have learned to deploy ColorSync in phased, planned steps.
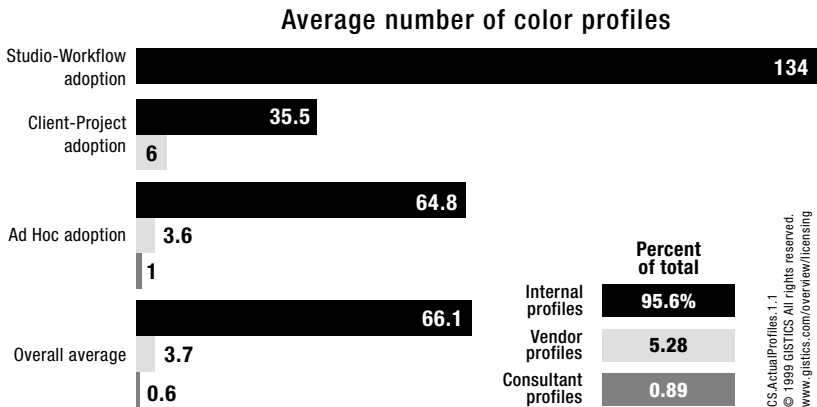
TEST SEPARATELY, THEN DEPLOY. Technical managers introduce ColorSync solutions into production environments only after first validating the solutions in a separate testing environment.

CLIENT-SPECIFIC. Department managers at some Smart Media firms have reduced their initial costs by standardizing on a color space for a particular client.

SKILLS BUILDING. Department managers use that more-limited approach to develop internal competencies before rolling out color management in all workflows.

SOURCE OF COLOR PROFILES USED, BY GROUP

Average number of color profiles

Group	Value
Studio-Workflow adoption	134
Client-Project adoption	35.5
	6
Ad Hoc adoption	64.8
	3.6
	1
Overall average	66.1
	3.7
	0.6

Percent of total

Internal profiles	95.6%
Vendor profiles	5.28
Consultant profiles	0.89

The state of the art for integrated color management
continues to evolve.

THREE STAGES

Media producer firms and workers employ one of two color management practices or a mix of both.

- **Dynamic calibration.** This strategy emphasizes the recalibration of a workflow color space—the video display and output devices—for a particular client or type of project. This strategy entails significant additional cost to make it work.

- **Closed-loop calibration.** This strategy enforces one internally defined color space, usually calibrated to a set of standardized color targets—the equivalent of standard weights and measures for visual characterization of color.

STARTING SMALL. The color management practice generally starts small, among a small workgroup or a single person. Taking advantage of the small scale of a workgroup and the *relative ease of calibrating only a few devices*, these single users or small workgroups *gravitate toward a dynamic calibration* strategy.

KNOWLEDGE AND SKILLS. While less than efficient, this strategy encourages experimentation and helps develop a broader knowledge of *color management as a practice*.

REDUCED COMPLEXITY. Once color management proves viable in reducing quality defects, reworks, and more costly make-goods, technical and business managers will often insist upon *one color space standard*: a closed-loop calibration strategy.
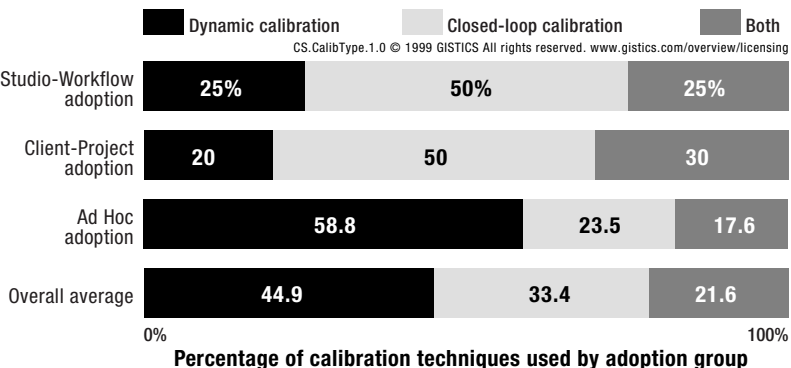
OUTWARD BOUND. The color management practice moves into an expansion phase, driving its color management practices upstream to clients and downstream into final production and delivery.

SIGNALS CUSTOMER BENEFIT. Smart Media firm executives and business managers discover that they can use ColorSync as a *branded differentiator* in competitive markets. Its use telegraphs to customers that the studio or firm has made a significant commitment to color management.

Once they have mastered color management, Smart Media firm business managers drive the practice upstream into the color space of clients— dynamic calibration of the integrated Studio-Workflow group.

VENDOR CONSOLIDATION. Vendor management of the client color space encourages clients to consolidate their purchasing to one or two vendors who have demonstrated mastery of color management.

CALIBRATION TECHNIQUES IMPLEMENTED

	Dynamic calibration	Closed-loop calibration	Both

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	Dynamic	Closed-loop	Both
Studio-Workflow adoption	25%	50%	25%
Client-Project adoption	20	50	30
Ad Hoc adoption	58.8	23.5	17.6
Overall average	44.9	33.4	21.6

0%   100%

Percentage of calibration techniques used by adoption group

Solo contractors using best practice color management

can produce $518,187 in economic benefits over three years, returning an investment of $42,689 a total of 11.14 times.

This scenario characterizes two ICC color management adoption levels for a solo contractor: **pro forma** (typical, average) and **best practice** (in this case, Client-Project adoption).

A return-on-investment (ROI) scenario calculates the **benefits** and **investments** over one-year and three-year periods.

COLORSYNC ROI CALCULATOR

GISTICS has developed an interactive ROI calculator and will make it available upon request by e-mail (research@gistics.com). It enables a business manager to examine potential levels of return on investment, accommodating key variables of studio size and nature of work.

SOLO CONTRACTOR

Staff Composition[1]	Pro Forma[2] Color Management	Best Practice[3] Color Management
Ad Hoc Adopters	1	
Client-Project Adopters		1
Total full-time graphics employees and contractors	1	1
ColorSync Deployment Scope[4]		
Training of all employees and contractors		✔
Time and funds reinvested in process improvements	None	Low
Overall Results[5]	**Pro Forma**	**Best Practice**
First-year gross benefits[6]	$5,436	$122,695
First-year investment	$3,086	$14,721
1-year ROI	**0.76**	**7.33**
Cumulative three-year gross benefits[6]	$17,015	$518,186
Total three-year investment	$9,730	$42,689
3-year ROI	**0.75**	**11.14**

STUDIO SIZE ▼	
Industry	**>2500**
Global	**121 – 2500**
Large	**36 – 120**
Small Business	**7 – 35**
Small Team	**2 – 6**
Solo Contractor	**1**

DETAILED THREE-YEAR FORECASTS

Projected Pro Forma Budget	Year 1	Year 2	Year 3
Project Management	$381	$397	$431
Training	405	462	478
Calibration Processes	1,919	1,957	2,110
Hardware & Software	381	401	408
Process Improvement	0	0	0
Total Investment	**$3,086**	**$3,217**	**$3,427**
Projected Pro Forma gross benefits[6]	**$5,436**	**$5,653**	**$5,927**

Projected Best Practice Budget	Year 1	Year 2	Year 3
Project Management	$1,640	$1,673	$1,689
Training	3,301	3,103	2,476
Calibration Processes	6,391	5,880	5,688
Hardware & Software	2,770	2,908	2,964
Process Improvement	619	824	762
Total Investment	**$14,721**	**$14,388**	**$13,579**
Projected Best Practice gross benefits[6]	**$122,695**	**$176,846**	**$218,645**

[1] **Staff composition** describes the number of users and their level of adoption of ICC color management in the studio.

[2] **Pro Forma** represents a typical or average level of adoption; in this case, one Ad Hoc adopter not currently exchanging profiles.

[3] **Best Practice** signifies adoption of color management to a higher level of adoption; in this case, one Client-Project adopter exchanging profiles.

[4] **Deployment scope** indicates those activities that assist in a higher adoption of ICC color management (what it takes to move from Pro Forma to Best Practice).

[5] **Overall results** illustrate the first-year costs and benefits for both current and best practice adopters.

[6] **Gross benefits**. GISTICS subtracts total investment from gross benefits to yield net benefits; that number is then divided by total investment to yield ROI.

A small team in an advertising group using best practice color management can produce $6,193,850 in economic benefits over three years, returning an investment of $229,170 a total of 26.03 times.

This scenario characterizes two ICC color management adoption levels by a small team of four media producers in an advertising group: **pro forma** (typical, average) and **best practice** (full Studio-Workflow adoption).

This ROI scenario calculates **benefits** and **investments** over one-year and three-year periods.

COLORSYNC ROI CALCULATOR

GISTICS has developed an interactive ROI calculator and will make it available upon request by e-mail (research@gistics.com). It enables a business manager to examine potential levels of return on investment, accommodating key variables of studio size and nature of work.

ADVERTISING GROUP, SMALL TEAM

Staff Composition[1]	Pro Forma[2] Color Management	Best Practice[3] Color Management
Ad Hoc Adopters	4	
Studio-Workflow Adopters		4
Total full-time graphics employees and contractors	4	4
ColorSync Deployment Scope[4]		
Training of all employees and contractors	✔	✔
Lateral integration of multiple color media		✔
Color management of upstream client devices		✔
Color management of downstream suppliers		✔
Time and funds reinvested in process improvements	None	Medium
Overall Results[5]	**Pro Forma**	**Best Practice**
First-year gross benefits[6]	$31,801	$1,455,157
First-year investment	$18,671	$78,940
1-year ROI	**0.70**	**17.43**
Cumulative three-year gross benefits[6]	$123,233	$6,193,850
Total three-year investment	$58,858	$229,170
3-year ROI	**1.09**	**26.03**

STUDIO SIZE ▼	
Industry	**>2500**
Global	**121 – 2500**
Large	**36 – 120**
Small Business	**7 – 35**
Small Team	**2 – 6**
Solo Contractor	**1**

DETAILED THREE-YEAR FORECASTS

Projected Pro Forma Budget	Year 1	Year 2	Year 3
Project Management	$2,308	$2,400	$2,608
Training	2,450	2,793	2,891
Calibration Processes	11,606	11,838	12,766
Hardware & Software	2,308	2,423	2,469
Process Improvement	0	0	0
Total Investment	**$18,672**	**$19,454**	**$20,734**
Projected Pro Forma gross benefits[6]	**$31,801**	**$33,073**	**$58,358**

Projected Best Practice Budget	Year 1	Year 2	Year 3
Project Management	$7,824	$7,981	$8,059
Training	15,750	14,805	11,812
Calibration Processes	30,491	28,051	27,137
Hardware & Software	13,214	13,874	14,138
Process Improvement	11,661	12,011	12,361
Total Investment	**$78,940**	**$76,722**	**$73,507**
Projected Best Practice gross benefits[6]	**$1,455,157**	**$2,120,074**	**$2,618,619**

[1] **Staff composition** describes the number of users and their level of adoption of ICC color management in the studio.

[2] **Pro Forma** represents a typical or average level of adoption; in this case, four Ad Hoc adopters.

[3] **Best Practice** signifies adoption of color management to a higher level of adoption; in this case, four Studio-Workflow adopters.

[4] **Deployment scope** indicates those activities that assist in a higher adoption of ICC color management (what it takes to move from Pro Forma to Best Practice).

[5] **Overall results** illustrate the first-year costs and benefits for both current and best practice adopters.

[6] **Gross benefits**. GISTICS subtracts total investment from gross benefits to yield net benefits; that number is then divided by total investment to yield ROI.

A small team using best practice color management can produce $5,532,207 in economic benefits over three years, returning an investment of $221,789 a total of 23.94 times.

This scenario characterizes two ICC color management adoption levels by a small team of four media producers in desktop publishing: **pro forma** (typical, average) and **best practice** (full Studio-Workflow adoption).

This ROI scenario calculates **benefits** and **investments** over one-year and three-year periods.

COLORSYNC ROI CALCULATOR

GISTICS has developed an interactive ROI calculator and will make it available upon request by e-mail (research@gistics.com). It enables a business manager to examine potential levels of return on investment, accommodating key variables of studio size and nature of work.

INDEPENDENT DESKTOP PUBLISHER MOVING INTO COLORSYNC, SMALL TEAM

	Pro Forma[2] Color Management	Best Practice[3] Color Management
Staff Composition[1]		
Noncolor graphics professionals	3	
Ad Hoc Adopters	1	
Studio-Workflow Adopters		4
Total full-time graphics employees and contractors	4	4
ColorSync Deployment Scope[4]		
Training of all employees and contractors		✔
Time and funds reinvested in process improvements	None	Low
Overall Results[5]	**Pro Forma**	**Best Practice**
First-year gross benefits[6]	$5,436	$1,309,899
First-year investment	$3,086	$76,540
1-year ROI	**0.76**	**16.11**
Cumulative three-year gross benefits[6]	$18,624	$5,532,207
Total three-year investment	$9,730	$221,789
3-year ROI	**0.91**	**23.94**

STUDIO SIZE ▼	
Industry	**>2500**
Global	**121 – 2500**
Large	**36 – 120**
Small Business	**7 – 35**
Small Team	**2 – 6**
Solo Contractor	**1**

DETAILED THREE-YEAR FORECASTS

Projected Pro Forma Budget	Year 1	Year 2	Year 3
Project Management	$381	$397	$431
Training	405	462	478
Calibration Processes	1,919	1,957	2,110
Hardware & Software	381	401	408
Process Improvement	0	0	0
Total Investment	**$3,086**	**$3,217**	**$3,427**
Projected Pro Forma gross benefits[6]	**$5,436**	**$5,653**	**$7,535**

Projected Best Practice Budget	Year 1	Year 2	Year 3
Project Management	$8,553	$8,724	$8,810
Training	17,217	16,184	12,912
Calibration Processes	33,330	30,664	29,664
Hardware & Software	14,444	15,166	15,455
Process Improvement	2,996	3,985	3,685
Total Investment	**$76,540**	**$74,723**	**$70,526**
Projected Best Practice gross benefits[6]	**$1,309,899**	**$1,888,028**	**$2,334,280**

[1] **Staff composition** describes the number of users and their level of adoption of ICC color management in the studio.

[2] **Pro Forma** represents a typical or average level of adoption; in this case, one Ad Hoc adopter and three producers of black and white assets.

[3] **Best Practice** signifies adoption of color management to a higher level of adoption; in this case, four Studio-Workflow adopters.

[4] **Deployment scope** indicates those activities that assist in a higher adoption of ICC color management (what it takes to move from Pro Forma to Best Practice).

[5] **Overall results** illustrate the first-year costs and benefits for both current and best practice adopters.

[6] **Gross benefits**. GISTICS subtracts total investment from gross benefits to yield net benefits; that number is then divided by total investment to yield ROI.

An internal marketing group using best practice color management

can produce $21,678,475 in economic benefits over three years, returning an investment of $802,096 a total of 26.03 times.

Apple Publishing Technologies

This scenario characterizes two ICC color management adoption levels by a small group of 14 media producers in internal marketing: **pro forma** (typical, average) and **best practice** (full Studio-Workflow adoption).

This ROI scenario calculates **benefits** and **investments** over one-year and three-year periods.

COLORSYNC ROI CALCULATOR

GISTICS has developed an interactive ROI calculator and will make it available upon request by e-mail (research@gistics.com). It enables a business manager to examine potential levels of return on investment, accommodating key variables of studio size and nature of work.

IN-HOUSE BRANDS, SMALL BUSINESS

Staff Composition[1]	Pro Forma[2] Color Management	Best Practice[3] Color Management
Ad Hoc Adopters	4	
Client-Project Adopters	10	
Studio-Workflow Adopters		14
Total full-time graphics employees and contractors	14	14
ColorSync Deployment Scope[4]		
Training of all employees and contractors	✔	✔
Lateral integration of multiple color media		✔
Color management of upstream client devices		✔
Color management of downstream suppliers		✔
Time and funds reinvested in process improvements	Low	Medium
Overall Results[5]	**Pro Forma**	**Best Practice**
First-year gross benefits[6]	$879,975	$5,093,048
First-year investment	$115,009	$276,290
1-year ROI	**6.65**	**17.43**
Cumulative three-year gross benefits[6]	$2,815,437	$21,678,475
Total three-year investment	$363,797	$802,096
3-year ROI	**6.74**	**26.03**

STUDIO SIZE ▼	
Industry	**>2500**
Global	**121 – 2500**
Large	**36 – 120**
Small Business	**7 – 35**
Small Team	**2 – 6**
Solo Contractor	**1**

DETAILED THREE-YEAR FORECASTS

Projected Pro Forma Budget	Year 1	Year 2	Year 3
Project Management	$13,717	$14,266	$15,500
Training	14,560	16,599	17,181
Calibration Processes	68,984	70,364	75,882
Hardware & Software	13,717	14,403	14,677
Process Improvement	4,031	5,079	4,837
Total Investment	**$115,009**	**$120,711**	**$128,077**
Projected Pro Forma gross benefits[6]	**$879,975**	**$916,419**	**$1,019,043**

Projected Best Practice Budget	Year 1	Year 2	Year 3
Project Management	$27,386	$27,933	$28,207
Training	55,125	51,817	41,344
Calibration Processes	106,717	98,180	94,978
Hardware & Software	46,247	48,560	49,485
Process Improvement	40,815	42,039	43,264
Total Investment	**$276,290**	**$268,529**	**$257,278**
Projected Best Practice gross benefits[6]	**$5,093,048**	**$7,420,259**	**$9,165,168**

[1] **Staff composition** describes the number of users and their level of adoption of ICC color management in the studio.

[2] **Pro Forma** represents a typical or average level of adoption; in this case, four Ad Hoc adopters and ten Client-Project adopters.

[3] **Best Practice** signifies adoption of color management to a higher level of adoption; in this case, 14 Studio-Workflow adopters.

[4] **Deployment scope** indicates those activities that assist in a higher adoption of ICC color management (what it takes to move from Pro Forma to Best Practice).

[5] **Overall results** illustrate the first-year costs and benefits for both current and best practice adopters.

[6] **Gross benefits**. GISTICS subtracts total investment from gross benefits to yield net benefits; that number is then divided by total investment to yield ROI.

A small new media business using best practice color management
can produce $15,122,018 in economic benefits over three years, returning an investment of $853,920 a total of 16.71 times.

Apple Publishing Technologies

This scenario characterizes two ICC color management adoption levels by a small business of 16 media producers in new media branding: **pro forma** (typical, average) and **best practice** (in this case, raising everyone's adoption one level).

This ROI scenario calculates **benefits** and **investments** over one-year and three-year periods.

COLORSYNC ROI CALCULATOR

GISTICS has developed an interactive ROI calculator and will make it available upon request by e-mail (research@gistics.com). It enables a business manager to examine potential levels of return on investment, accommodating key variables of studio size and nature of work.

NEW MEDIA COMPANY IN BRANDING, SMALL BUSINESS

	Pro Forma[2] Color Management	Best Practice[3] Color Management
Staff Composition[1]		
Noncolor graphics professionals	4	
Ad Hoc Adopters	4	4
Client-Project Adopters	8	4
Studio-Workflow Adopters		8
Total full-time graphics employees and contractors	16	16
ColorSync Deployment Scope[4]		
Training of all employees and contractors	✔	✔
Lateral integration of multiple color media		✔
Time and funds reinvested in process improvements	None	Medium
Overall Results[5]	**Pro Forma**	**Best Practice**
First-year gross benefits[6]	$660,559	$3,552,379
First-year investment	$99,314	$294,385
1-year ROI	**5.65**	**11.07**
Cumulative three-year gross benefits[6]	$2,108,546	$15,122,018
Total three-year investment	$313,078	$853,920
3-year ROI	**5.73**	**16.71**

STUDIO SIZE	▼
Industry	>2500
Global	121 – 2500
Large	36 – 120
Small Business	**7 – 35**
Small Team	2 – 6
Solo Contractor	1

DETAILED THREE-YEAR FORECASTS

Projected Pro Forma Budget	Year 1	Year 2	Year 3
Project Management	$12,275	$12,766	$13,871
Training	13,030	14,854	15,375
Calibration Processes	61,733	62,968	67,907
Hardware & Software	12,275	12,889	13,134
Process Improvement	0	0	0
Total Investment	**$99,313**	**$103,477**	**$110,287**
Projected Pro Forma gross benefits[6]	**$660,559**	**$686,982**	**$761,005**

Projected Best Practice Budget	Year 1	Year 2	Year 3
Project Management	$29,556	$30,147	$30,443
Training	59,494	55,924	44,620
Calibration Processes	115,175	105,961	102,506
Hardware & Software	49,913	52,408	53,406
Process Improvement	40,248	41,456	42,663
Total Investment	**$294,386**	**$285,896**	**$273,638**
Projected Best Practice gross benefits[6]	**$3,552,379**	**$5,176,237**	**$6,393,402**

[1] **Staff composition** describes the number of users and their level of adoption of ICC color management in the studio.

[2] **Pro Forma** represents a typical or average level of adoption; in this case, four Ad Hoc adopters, eight Client-Project adopters, and four producers of black and white assets.

[3] **Best Practice** signifies adoption of color management to a higher level of adoption; in this case, four Ad Hoc adopters, four Client-Project adopters, and eight Studio-Workflow adopters.

[4] **Deployment scope** indicates those activities that assist in a higher adoption of ICC color management (what it takes to move from Pro Forma to Best Practice).

[5] **Overall results** illustrate the first-year costs and benefits for both current and best practice adopters.

[6] **Gross benefits**. GISTICS subtracts total investment from gross benefits to yield net benefits; that number is then divided by total investment to yield ROI.

A small business in print production using best practice color management can produce $18,146,459 in economic benefits over three years, returning an investment of $669,496 a total of 26.10 times.

This scenario characterizes two ICC color management adoption levels by a small group of ten media producers in print production: **pro forma** (typical, average) and **best practice** (full Studio-Workflow adoption).

This ROI scenario calculates **benefits** and **investments** over one-year and three-year periods.

COLORSYNC ROI CALCULATOR

GISTICS has developed an interactive ROI calculator and will make it available upon request by e-mail (research@gistics.com). It enables a business manager to examine potential levels of return on investment, accommodating key variables of studio size and nature of work.

PRINT PRODUCTION, SMALL BUSINESS

Staff Composition[1]	Pro Forma[2] Color Management	Best Practice[3] Color Management
Client-Project Adopters	10	
Studio-Workflow Adopters		10
Total full-time graphics employees and contractors	10	10
ColorSync Deployment Scope[4]		
Training of all employees and contractors	✔	✔
Lateral integration of multiple color media		✔
Color management of upstream client devices		✔
Color management of downstream suppliers		✔
Time and funds reinvested in process improvements	Medium	High
Overall Results[5]	**Pro Forma**	**Best Practice**
First-year gross benefits[6]	$934,597	$4,217,701
First-year investment	$108,234	$228,996
1-year ROI	**7.63**	**17.42**
Cumulative three-year gross benefits[6]	$3,065,728	$18,146,459
Total three-year investment	$342,594	$669,496
3-year ROI	**7.95**	**26.10**

STUDIO SIZE ▼	
Industry	>2500
Global	121 – 2500
Large	36 – 120
Small Business	**7 – 35**
Small Team	2 – 6
Solo Contractor	1

DETAILED THREE-YEAR FORECASTS

Projected Pro Forma Budget	Year 1	Year 2	Year 3
Project Management	$11,409	$11,866	$12,892
Training	12,111	13,806	14,291
Calibration Processes	57,378	58,526	63,116
Hardware & Software	11,409	11,980	12,208
Process Improvement	15,927	17,838	17,838
Total Investment	**$108,234**	**$114,016**	**$120,345**
Projected Pro Forma gross benefits[6]	**$934,597**	**$982,386**	**$1,148,745**

Projected Best Practice Budget	Year 1	Year 2	Year 3
Project Management	$19,561	$19,952	$20,148
Training	39,375	37,012	29,531
Calibration Processes	76,227	70,128	67,842
Hardware & Software	33,034	34,685	35,346
Process Improvement	60,799	62,623	63,231
Total Investment	**$228,996**	**$224,400**	**$216,098**
Projected Best Practice gross benefits[6]	**$4,217,701**	**$6,231,562**	**$7,697,195**

[1] **Staff composition** describes the number of users and their level of adoption of ICC color management in the studio.

[2] **Pro Forma** represents a typical or average level of adoption; in this case, ten Client-Project adopters.

[3] **Best Practice** signifies adoption of color management to a higher level of adoption; in this case, ten Studio-Workflow adopters.

[4] **Deployment scope** indicates those activities that assist in a higher adoption of ICC color management (what it takes to move from Pro Forma to Best Practice).

[5] **Overall results** illustrate the first-year costs and benefits for both current and best practice adopters.

[6] **Gross benefits**. GISTICS subtracts total investment from gross benefits to yield net benefits; that number is then divided by total investment to yield ROI.

A small business in publishing using best practice color management can produce $14,517,167 in economic benefits over three years, returning an investment of $535,597 a total of 26.10 times.

This scenario characterizes two ICC color management adoption levels by a small business of eight media producers in publishing: **pro forma** (typical, average) and **best practice** (full Studio-Workflow adoption).

This ROI scenario calculates **benefits** and **investments** over one-year and three-year periods.

COLORSYNC ROI CALCULATOR

GISTICS has developed an interactive ROI calculator and will make it available upon request by e-mail (research@gistics.com). It enables a business manager to examine potential levels of return on investment, accommodating key variables of studio size and nature of work.

PUBLISHER, SMALL BUSINESS

	Pro Forma[2] Color Management	Best Practice[3] Color Management
Staff Composition[1]		
Ad Hoc Adopters	4	
Client-Project Adopters	4	
Studio-Workflow Adopters		8
Total full-time graphics employees and contractors	8	8
ColorSync Deployment Scope[4]		
Training of all employees and contractors	✔	✔
Lateral integration of multiple color media		✔
Color management of upstream client devices		✔
Time and funds reinvested in process improvements	None	High
Overall Results[5]	**Pro Forma**	**Best Practice**
First-year gross benefits[6]	$346,180	$3,374,161
First-year investment	$55,594	$183,197
1-year ROI	**5.23**	**17.42**
Cumulative three-year gross benefits[6]	$1,199,617	$14,517,167
Total three-year investment	$175,254	$535,597
3-year ROI	**5.85**	**26.10**

STUDIO SIZE ▼	
Industry	>2500
Global	121 – 2500
Large	36 – 120
Small Business	**7 – 35**
Small Team	2 – 6
Solo Contractor	1

DETAILED THREE-YEAR FORECASTS

Projected Pro Forma Budget	Year 1	Year 2	Year 3
Project Management	$6,871	$7,146	$7,765
Training	7,294	8,315	8,607
Calibration Processes	34,557	35,248	38,013
Hardware & Software	6,871	7,215	7,352
Process Improvement	0	0	0
Total Investment	**$55,594**	**$57,924**	**$61,736**
Projected Pro Forma gross benefits[6]	**$346,180**	**$360,028**	**$493,409**

Projected Best Practice Budget	Year 1	Year 2	Year 3
Project Management	$15,649	$15,962	$16,118
Training	31,500	29,610	23,625
Calibration Processes	60,981	56,103	54,273
Hardware & Software	26,427	27,748	28,277
Process Improvement	48,640	50,099	50,585
Total Investment	**$183,197**	**$179,522**	**$172,879**
Projected Best Practice gross benefits[6]	**$3,374,161**	**$4,985,250**	**$6,157,756**

[1] **Staff composition** describes the number of users and their level of adoption of ICC color management in the studio.

[2] **Pro Forma** represents a typical or average level of adoption; in this case, four Ad Hoc adopters and four Client-Project adopters.

[3] **Best Practice** signifies adoption of color management to a higher level of adoption; in this case, eight Studio-Workflow adopters.

[4] **Deployment scope** indicates those activities that assist in a higher adoption of ICC color management (what it takes to move from Pro Forma to Best Practice).

[5] **Overall results** illustrate the first-year costs and benefits for both current and best practice adopters.

[6] **Gross benefits**. GISTICS subtracts total investment from gross benefits to yield net benefits; that number is then divided by total investment to yield ROI.

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Apple Publishing Technology

Section ▶

R.O.I. tech brief

ECONOMIC PAYBACK ASSESSMENT FOR NEW TECHNOLOGY

COLORSYNC QUICKSTUDIES

Essential Questions

*What **particular and concrete benefits** have Smart Media firms derived from ColorSync?*

*What **strategies and tactics** inform successful deployment of ColorSync?*

*What **human and business factors** impel or inhibit deployment?*

Summary

Sole proprietor and master craftsman saves time and money with ColorSync and **eliminates color frustrations**.

ColorSync enables book author to shave $10 off cover price ($100,000 in printing costs) and learn how **direct control of color creates a better book** on Photoshop.

True colors satisfy customers buying business forms; global printing firm faithfully recreates color logos even when produced by high-volume electronic color publishing system.

A **standardized color space** for Simon & Schuster spans a thousand users, ensuring higher consistency of 100,000 scanned images per year.

Sole proprietor and master craftsman saves time and money with ColorSync and eliminates color frustrations.

R.O.I. tech brief

PAYBACK ASSESSMENT

SYNOPSIS

Owner of a small fine arts print-making firm uses ColorSync technology to reduce the costly aggravation of inconsistent color. Before using ColorSync, he relied on trial and error to faithfully reproduce client artwork. This process often required 20 or more digital proofs; producing proofs consumed 15 minutes for each and make-ready time consumed about two hours for each. Consumables cost per digital proof ranged from $1.50 to $3.00.

ENTERPRISE

Century Guild

SOLUTION ADVOCATE

Michael Tienhaara*
Owner, President, Century Guild

With 20 years in the art business, he has done printmaking, screen printing, and lithography.

"Mostly, I do fine art in print, as well as distribute art; that's why I got into this.

"I do custom jobs for artists and occasionally some off-the-wall jobs. My job also includes all management and administrative, the profit and loss responsibilities of owning a business."

MORE PREDICTABLE RESULTS IMPROVE BOTTOM LINE

"I operated without color management for 6 months after I got the *Iris 3047G* (digital proofer). It involved too much trial and error. I had to play too many games, tweaking this and that. Very time consuming and costly.

"This is a competitive marketplace; I needed to improve my bottom line and get rid of all that trial and error—cost that I had to eat. More predictable results let me cut costs; my bottom line improves."

SOFT AND HARD AGREE

"ColorSync helps in handling out-of-gamut colors. I know where the colors are going to go. Without color management, you're never sure what it's going to look like or how to correct it.

"ColorSync may not give me the color I want, but at least I'll know the direction it's going in. I get predictability, being able to soft proof on the screen and match that to my output."

LAST PIECES OF THE COLOR PUZZLE

"I started researching color management in a methodical, systematic way; I needed to find software that would work for me.

"The final piece to the whole puzzle was getting good software that profiles the Iris printer correctly. I had great software for the *Barco* monitor, the software for the *Linotype-Hell* scanner was good. Not really any technical issues for me to overcome other than getting a good quality profile for the printer.

"I read up on ColorSync. I knew what it was and what it could do; what the intent behind ColorSync was. It was my intention to implement it right away, but I found out it was harder to do that.

"I bought one software package that didn't work, *Profile 80* by RIT; it was an inexpensive product that didn't work.

"Then I was a beta test site as they tried to improve it. I also fooled around a little with *ColorBlind* from Monaco.

"Color Blind worked well, but I still wasn't 100 percent happy. Then I got to *Praxisoft* through the ColorSync user group through Apple. I've had the Praxisoft system up and running now for about two months."

WORKING IT THROUGH

"All together, it took hundreds of hours of trial and error work before I had a system that worked for me, as I worked through the different software packages.

"Basically, I did it all myself, with a little tech support from Praxisoft. Using beta software, and no manual, I had to work through it on my own; I got some help from them that would have been provided in a manual.

"As soon as I installed the Praxisoft, it took me a few hours to print out the test patches, read them all in, and generate a profile."

HOW BAD COLOR AFFECTS MICHAEL TIENHAARA

Delayed sales

Graphics rework

Lost time

Reprints

STUDIO SIZE* ▼	
Industry	>2500
Global	121 – 2500
Large	36 – 120
Small Business	7 – 35
Small Team	2 – 6
Solo Contractor	1

CENTURY GUILD

1 employee

* Interviewed by Doug Millison on 11 May 1998 by telephone; all quotations constitute verbatim transcription with the exception of minor editing of grammar and syntax.

* Studio size reflects the number of media producers or the scale of the IT infrastructure supporting those producers.

"I'm saving money and producing more consistent results. It's a personal win for me and for my business."

MONEY SAVED?

"It's hard to say in actual dollars. It cut down my proofing time by at least 75 percent (I print on-demand copies of limited-edition fine art pieces).

"I'd have to do as many as 20 proofs before using ColorSync. A normal 8" by 10" proof takes 15 minutes alone to print, plus up to two hours of editing and tweaking prior to printing. I price my time at $100 per hour.

"I'm saving money and producing more consistent results. It's a personal win for me and for my business."

FUTURE PLANS

"I'm thinking about getting into production of offset prints. That would mean I'd have to deal with four-color printers and presses. I could manipulate my imagery to take advantage of the press's wider color capabilities."

STUDIO PROFILE

Number of employees and contractors	**1**	
Types of users:		
Animation	**1**	Windows for Lightwave 3D and World Construction
CD-ROM publishing	**0**	
Desktop publishing	**0**	
Digital photography	**1**	Mac
Digital video	**0**	
Executive management	**1**	Windows
General creative	**1**	Mac
Web authoring	**0**	
Number of locations	**1**	
Number of LAN servers	**1**	Windows PC to Macs linked via Windows server
Media asset management	**Yes**	SyQuest cartridges*
Number of prepress vendors used	**0**	Done in-house
Number of printers used	**0**	Done in-house
Number and type of output devices:		
Black-and-white printer	**0**	
Color printer	**1**	Epson color printer for examples
Digital proofer	**1**	Iris 3047G
Types of color management tools used:		
For digital proofer	**1**	Praxisoft
For color monitor	**1**	CalibratorTalk by Barco
For scanner	**1**	ScanOpenLights by Linotype-Hell

* "I make very detailed records for jobs in progress, keep everything on SyQuest cartridges, and at the end of a job I put them on tape with everything logged. I know what I've got and I log it carefully."

STUDIO SIZE* ▼	
Industry	**>2500**
Global	**121 – 2500**
Large	**36 – 120**
Small Business	**7 – 35**
Small Team	**2 – 6**
Solo Contractor	**1**
CENTURY GUILD	
1 employee	

* Studio size reflects the number of media producers or the scale of the IT infrastructure supporting those producers.

ColorSync enables book author to shave $10 off cover price ($100,000 in printing costs) and learn how direct control of color creates a better book on Photoshop.

SYNOPSIS

Authors of a book on Photoshop wanted to have a competitively priced book, believing that a lower price would increase sales and, most importantly, royalties. The use of a computer-to-plate printing process would accomplish that objective, eliminating $120,000 in costs for films. However, that process required digitally proofing a book containing 500 color-sensitive photos and 500 color-sensitive illustrations. Color synchronization of the book printing press and the desktop publishing computers enabled the authors to produce a soft proof (no films) as well as tweak designs, images, and photos to improve faithful reproduction of the original art.

SOLUTION ADVOCATE

Bruce Fraser*
Independent Consultant, Author

He co-wrote and produced *Real World Photoshop 4: Industrial Strength Production Techniques* with David Blatner, (PeachPit Press).

"I have worked in digital imaging on the Mac since slightly before it was possible: 1989 with the BarneyScan and a RasterOps 24-bit video board.

"Currently, I do a certain amount of consulting for vendors, helping them understand how to use ColorSync in their products. I also help end-users integrate ColorSync in their workflows."

DIRECT-TO-PLATE SAVES MONEY, BUT...

"We had a 700-page book to produce with lots of 4-color pages. We wanted to keep the cover price below $50. Our publisher told us that if we would go direct-to-plate, we could save $120,000 on film and matchprints; those essentially make the difference between a $45 and $55 cover price for the book.

"But with direct-to-plate you can't use conventional proofing; you have no film from which to make the proofs. Since this book was about Photoshop, about working with color in Photoshop, color remained critical. At the time, we said, 'This is scary, but let's investigate.'

"First, we looked at the last book that R.R. Donnelley had produced on this press (on Web design); then we looked at the Iris proofs that they produced.

"The Iris proofs looked beautiful but didn't correspond to the published book. How could we proof it?

"We decided to profile the press itself. This enabled us to use Photoshop and PageMaker to get accurate soft proofs onto the monitor. For some of the critical images, we did hard copy proofs on a dye sublimation printer.

"When we actually saw the manufactured piece, we had only a few surprises."

LAST MINUTE CHANGES

"Another interesting aspect was that this was the first time we had been able to work with accurate color in the page layout program.

"We were actually seeing composed pages in our soft proofs and that led to making some changes in the images and the text.

"A lot of what we covered in the book was step-by-step techniques for color correction. Being able to see the actual images in context on the page, we were able to look and say, "These two are too similar, these are too different," and we could go back and make changes because we had had the luxury of seeing these composed pages in context.

"That was a benefit we hadn't anticipated; it proved to be very significant."

BUILDING BRANDS A BETTER WAY

"A lot of Photoshop books are out there, some produced better than others. A lot of authors don't have the ability to control production quality.

"We felt that this book needed to look good; we needed to be able to have potential buyers flip it open in a book store and say, 'Yeah, these authors know how to make Photoshop work.'

"We will emphasize [control of the color] in future editions of the book."

STUDIO SIZE*	▼
Industry	>2500
Global	121 – 2500
Large	36 – 120
Small Business	**7 – 35**
Small Team	2 – 6
Solo Contractor	1
BRUCE FRASER	

STUDIO PROFILE	
Number of employees and contractors	1
Number of illustrations in book	500
Number of photos in book	500
Number and type of output devices profiled:	
Color printers	20
Color monitors	40
Offset and web printers	12
Digital cameras	1
Digital photo copiers	5
Number hours spent calibrating devices last 12 months	740
Number hours spent calibrating each device	20

* Studio size reflects the number of media producers or the scale of the IT infrastructure supporting those producers.

* Interviewed by Doug Millison on 8 May 1998 by telephone; all quotations constitute verbatim transcription with the exception of minor editing of grammar and syntax.

"We achieved a remarkable degree of predictability in the printing process, which led to a business process in which we can better predict costs and savings."

NO FREE LUNCH

"There was some expense involved in this. We had to do a print run to profile the press, to print calibration targets; that cost about $5,000. I built the profiles using a hand-held spectro-photometer, a $12,000 instrument. Measuring the targets and building the profiles took two days of my time at $1,000 a day. But, compared to $120,000 in film costs, we came out ahead."

BOOKS, BOTTOM LINES, AND COLORSYNC

"Using ColorSync, we saved about $100,000; the direct-to-plate printing process let us keep the cover price of the book low; $10 lower than otherwise. We expected that the lower price would result in increased sales.

"We didn't really consider any other approach; ColorSync was the only color management system that made sense to use.

"We produced the book in PageMaker partly because of its ColorSync capability. PageMaker also uses other ICC color management schemes. There didn't seem to be any benefit in using them. We did some tests, but found no reason to introduce another variable."

COLOR ROCKET SCIENCE

"Building ColorSync output profiles for CMYK printing still involves a lot of rocket science; you don't just press a button.

"You have to understand the printing process quite well; you have to make intelligent decisions about inking and so on.

"When we did the print run to characterize the press, we also put some test images in there and we were able to see what kind of a profile we needed to build. We built several profiles and tested each one; because we had the actual images, we could compare the soft proof on the monitor with an actual printed image.

"We achieved a remarkable degree of predict-ability in the printing process, which led to a business process in which we can better predict costs and savings."

LESSON LEARNED, APPLIED

"We almost had a feeling of anti-climax; it just worked the way we wanted. We really went out on a limb with this. We didn't know if it was going to work.

"At the same time, if the content of the book had any real validity, we had to be able to practice what we preached, and we were vindicated in that.

"Working with soft proofs of composed pages gave us a tremendous luxury. We improved the book content in ways we hadn't expected.

"We have already begun working on the next edition of the book. I can't imagine we'll find a cheaper way to do it than to go direct-to-plate on the web press."

PERSONAL BRAND BUILDING

"Doing this project has helped me tremendously, especially in my relationship with consultation clients. I can point to the book and they see I know what I'm talking about."

STUDIO SIZE* ▼	
Industry	>2500
Global	121 – 2500
Large	36 – 120
Small Business	**7 – 35**
Small Team	2 – 6
Solo Contractor	1
BRUCE FRASER	

* Studio size reflects the number of media producers or the scale of the IT infrastructure supporting those producers.

True colors satisfy customers buying business forms;
global printing firm faithfully recreates color logos even when produced by high-volume electronic color publishing system.

Apple Publishing Technologies

section
COLORSYNC QUICKSTUDIES

topic
MOORE GRAPHICS

keywords

author(s)
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contributor(s)

source document
MEDIA ASSET MANAGEMENT MARKET REPORT—1999

SYNOPSIS

Large, multinational printer of business forms, labels, and specialty direct mail uses ColorSync to ensure faithful reproduction of color-sensitive brand identity elements (logos). Customer representatives preview contracted projects in the publishing application, knowing that projects printed with the Xerox DocuColor electronic publishing system will closely match soft proofs on an RGB display.

ENTERPRISE

Moore Graphics, Research Center
Advanced Technology Group
20,000 employees worldwide; 300 in the Research Center

SOLUTION ADVOCATES

Moore Graphics
Paul Conigilo,* Senior Software Engineer
Ben Burns,* Digital Color Engineer

Paul Conigilo has 10 years experience in digital printing: "Currently, I mainly develop plug-ins for Adobe Acrobat Exchange for our proprietary print system."

Ben Burns has four years experience with digital printing, and "works in a systems engineering group that monitors image quality and color management."

THE BUSINESS OF FORMS AND GRAPHICS

"Moore Graphics prints business forms, direct mail pieces, labels, and so on. The Advanced Technology Group develops RIP and front-end technology to drive different printers and presses; it conducts basic research into printing and adhesives for pressure-sensitive labels.

"We do a lot of color printing; we use ColorSync for soft-proofing to check accuracy of our four-color digital presses.

"Internally, we've developed marketing samples using ColorSync. We help maintain color accuracy for our internal service bureau.

"As we develop new technology, we come up with prototypes of the kind of printing services that Moore can offer to our customers."

SO WHAT'S THE PROBLEM?

"ColorSync means that you don't have to prepare a color separation for each image produced by different output devices. ColorSync provides us with a system-level solution that we can use to get consistent results with the software applications that we use.

"We've got these digital presses that aren't always available for proofing; we had to come up with another solution to let us get the color accuracy we wanted.

"Our customers think matching spot colors for their company logos on the business forms we produce for them is very important.

"Before we run a job, we have to show customers what the job is going to look like. Usually, this means that they specify colors in QuarkXPress; that way they get the idea of what they want."

CYCLE TIMES OF TRUE COLOR

"Running digital presses isn't cheap; proofing on them isn't cheap. Being able to proof to an alternate source, being able to make color adjustments intelligently saves a lot of prepress time—it all saves money.

"These machines don't behave like your typical spot press. We don't have imagesetters that simulate these things. Going to color management remains the only way to work towards color fidelity between devices."

STUDIO SIZE* ▼	
Industry	>2500
Global	121 – 2500
Large	**36 – 120**
Small Business	7 – 35
Small Team	2 – 6
Solo Contractor	1

MOORE GRAPHICS, Research Center Advanced Technology Group

300 employees

* Studio size reflects the number of media producers or the scale of the IT infrastructure supporting those producers.

* Interviewed by Doug Millison on 19 May 1998 by telephone; all quotations constitute verbatim transcription with the exception of minor editing of grammar and syntax.

"We're really looking forward to cross-platform color management. We can't do anything for people frustrated by the lack of color management on the PC."

STUFF HAPPENS

"It [adoption of ColorSync] just happened by committee; the two of us were talking about production issues. Our internal service bureau found it easy to implement ColorSync.

"We had tried some end-to-end solutions. We found most of the available solutions either too costly or too complicated to expect the service bureau people to handle. Keeping your machines set up consistently, you don't need to do that all that often.

"A big part of making ColorSync work happens at the profiling stage; we tried to color-calibrate a device like the Xerox DocuColor 40. That is, we calibrated it, then profiled it; that seemed to give us better results. That means lowering the density and dot gains more consistent with what a litho press would do.

"But as soon as we got our system together, we got results immediately

"Now we can go to our other plants, help them implement a similar solution; they pass the savings on to customers and earn higher profits."

PROFILES NOT ALL EQUAL

"One of the big issues remains that not all profiles are created equal. Application program file formats are consistent; but profiles are not. When provided externally, different vendors use a different number of patches. Canned profiles can sometimes be a problem. Understanding how profiles from certain vendors interact can be frustrating."

SOME DAY, OVER THE RAINBOW

"We're really looking forward to cross-platform color management. We can't do anything for people frustrated by the lack of color management on the PC.

"We'd like to streamline our profiling process a little more. From the front end, the vendors are taking care of that for us. More applications are being released ColorSync-enabled; that makes things easy for us."

COLORSYNC SCORES PERSONAL WINS

"We get to keep our jobs. A lot of it just makes our jobs easier; ColorSync makes things easy for us."

STUDIO SIZE*	▼
Industry	>2500
Global	121 – 2500
Large	**36 – 120**
Small Business	7 – 35
Small Team	2 – 6
Solo Contractor	1

MOORE GRAPHICS, Research Center Advanced Technology Group

300 employees

* Studio size reflects the number of media producers or the scale of the IT infrastructure supporting those producers.

A standardized color space for Simon & Schuster spans a thousand users, ensuring higher consistency of 100,000 scanned images per year.

R.O.I. tech brief

PAYBACK ASSESSMENT

Apple Publishing
Technologies

section
COLORSYNC QUICKSTUDIES

topic
SIMON & SCHUSTER

keywords

author(s)
D. MILLISON, M. MOON

contributor(s)

source document
MEDIA ASSET MANAGEMENT
MARKET REPORT—1999

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SYNOPSIS

The group responsible for digital imaging and corporate archives for Simon & Schuster has established a companywide color space standard that ensures a more consistent portrayal of scanned images across multiple media. The company deployed ColorSync as a preventive cost-savings measure that will extend to over 1,000 users.

ENTERPRISE

Simon & Schuster
Corporate Digital Archive
15 employees in this studio group

SOLUTION ADVOCATE

Todd Ware[1]
Associate Director, Digital Imaging and
Corporate Digital Archive

Ware has 13 years of experience in press and prepress, with 6 years at Simon & Schuster.

"I'm in charge of scanning departments in three locations in New Jersey: Parsippany, Ramsey, and Upper Saddle River.

"We do all the scanning and digitization of Simon & Schuster images for book publishing. We also do imaging conversions for multimedia and Web projects.

"I manage 14 people that handle about 100,000 images a year for titles across Simon & Schuster's various book imprints and product lines.

"When we scan images, we also archive every image to a certain size and format.

"It's a combination of people and technical management. This includes development of workflow solutions to maximize throughput, finding ways to work cheaper, faster, and better, but I don't spent a lot of time on budget administration."

BASIC COLOR CONSISTENCY

"I manage three different scanning departments. We scan for multiple outside vendors [printers]; each has its own specifications for print quality (dot gain values, inking, maximum ink densities, ink colors spectrally), all those different variables.

"We send out digital files to all the production groups in our company; they place them in their books. We needed to have some common ground for the scanning groups to scan to, some way to arrive at a generic profile that we could use on outgoing images. We need to predict the quality level.

"We can't control every variable the outside vendors apply once they get the scans, but we want to supply our output.

"We look for basic color consistency and predictable quality of images coming out of our scanning groups. Since we print on web presses (that introduce more quality variables than sheet-fed presses), we definitely needed to come up with a formula for quality consistency in our images."

INSIDE COMPETITOR

"Before we went ahead with the color management solution, we went to the top 10 vendors (our printers) and got their feedback; what they wanted.

"As an 'inside vendor' for all the Simon & Schuster groups (the Corporate Digital Archive), we had to match the quality of outside vendors we compete with for scanning business and give our production groups that same quality."

ACQUISITIONS COMPOUND QUALITY ISSUES

"Simon & Schuster consists of many different groups. Over the years it has grown through many acquisitions (Macmillan and many others). As these new acquisitions come into Simon & Schuster, we decide which of our locations will do the scanning for the groups; we offer the groups our service. This means we need a standard solution to apply as we integrate these acquisitions.

"We wanted to standardize internally for predictable quality."

[1] Interviewed by Doug Millison on 11 May 1998 by telephone; all quotations constitute verbatim transcription with the exception of minor editing of grammar and syntax.

[2] Studio size reflects the number of media producers or the scale of the IT infrastructure supporting those producers.

STUDIO SIZE[2]	▼
Industry	**>2500**
Global	**121 – 2500**
Large	**36 – 120**
Small Business	**7 – 35**
Small Team	**2 – 6**
Solo Contractor	**1**

SIMON & SCHUSTER
Corporate Digital Archive

15 employees

STUDIO PROFILE

Number of employees and contractors	**15**	
Number of people creating media	**15**	
Types of users:		
Animation	**0**	
CD-ROM publishing	**1**	Windows
Desktop publishing	**0**	
Digital photography	**4**	Mac
Digital video	**0**	
Executive management	**3**	Mac
General creative	**3**	Mac
Web authoring	**0**	
Miscellaneous	**4**	
Number locations	**3**	
Number of LAN servers	**5**	
Media asset management	**Yes**	Oracle DBMS
Number of prepress vendors used	**50+**	
Number of printing firms used	**35**	"The 10 big ones"
Number of new media firms used	**25+**	

"If we didn't have [ColorSync] there'd be no consistency;
because we have it we get 80 percent consistency; we're always in the ball park instead of sometimes out in the parking lot."

IN A COLOR BIND

"My boss, Richard Walkus, led the effort to adopt ColorSync. He brought together a few people, including me, in a focus group to decide where we needed to go and what we needed to get there.

"We all agreed to look into ColorBlind [a software package from Color Solutions that uses ColorSync]. We then let our vendors—outside printers—know what we were doing; they were all happy to work with us; I have generic profiles for their web and sheet-fed presses.

"We brought in a consultant for six months, setting us up with ColorBlind software, the profiles, and the equipment."

COMPANY COLOR SPACE

"We went ahead and profiled the scanners, the monitors, the Iris printers, put all those profiles together with ColorBlind. This led to a couple of conclusions.

"We concluded that we couldn't use ColorBlind in all our workflows, mainly due to profiling problems with the Topaz scanners.

"We found that out during the process and had to come up with other ways of doing it. We've also come up with a Simon & Schuster standard color space that we apply to every image coming into the archive."

NO OTHER OPTION: FORWARD

"That was a starting point, applying that RGB standard to all images and then using output profiles for whatever printer or color copier or Iris.

"We never considered a non-ColorSync solution. There was nothing else to consider.

"Our use of ColorSync has continually evolved over the past year. We're not at a point where it's all done; it's an ongoing process and we expect it will be for some time.

"Right now we're in the midst of deploying it for our production groups so they can understand how best to work with our output. With over 1,000 people, to get them up to speed is a challenge.

"It's a preventive measure that saves a huge potential cost; I don't know how to estimate it in terms of dollars."

HAPPINESS, A GOOD THING ALL AROUND

"It's 80 percent mental and 20 percent actual. When you go to your customers and they have been having problems with your output, and you tell them you're implementing something like ColorSync, they don't understand it. They do understand you're doing something to increase quality, and that warm fuzzy feeling helps dramatically.

"The people who work with it on a daily basis—some like it and some don't. Those from conventional backgrounds don't like creating a profile and just letting things go; others really like it.

"If we didn't have it there'd be no consistency; because we have it we get 80 percent consistency; we're always in the ball park instead of sometimes out in the parking lot.

"It's not always perfect, but it's always a 'pleasing color' or an 'optimized color.'

"I give out a pamphlet that describes our group and how we do things and in it ColorSync is part of our brand identity. We talk about how we're using it to help produce consistently optimized results; it's part of who we are."

SPINNING IT UP, OFFLINE FIRST

"Dealing with the six-month period of planning, deployment, going through the training process, we've learned a tremendous amount. To jump into ColorSync without doing that wouldn't be possible for a company like mine.

"I advocate a methodical, step-by-step beta-test attitude: don't throw it directly into a production environment.

"We threw our regular production at it and it was disrupting it for awhile; we had to pull back, regroup, re-implement to make it all work out.

"If we were doing it over again, we'd first create a separate testing environment."

STICKING WITH IT

"I'm seeing us shift from ColorBlind to the applications commonly used in our production groups—Photoshop, Quark, Illustrator, Linotype-Hell; they are all implementing ColorSync better than they have before.

"What I've learned from ColorBlind I want to apply to the applications we use everyday; apply the profiles we developed in ColorBlind and use them with these everyday applications.

"For us to use a different application, ColorBlind, isn't ideal. Now that [our production] applications use ColorSync in an acceptable way, we will stick to that."

STUDIO SIZE* ▼	
Industry	>2500
Global	121 – 2500
Large	36 – 120
Small Business	7 – 35
Small Team	2 – 6
Solo Contractor	1

SIMON & SCHUSTER
Corporate Digital Archive

15 employees

* Studio size reflects the number of media producers or the scale of the IT infrastructure supporting those producers.

Warner Brothers digitizes 100 background paintings

per month for feature animations, using ColorSync to save two hours of color correction work on every painting.

A VERY SIMPLE PROBLEM

Warner Brothers Feature Animation produces the highest-quality whatever-it-takes animated films. A typical film project uses 1200 backgrounds against which the action takes place.

According to Arjun Ramamurthy, "We have 18 to 20 artists creating these backgrounds. Traditionally, they paint these on boards or on acetate cels. We then scan these backgrounds and thus bring them into the digital realm. At that point, our digital artists add the characters, making a composite that we then record to film. Sounds simple, doesn't it?"

ENTERPRISE

Warner Brothers Feature Animation
18-20 employees in this group

SOLUTION ADVOCATE

Arjun Ramamurthy[1]
Manager, 2D Imaging

NOTHING MATCHES

"The biggest problem comes when we paint the backgrounds. We want to make sure that we maintain color fidelity, contrast, brightness, but most important, the color. We must get the same color on the monitor that you saw on the board or on the cel. We have 18 to 20 artists [creating] more than 1200 backgrounds, with each consisting of one board and two cels.

"When these guys paint a board, the art director approves it. Then we scan it, but nothing matches. So then we have to re-do the job, and have the digital artist match things up on his or her monitor. Making the monitor display the same color as what you see on the film output becomes the real challenge. To create a believable fantasy realm, our artists take great efforts to make these backgrounds; they have a lot of freedom to create outlandish imagery, lots of saturated colors and effects to bring out that fantasy."

NO MATTER WHAT

"We used to spend two hours' worth of color correction per background (1200 per film), a man-year of time, before we implemented our color management system. Better color management lets us now finish films more quickly and get them to market sooner, at a lower cost."

EXHAUSTIVE EVALUATION

"We asked ourselves if we should develop a color management system ourselves or use something from a vendor. We looked at a variety of vendors who had products, but none of them worked to the level or degree we desired. We found that a lot of them expressed no willingness to even work with us. Fortunately, we found Color Solutions, with whom we have worked quite closely."

LESS THAN ALL THE COLORS

"Our Chief Scientist, Len Davis, drove our color management program. He planted the seed. Then I came on board [to manage the process]," states Ramamurthy. The program involved the color modelists, the film printers, camera operators, and the background painters. Traditionally knowing that colors would change, they would not use the entire palette. "Now they go ahead and paint the way they want, without a restricted palette."

GETTING IT RIGHT

"Once you calibrate your devices, you have to take extra care to maintain those devices, so they don't drift away and risk less-than-optimum results," Ramamurthy insists. Once you can maintain a consistent color space, "a question of human expectations arises. They want us to get better. Their expectations get higher and higher."

STUDIO SIZE[2]	▼
Industry	**>2500**
Global	**121 – 2500**
Large	**36 – 120**
Small Business	**7 – 35**
Small Team	**2 – 6**
Solo Contractor	**1**

WARNER BROTHERS

Feature Animation

18-20 employees

STUDIO PROFILE

Primary reasons for deploying color management	
	Rework costs
Secondary reasons for deploying color management	
	Rework costs
	Plug-and-play graphics usage
	Reduced consumable costs
Number of graphics produced per month	
	100
Number of media producers sharing a color synchronization problem	
	160
Number of devices color-calibrated in the past year	
	25 monitors calibrated weekly
	5 Iris color printers
	2 digital cameras
	4 digital film recorders
	2 color scanners
Time spent calibrating monitors over the last year	
30 minutes per monitor per week	**650 hours**

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[1] Interviewed by Doug Millison on 21 May 1998 by telephone; all quotations constitute verbatim transcription with the exception of minor editing of grammar and syntax.

[2] Studio size reflects the number of media producers or the scale of the IT infrastructure supporting those producers.

"We've seen tremendous cost savings, reduced time to market, less labor, and increased confidence."

Apple Publishing
Technologies

section
COLORSYNC QUICKSTUDIES

topic
WARNER BROTHERS FEATURE
ANIMATION

keywords

author(s)
D. MILLISON, M. MOON

contributor(s)

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MEDIA ASSET MANAGEMENT
MARKET REPORT—1999

PROFILES OF COLOR

"We worked closely with Color Solutions. They helped us design and refine some of the algorithms for our color management system," says Ramamurthy. This means that his team calibrated each of 30 or so devices that create or display color images. This calibration yielded a color profile—a set of numeric values that correlates how each device distorts the colors from a color target.

GETTING BACK TO COLORS TRUE

"We then use Apple ColorSync to translate these device profiles. We use a Mac to capture the image from the color scanner (where we scan the backgrounds) and display it on the Brace monitor. With Color Solutions, we developed a color engine so we could take artwork from scanner to monitor, and then from monitor to film or to digital printer without distorting or losing colors. Standard targets work fine for photographic media, but not for our paintings and film output. We had to design our own target so we could generate very respectable scanner profiles. For all of our profiling needs, we use commercially available spectrophotometers. For scanner calibration, we use photometers and colorometers."

QUEST LEADS TO COLORSYNC

"We deployed our ColorSync solution in January 1997, and used it on our new film *Quest for Camelot*. Today, we use it on the next film now in production, *The Iron Giant*. It took about nine months to fully deploy, a little longer than we thought it would take. However, we've seen tremendous cost savings, reduced time to market, less labor, and increased confidence. They used to spend two hours' worth of color correction per background (1200 per film; a man-year of time) before using ColorSync."

LESS HASSLE, MORE FUN

"As a result of color management, the creative team has fewer turf battles. Background painters and digital color specialists don't argue as much. The art director and film director have more confidence; they see that the corrections they've applied work the way they want them."

A SOLUTION, NOT A PANACEA

"Unfortunately, some people have hyped color management a bit too much. It has limitations. With it, you have colors that by and large match, but not in all cases. Our target customers—art directors—remain highly critical. Color management eases the workflow, but it did not solve all of our problems. We had to design a software application, *Film Contrast Node*, that lets us add contrast before we put it in film. Our painters used to paint backgrounds 'flat,' expecting the color correction process that we used before our current ColorSync [process] to add that contrast."

STUDIO SIZE* ▼	
Industry	>2500
Global	121 – 2500
Large	36 – 120
Small Business	**7 – 35**
Small Team	2 – 6
Solo Contractor	1

WARNER BROTHERS

Feature Animation

18-20 employees

* Studio size reflects the number of media producers or the scale of the IT infrastructure supporting those producers.

* Studio size reflects the number of media producers or the scale of the IT infrastructure supporting those producers.

iCorp!

METHODOLOGY

R.O.I. tech brief

ECONOMIC PAYBACK ASSESSMENT
FOR NEW TECHNOLOGY

Essential Questions

*How did GISTICS compile its **statistical data**?*

*How does the survey data **correlate to the overall industry**?*

*How well did GISTICS follow commonly accepted **statistical methodologies**?*

Summary

User distribution in survey samples correlates to established industry distributions for **company type**, **professional practice**, and **company size**.

GISTICS estimates that survey data findings will support a **95 percent confidence level**, yielding a five percent margin of error.

Research findings indicate that 68 percent of professional media producers use the **Macintosh as their primary** design and production platform.

Users report that **superior productivity** derives from the Macintosh's ease of use and a rich, tightly integrated portfolio of **foundation** and **publishing technologies**.

In February 1998, GISTICS began to examine potential sources of productivity gains and losses related specifically to the underlying technologies of popular personal computing platforms *as employed in the professional media producer industry*.

GISTICS examined 39 technologies employed by the Macintosh computing platform and 29 technologies employed by the Windows computing platform, totaling 68 technologies.

GISTICS now characterizes these as *foundation technologies*, items closely wedded to the operating system—its ancillary resources, extensions, and utilities provided by the system vendor or a third party.

GISTICS researchers analyzed each of these technologies by level of adoption and time of use and by the time required to achieve proficient use of a foundation technology. The study also included the qualitative perceptions associated with the overall ease of use of a platform, effect on quality and production cycle times, and impact on user satisfaction.

GISTICS sought to identify the net return-on-investment benefit of each technology, understanding that many external variables (business design, industry, regional differences, level of training and experience of users, soft management skills, the nature of work produced, and other factors) influence the adoption and payback of foundation technologies.

To this end, GISTICS analysts employed a variety of analytic techniques and user segmentation strategies, yielding a comprehensive and inclusive framework for understanding the economic payback of individual technologies and how they all contribute to user productivity, studio revenue, business profit, and ultimately the valuation of the media producing firm.

The research effort entailed comparing quantitative data (gathered using paper-based survey forms and telephone interviews) with qualitative assessments of user perceptions. This comparison yielded a scorecard of both hard and soft technology benefit assessments.

Research of foundation technologies began with a preliminary identification of those discrete, individual elements of an integrated computing platform that make a noticeable difference in users' experiences and in the quality and cycle time of user output.

GISTICS researchers asked users about the time required to configure a technology, the actual time spent on average each week using the technology, the training costs carried by their organization, and the relative savings realized over previous means of accomplishing the same outcome or job.

Drawing from a database of 250,000 professional media producers, GISTICS created a random sample of 650 individuals based on job title category and job activities.

GISTICS qualified each respondent by primary author type, primary computer used, and size of organization.

To ensure the highest rates of participation, GISTICS offered respondents a complimentary copy of a GISTICS publication (an ROI TechBrief analyzing economic tradeoff for Macintosh and Windows platforms) as well as a summary of the current research effort.

GISTICS started with the objective of completing 150 surveys that most closely correlate to the overall North American professional population of 3.9 million individuals, to yield a representative sample that accurately characterized the overall media producer industry.

GISTICS performed 161 telephone surveys against a random sample that would yield data findings projectable to the overall industry.

While the 161 cases in this sample provide adequate coverage, in some instances data sets needed for cross-tabulations proved insufficient.

GISTICS subsequently interviewed 193 respondents, completing a comprehensive telesurvey that investigated one technology group per respondent (automation scripting, color management, digital video publishing, or database-served Web sites).

In this manner, GISTICS collected 354 telesurveys: 161 from a random sample and 193 from known adopters of a featured technology group.

With the **random sample group**, each telesurvey took between 35 and 55 minutes; GISTICS completed all surveys between 15 May and 7 July 1998, totaling 161 completed surveys that met the qualification and selection criteria for this study.

With the **second group** (a **nonrandom sample**), GISTICS performed in-depth examinations of automation scripting, color management, digital video publishing, and large Web site development and management technologies.

Selective calling by a GISTICS analyst (against our database) led us to build a panel of 500 prospective best practice users and, ultimately, survey 193 individuals by telephone.

In each technology group (nonrandom sample), GISTICS sought to identify best practice users—individuals characterized by unusually high productivity and income per user.

In several cases, respondents volunteered to have their application characterized in a case study that GISTICS would publish for general distribution (visit **www.gistics.com**, and look for the "publications available").

Subsequently, GISTICS interviewed 32 best practice exemplars between March and June 1998, and will soon (at this writing) publish four Best Practice QuickStudies for each technology group.

These interviews also investigated the *institutional roles* of four principal actors: a **solution evangelist** (who champions adoption of the technology), a **departmental buyer** (who sought group and process benefits), a **technical buyer** (who holds the line on technical support and network integration), and an **economic buyer** (who releases the funds and resources for deployment upon understanding its return on investment).

The best practice exemplars (validated with over 12 years of GISTICS solutions research) provide penetrating insight into general adoption patterns, critical success factors, technical and institutional barriers to adoption, pivotal contributions of external industry resources, and the cognitive and connative factors that constitute a successful best practice exemplar.

As noted previously, GISTICS interviewed 193 known adopters. We spent 30 to 60 minutes with each respondent, investigating one technology group (script automation, et al) per respondent. This effort produced 100 profiles of digital video publishers, 25 profiles of color management users, and 21 profiles of script automation users. It also produced 47 in-depth profiles of large, high-end, database-served Web sites (findings which GISTICS will publish in its report on digital branding and deep gravity well Web sites).

In total, GISTICS completed 354 personal interviews and developed 32 best practice case studies, meeting our stated objective to research a representative sample of the industry overall.

A GISTICS analyst collated and validated survey data in an MS Excel spreadsheet, transferring conditioned data elements to the statistical application program, DataDesk by Data Descriptions Inc.

The research database holds over 1,400 data elements derived from the basic survey and another 1,100 data fields gathered in in-depth profiles.

A GISTICS analyst then placed summarized data findings into another MS Excel spreadsheet, rendering rows and columns of data suitable for charts and graphs composed with Adobe Illustrator 7.0 and published in a QuarkXPress 4.0 document and/or an Adobe Acrobat PDF.

GISTICS circulated a preliminary copy of its findings to respondents and industry professionals, asking for their critique and comments.

The charts and diagrams presented in the methodology section further illustrate how closely the respondent base matches an overall industry model.
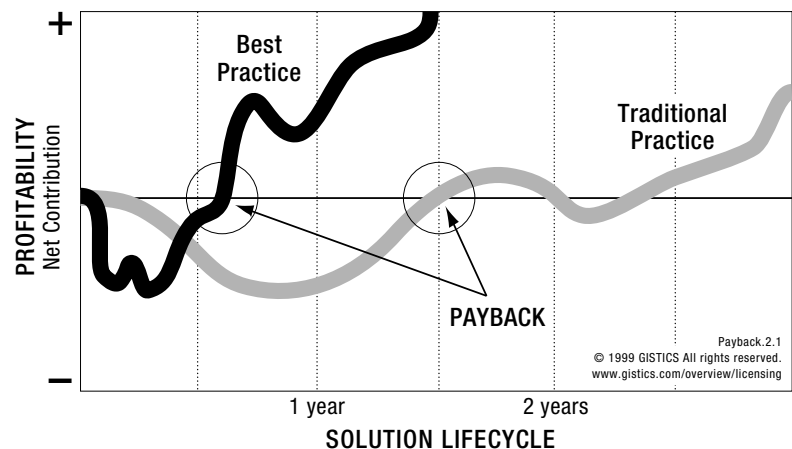
COMPLIMENTARY ROI CALCULATOR

The return-on-investment scenarios presented in this report derive from a spreadsheet calculator that GISTICS will make available through its Web site. We make it available on a subscription basis, asking that a subscriber provide a basic profile of his or her business activities and studio practices.

This ROI calculator incorporates the collective insights of best practice exemplars, using business assumptions that successful early adopters have proven to be relevant and valid.

While GISTICS has undertaken great effort to publish a generalizable ROI model that will enable an individual to assess dozens of variables unique to his or her business, it remains a best-effort estimate.

For a more comprehensive and customized assessment particular to a firm or workgroup, contact GISTICS (research@gistics.com).

BEST PRACTICE PAYBACK

Best Practice

Traditional Practice

PROFITABILITY Net Contribution

PAYBACK

1 year   2 years

SOLUTION LIFECYCLE

In compiling this report, GISTICS used commonly accepted sampling practices for quantitative methods and over six years of ongoing research activity in the digital media producer industry.

COMPANY TYPE

The relative proportions of survey respondents by company type meaningfully track the overall distribution in the media producer industry.

PROFESSIONAL PRACTICE

For the purposes of this survey, an individual must derive more than 50 percent of his or her income from a particular professional practice in order to be included in that practice. The number and distribution of survey respondents by professional practice generally conform to the industry overall.

DISTRIBUTION OF SURVEY SAMPLE BY COMPANY TYPE AND PROFESSIONAL PRACTICE

COMPANY TYPE

APM.CompanyDistrib.1.1
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PROFESSIONAL PRACTICE

APM.Segments.1.2 © 1999 GISTICS All rights reserved. www.gistics.com/overview/licensing

GISTICS surveyed individuals at all levels of responsibility in a comprehensive variety of studio workgroup configurations and company sizes.

To better represent the diversity, depth, and scope of the media producer industry, GISTICS assembled a panel that closely reflects the industry at large.

SCOPE OF RESPONSIBILITY

Respondents came from all areas of the media producing enterprise, representing both frontline and managerial concerns.

TYPE OF WORKGROUP

Media producers organize themselves in teams and workgroups of varied structure. **Several Simultaneous Structured Groups** depict the most complex configuration; they exchange work among themselves (often at multiple locations) that may belong to different clients or projects. **Single Structured Workgroups** share common infrastructure and project management frameworks. **Several Simultaneous Ad Hoc Grou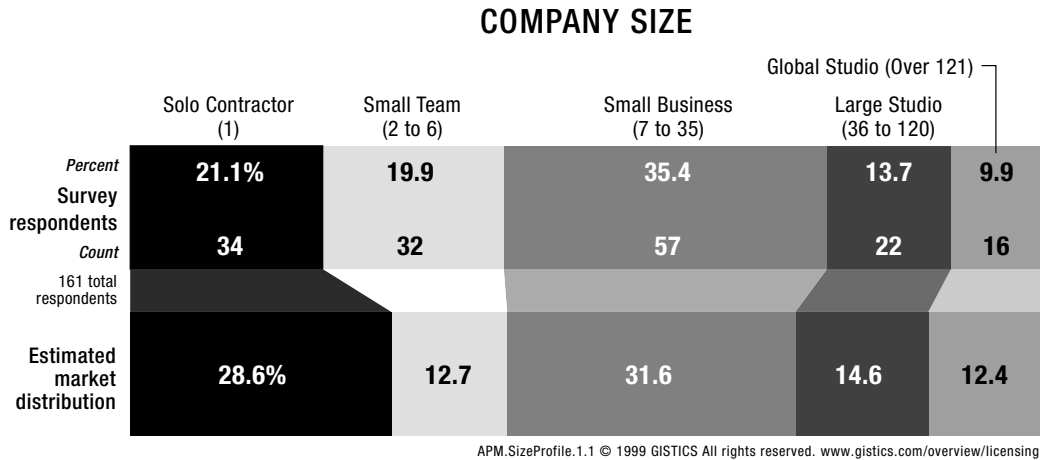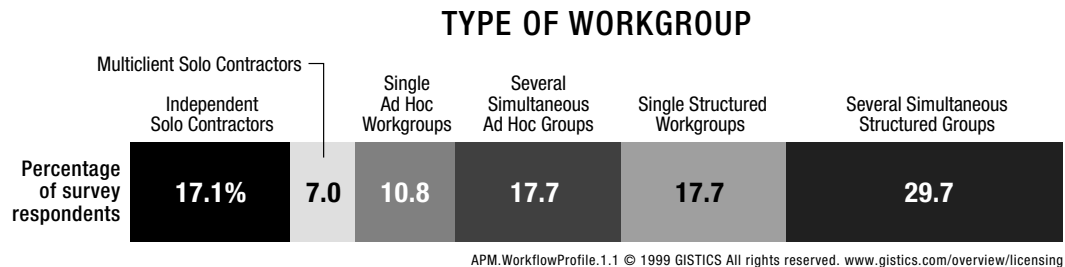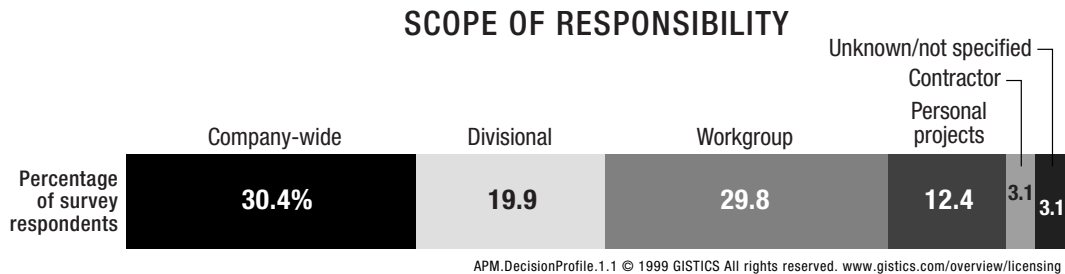ps** often do not share common practices and project management frameworks; typically, small pods will organize their work around a particular authoring practice (document layout). **Single Ad Hoc Workgroups** depict a one-shot team, brought together to complete one project and then disbanded. **Multiclient Solo Contractors** plug and play into two or more clients, typically rendering a particular tradecraft function. **Independent Solo Contractors** either work on their own projects or the projects of one client.

DISTRIBUTION OF SURVEY SAMPLE BY DECISION-MAKING RESPONSIBILITY, WORKGROUP TYPE, AND COMPANY SIZE

SCOPE OF RESPONSIBILITY

	Company-wide	Divisional	Workgroup	Personal projects	Contractor	Unknown/not specified
Percentage of survey respondents	30.4%	19.9	29.8	12.4	3.1	3.1

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TYPE OF WORKGROUP

	Independent Solo Contractors	Multiclient Solo Contractors	Single Ad Hoc Workgroups	Several Simultaneous Ad Hoc Groups	Single Structured Workgroups	Several Simultaneous Structured Groups
Percentage of survey respondents	17.1%	7.0	10.8	17.7	17.7	29.7

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COMPANY SIZE

	Solo Contractor (1)	Small Team (2 to 6)	Small Business (7 to 35)	Large Studio (36 to 120)	Global Studio (Over 121)
Percent Survey respondents	21.1%	19.9	35.4	13.7	9.9
Count 161 total respondents	34	32	57	22	16
Estimated market distribution	28.6%	12.7	31.6	14.6	12.4

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Macintosh platforms hold a 68 percent share of market
in the professional media producer industry.

GISTICS research reveals that 68.3 percent of professionals engaged in the development, production, and management of Web sites use the Macintosh as their primary platform.

Users report that they get "more, higher-quality work done right the first time" than on competing platforms.

This higher productivity derives from the Mac's vaunted ease of use and a mature, battle-proven portfolio of foundation and publishing technologies.

This report examines and analyzes the economic impact of Apple publishing technologies on productivity, revenue, and profit of the media producer firm.

DISTRIBUTION OF SURVEY SAMPLE BY PLATFORM
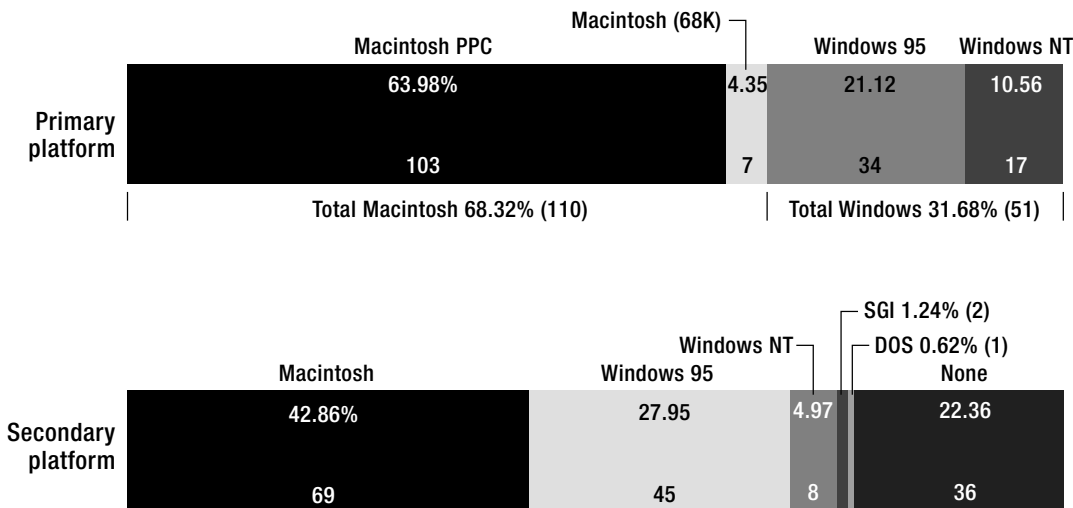
Primary platform

Macintosh PPC	Macintosh (68K)	Windows 95	Windows NT
63.98%	4.35	21.12	10.56
103	7	34	17

Total Macintosh 68.32% (110) | Total Windows 31.68% (51)

Secondary platform

Macintosh	Windows 95	Windows NT	SGI 1.24% (2) / DOS 0.62% (1)	None
42.86%	27.95	4.97		22.36
69	45	8		36

iCorp!

Apple Publishing Technology

Section ▶

GISTICS GLOSSARY AND TAXONOMY OF THE iCORP!

NEW KEYWORDS AND PHRASES FOR THE NETWORKED
ECONOMY

R.O.I. tech
brief

ECONOMIC PAYBACK ASSESSMENT
FOR NEW TECHNOLOGY

The GISTICS Glossary and Taxonomy of the iCorp! helps
busy professionals quickly grasp the fast-changing world of the Networked Economy.

In this collection of both new and familiar keywords and phrases, GISTICS sets forth a set of working, preliminary definitions that may aid the reader of this report. (For additional commentary and juried review of these distinctions, visit **www.gistics.com**, and go to the glossary section.)

iCORP! FRAMEWORK AND DEFINITIONS

We use *iCorp!* to set forth a framework for examining how companies (both large and small) must reorganize their core business processes, disciplines, and practices to meet the challenge of the Networked Economy.

A corporation that has successfully transitioned into the Networked Economy will become *inter*active, *inti*mate, *imme*diate, *intui*tive, *inge*nious, *inte*grated, and *inspir*ational—the many i's in the iCorp!

Our use of an exclamation point,"!," alludes to the mathematical notion of a factorial number (used in predicting probabilities).

Thus, the iCorp! suggests this metaphor: a way to view myriad possible and probable transformations of an enterprise in the Networked Economy.

Both this framework and its definitions remain fluid and contingent, reflecting the essential nature of the Networked Economy.

Nonetheless, we find that we must structure and organize the facts and perceptions of our world in a logical and, hopefully, consistent manner; hence, the iCorp! Glossary.

iCORP! DISCIPLINES AND CATEGORIES

The iCorp! model consists of four disciplines: Networked Economy, Digital Branding, Virtual Value Chains, and Process Management.

Disciplines frame areas of *formally stated theory*, extensive *case research*, a *set of logical operations* on a field of data, and a *jury of peers* that sanctions the development and application of theory, case research methods, and the outputs of the logical operation of the discipline.

The notion of iCorp! disciplines may strike some as needlessly novel, or even jingoistic, and a victim of buzzword engineering.

Some may conclude that invoking "disciplines" remains best suited for academia only.

However, the use of this term underscores a significant and what we believe remains an unexamined aspect of the Networked Economy. Many of our *traditional worldviews* and *cognitive frameworks* do not illuminate stock valuations for Internet firms, nor do they explain the amplified *first-mover advantages of e-commerce firms* when

attacking a traditional business. They also fail to depict the *destabilizing aspects of interactive relationships* between buyers and sellers, investors and firms, trading partners and their value chains, and employees and management.

These facts call for new maps, models, and tools: the iCorp!

NETWORKED ECONOMY frames a set of business designs and models specifically engineered for interactive relationships and the particulars of electronic commerce, including business models for the following:

- Solo contractors (what we call a *business of one*)
- Small teams optimized for digital collaboration and productivity (what we call *connative virtual teams*)
- Departmental electronic commerce platforms and solutions (pre-engineered interactive services allowing outsource provider roles with other departments or firms)
- Real-time 24 by 7 interactive relationships with corporate stakeholders (customers and prospects, investors and press, suppliers and distributors, and current and prospective employees and their spouses)
- Plug-and-play mergers and acquisitions

We call each of these a *category*: each defines a framework for deploying an iCorp! solution. Vendors selling hardware, software, and services will view these as *market categories*. Customers will call these categories *practices* or *business solutions*.

DIGITAL BRANDING characterizes the systematic application of media assets to the buying, using, and disposal experiences of customers, emphasizing the convergence of integrated communications and interactive, digital-media-enabled relationships among buyers and sellers.

VIRTUAL VALUE CHAINS depict the integration of individual companies with a global electronic commerce infrastructure, calling attention to enterprise resource planning (ERP), supply and demand chain management, and real-time operating systems for enterprises both large and small.

PROCESS MANAGEMENT defines a set of practices by which companies will source their primary offerings to customers, emphasizing outsourced providers of product development, demand creation and fulfillment, worldwide logistics, and business intelligence.

GISTICS encourages you to explore a growing glossary
and taxonomy of the iCorp! at **www.gistics.com**.

Administrivia	Brand factory virtual value chain	Client-funded editorial	Departmental e-commerce
AppleScript	Branded information	Color space	Deployment
Applet	Brand-knowledge navigation	ColorSync	Digerata
ASAP Prescriptive	Business design	Compositional profile	Digerati
ASK How Guide	Business intelligence	Connative virtual team	Digital asset
Asset repository	Business model	Cross-linked sites	Digital branding
Authoring for reuse	Business process	Cycle time	Digital media trade skill
Automation scripting	Business solution	Data mart	Digital POP display
Availability	Business of one	Data mining and analysis	Digital storytelling
Back channel	Buzzcut	Data warehouse	Document management
Benchmark	Capital and asset formation	Database publishing	Droplet
Best practice	Capital base	Deal flow management	Dynamic 1:1 branding
Best practice prescriptive	Capital partner	Deep gravity well Web site	Dynamic composition
Billable work	Category	Demand creation	Dynamic Web-to-print production
Brand	Category management	Demographic compositional profile	EDI
Brand asset management			

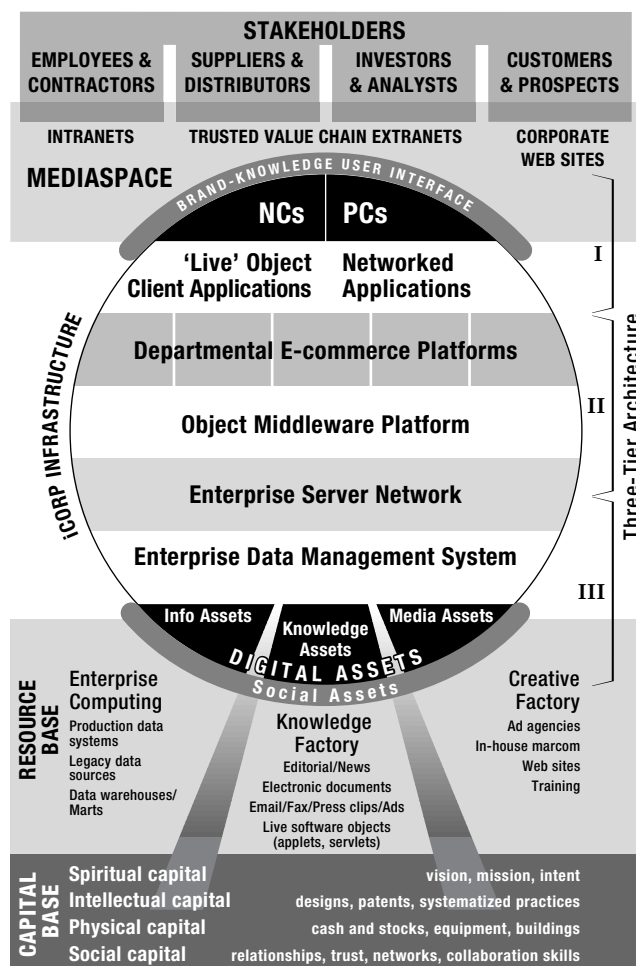## TECHNOLOGY INFRASTRUCTURE MODEL FOR THE iCORP!

As companies, organizations, and institutions (both public and private) confront the challenge of the Networked Economy, they will *reengineer core business and value-delivery processes* to better serve their **stakeholders**.

This reengineering process will entail the deployment of a unique technology infrastructure: robust **three-tier client/server systems** that interoperate with similar systems located at external stakeholder enterprises (customers, investors, suppliers).

All firms (large and small) will undergo this transformation. All firms will become interactive service providers. All firms will become an iCorp!

The model (shown) depicts several strategic business decisions (technology deployments such as **Object Middleware**, **Brand-Knowledge User Interface**) that will challenge executive management.

Digital asset management (and **Media Assets**, the result of Smart Media practices) comprises one such challenge. The fate of your firm in the Networked Economy will derive from your technology deployments of today.

STAKEHOLDERS

EMPLOYEES & CONTRACTORS	SUPPLIERS & DISTRIBUTORS	INVESTORS & ANALYSTS	CUSTOMERS & PROSPECTS

INTRANETS   TRUSTED VALUE CHAIN EXTRANETS   CORPORATE WEB SITES

MEDIASPACE

BRAND-KNOWLEDGE USER INTERFACE

NCs   PCs

'Live' Object Client Applications   Networked Applications   I

Departmental E-commerce Platforms   II

Object Middleware Platform

Enterprise Server Network

Enterprise Data Management System   III

iCORP INFRASTRUCTURE

Three-Tier Architecture

Info Assets   Knowledge Assets   Media Assets

DIGITAL ASSETS

Social Assets

RESOURCE BASE

Enterprise Computing
Production data systems
Legacy data sources
Data warehouses/ Marts

Knowledge Factory
Editorial/News
Electronic documents
Email/Fax/Press clips/Ads
Live software objects (applets, servlets)

Creative Factory
Ad agencies
In-house marcom
Web sites
Training

CAPITAL BASE

Spiritual capital   vision, mission, intent
Intellectual capital   designs, patents, systematized practices
Physical capital   cash and stocks, equipment, buildings
Social capital   relationships, trust, networks, collaboration skills

iCorp.Infrastructure.C.1.1 © 1999 GISTICS All rights reserved www.gistics.com/overview/licensing

A deep gravity well provides an apt metaphor for a
corporate Web strategy: creation of a brightly lit, compelling, and "sticky" destination in cyberspace.

eDistribution
E-lancer
Enterprise computing
Enterprise data management
Enterprise server network
Entrepreneur
ERP
Executive education
Extranet
FaceSpan
Fourth party
Frontier
Global electronic commerce infrastructure
Global studio

Groupware
Guild master
Headcount
ICC color management
iCorp infrastructure
iCorp!
iCorp! discipline
Information asset
Infrastructure
Integrated color workflow management
Integrated communications
Intellectual capital
Interactive annual reports & investor relations (iAR)
Interactive collaborative design

Interactive logistics
Intermediacy
Intranet
Invitational prospecting
IT interoperability
IT roadmap
JavaScript
Kenship
Knowledge asset
Knowledge management
Knowledge refinery
Large studio
Legacy data source
Lifecycle management
List development
Literacy

Live help
Live object client application
Live software object
Logistics
Make-good
Market category
Master script creator
Media and editorial asset management
Media producer industry
Message development
Narrowcast
NC
Networked application
Networked digital video
Networked Economy

DEEP GRAVITY WELL WEB SITE

Corporate Web sites in the Networked Economy have one purpose: to serve and satisfy the needs of interactive stakeholders (customers and prospects, investors and press, suppliers and distributors, and employees and their spouses).

Fulfillment of this purpose will entail the execution of an interactive relationship strategy and the deployment of technology to manage the evolving needs of stakeholders.

The deep gravity well metaphor begins to suggest the scope of required investments and technical performance criteria largely unconsidered by most firms today.

GravityWell.1.4 © 1999 GISTICS All rights reserved.
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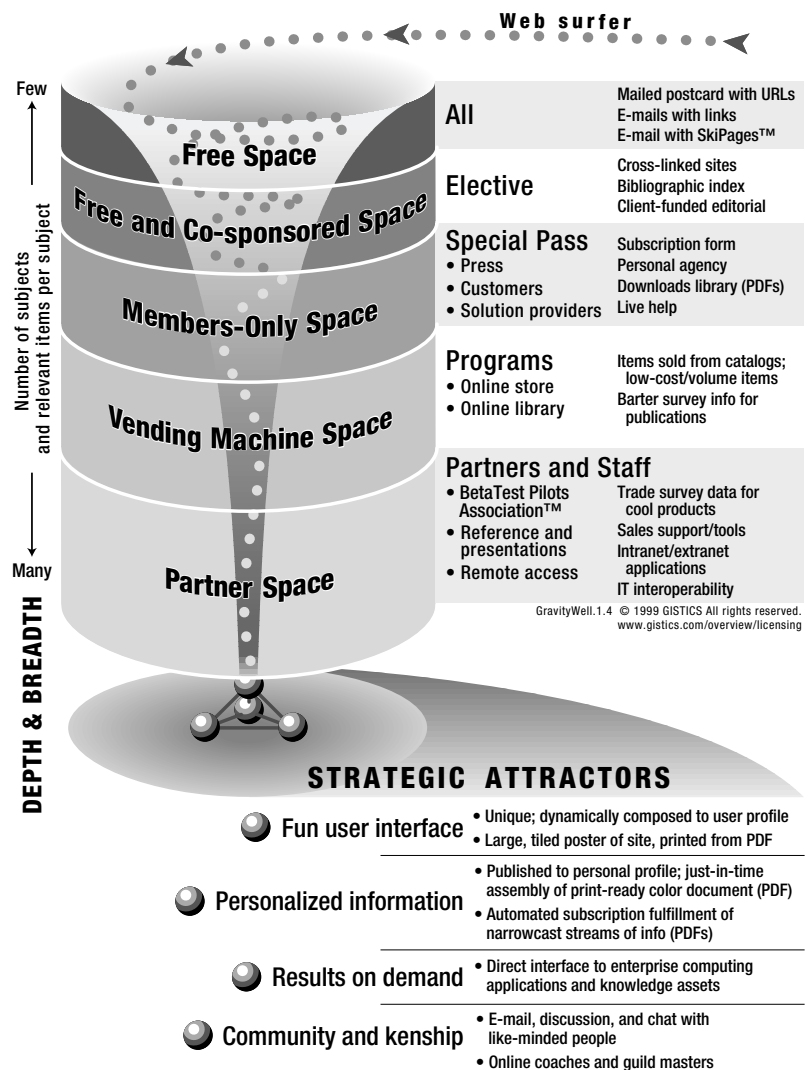
The iCorp! creates and manages reusable digital assets,

assembling finished print pages, online media, or digital TV scenes to the
personal criteria of an individual stakeholder.

Numeracy
Object middleware
Outsource provider
Outsourced design and production
Outsourced print production
PC
PDF
Perl
Personal agency
Personal branding

Platform
Plug-and-play mergers, acquisitions, and divestitures
Practice
Pre-engineered interactive services
Process knowledge
Process management
Production data system
Productivity
Profit

Programmer's mindset
Psychographic compositional profile
Publishing legacy and production data to browsers
QuicKeys
QuickStudy
QuickTime
Real-time 24x7 interactive relationship
Real-time income statement

Real-time operating system for the enterprise
Reference and presentation library
Regional seminar
Reliability
Remote 3D prototyping
Rental software
Resource base
Retail kiosk
Return on investment
Reusable script

## PUBLISHING MODEL FOR DYNAMIC 1:1 BRANDING

The dynamic publishing system of the iCorp! creates print and electronic documents as well as digital TV sequences, just in time and just for you.

The compositional profiles of individual stakeholders instruct the dynamic publishing system what to create.

Advanced applications of this compositional strategy reflect the cognitive (learned) and connative (instinctual) processes of an individual— some learn more quickly with visual examples,

while others must hear the process explained; helping others motivates some people to engage in learning, while obtaining material results motivates others.

The seeds of effective global distance learning (and the social, economic, and cultural benefits of literacy, numeracy, and intermediacy) lie in the effective, tasteful and creative use of compositional profiles.

BrandEvents.1.3
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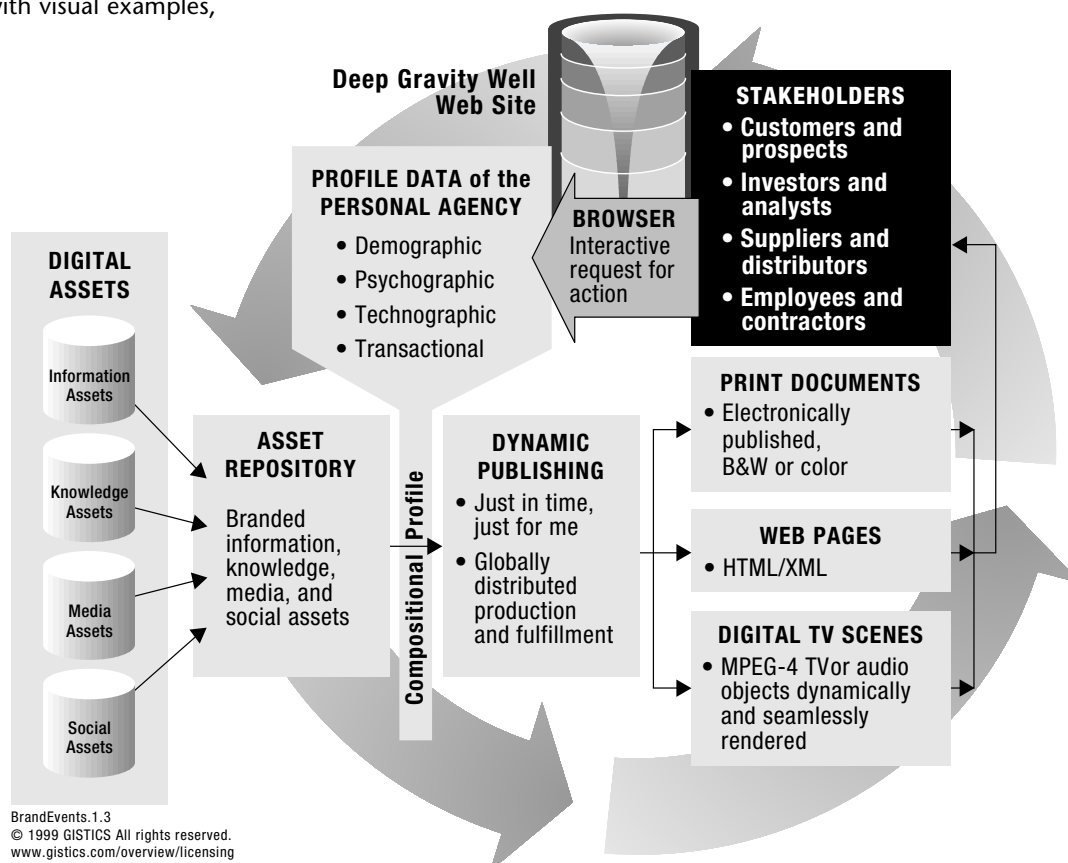
The iCorp works by systematically transforming its digital assets (information, knowledge, media, and social) into moments of truth for individual stakeholders.

Branding applies digital assets to the buying and selling
experience of customers.

ROI tech brief

PAYBACK ASSESSMENT

Revenue
Rework
Robust
ROI
ROI TechBrief
Satisfaction theater
Scalability
Scorecard
Script Debugger
Scripter
Self-directed lifelong distance learning
Seminar location
Servlet

SkiPage
Small business studio
Small team
Smart Media
Social asset
Social capital
Solo contractor
Solution
Solution category
Solution provider
Solutions research
Spiritual capital
Strategic platform
Strategies and tactics

Supply chain management
Survey
Tacit process knowledge
Technographic compositional profile
Third party
Three-tier client/server computing
Transactional compositional profile
Trusted value chain
Ubiquity
URL
Valuation

Value capture
Value capture mechanism
Value chain
Virtual seminar
Virtual value chain (extranet)
Visual Basic
WAN enterprise storage
Web page clickstream data mining
Web site
Workflow

VALUE CHAIN MODEL FOR BRAND MEDIASPACE

This branding process entails driving promotional and brand messages through networks of publications and various media—the brand mediaspace.

The process of finding and keeping customers remains the principal job of the enterprise. Entry into the Networked Economy only amplifies the speed and impact of the process.

A value chain model (as shown) depicts the collaborative nature of the Networked Economy; it also highlights the strategic role of *agile digital-media assets* and how they enable the iCorp! to compete in *Internet time* (very short time-to-market cycles).
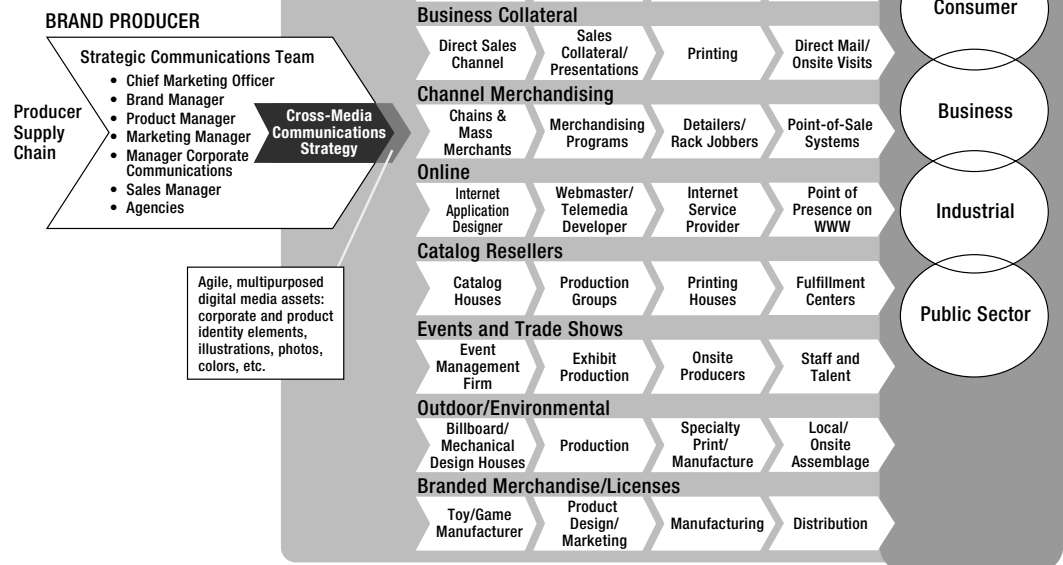
Chains.Brand.Media.0.92 © 1999 GISTICS All rights reserved. www.gistics.com/overview/licensing

iCorp!

GISTICS PROGRAMS

**R.O.I.tech
brief**

ECONOMIC PAYBACK ASSESSMENT
FOR NEW TECHNOLOGY

EXECUTIVE EDUCATION SERVICES

GISTICS ICORP EXECUTIVE SEMINARS

iCorp! sets forth a bold vision for the enterprise, emphasizing several strategies for building inter-active relationships with customers, shareholders, trade partners, and employees.

The **Web-Integrated Marketing** workshop extends best practices for direct response and integrated communications to an interactive customer relationship. The workshop examines the new rules for marketing, creating *deep gravity well* Web sites, and gathering business intelligence from customer and other stakeholder interactions.

The **Interactive Investor Relations and Annual Reports** workshop establishes the business case for an integrated approach to interactive communications with shareholders and employees. It highlights cost savings derived from digital communications, as well as the value of dampening share price volatility through direct communication with buy-side and sell-side analysts, large-position investors, and the press.
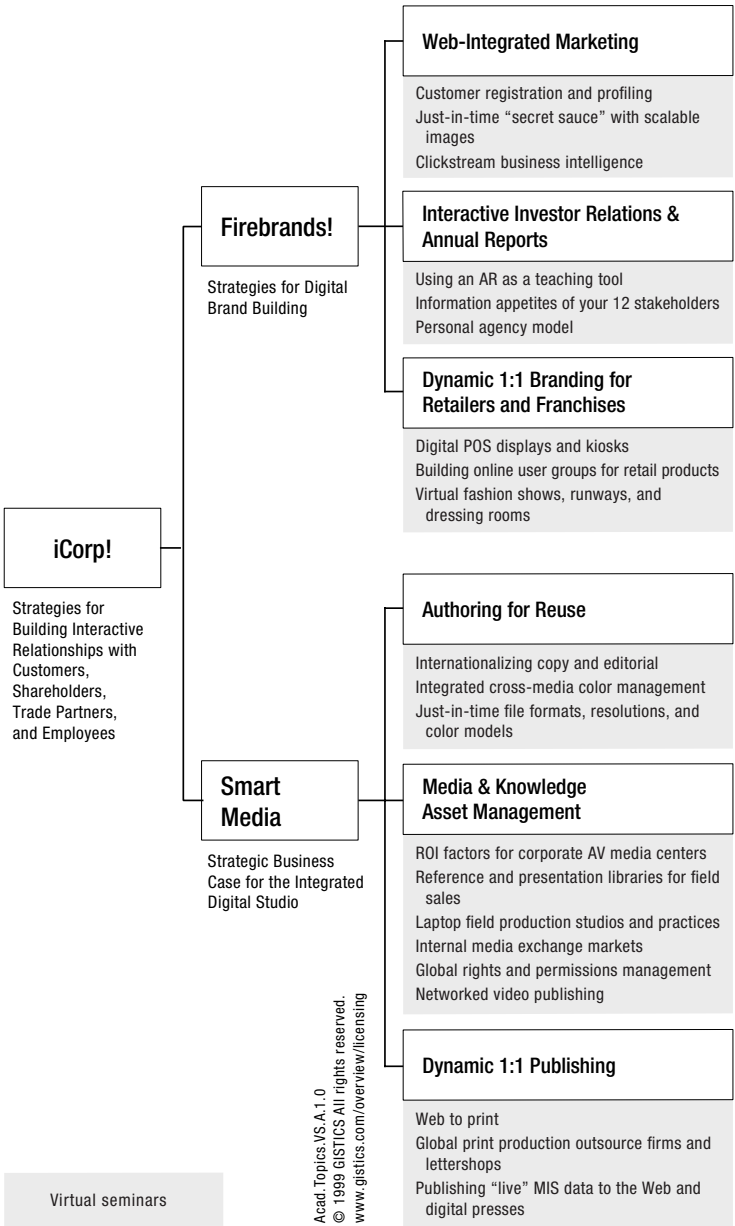
Dynamic 1:1 Branding for Retailers and Franchises illustrates how to bring 1:1 marketing to a chain of stores.

The **Authoring for Reuse** workshop establishes the business case for creating agile, multipurpose assets exclusively designed for reuse across print, broadcast, and online media. It highlights the need for the appropriate media-creation tools and practices.

The **Media and Knowledge Asset Management** workshop establishes the definitive business case for deployment. This workshop shows how reuse of pre-existing digital media and knowledge assets reduces cost, speeds production cycle time, boosts revenue per employee, and produces higher profit—all factors that drive higher business valuations. It also includes return-on-investment calculators and a review of competitive solution providers and their technologies.

The **Dynamic 1:1 Publishing** workshop establishes the business case for variable data electronic printing systems and managing color across a network of output devices (including printing presses at newspapers and magazines). The session includes a discussion of dynamically published Web pages (HTML, XML) and the automated composition of Adobe Acrobat PDFs, built to individual customer specifications.

ROADMAP OF EXECUTIVE SEMINARS AND MANAGEMENT WORKSHOPS

iCorp!
Strategies for Building Interactive Relationships with Customers, Shareholders, Trade Partners, and Employees

Firebrands!
Strategies for Digital Brand Building

Web-Integrated Marketing
Customer registration and profiling
Just-in-time "secret sauce" with scalable images
Clickstream business intelligence

Interactive Investor Relations & Annual Reports
Using an AR as a teaching tool
Information appetites of your 12 stakeholders
Personal agency model

Dynamic 1:1 Branding for Retailers and Franchises
Digital POS displays and kiosks
Building online user groups for retail products
Virtual fashion shows, runways, and dressing rooms

Smart Media
Strategic Business Case for the Integrated Digital Studio

Authoring for Reuse
Internationalizing copy and editorial
Integrated cross-media color management
Just-in-time file formats, resolutions, and color models

Media & Knowledge Asset Management
ROI factors for corporate AV media centers
Reference and presentation libraries for field sales
Laptop field production studios and practices
Internal media exchange markets
Global rights and permissions management
Networked video publishing

Dynamic 1:1 Publishing
Web to print
Global print production outsource firms and lettershops
Publishing "live" MIS data to the Web and digital presses

Virtual seminars

GISTICS invites you to pre-enroll for virtual seminars
and Webinars on iCorp solutions.

Apple Publishing Technologies

section

GISTICS PROGRAMS

topic

VIRTUAL SEMINARS AND WEBINARS

keywords

TELEPHONE CONFERENCE SEMINAR

author(s)

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contributor(s)

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AGENDA

Introduction to Media Asset Management
- Key definitions
- Deployment business models
- Interactive corporation roadmaps

Impact on Profit
- Workflow and collaboration
- Internal trading systems
- Dynamic publishing to Web users

Live Customer Testimonials
- Seasoned deployment managers, department heads, and frontline users

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GISTICS principal Michael Moon

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Apple Publishing
Technologies

MEDIA ASSET MANAGEMENT MARKET REPORT—Comprehensive Analysis of Technologies, Customer Requirements, and Vendors—1999 edition. $4,995 US (206 pages, 165 charts, 37 tables)

MEDIA ASSET MANAGEMENT BEST PRACTICE PRIMER—Prescriptives for Brand Managers, Craft Media Professionals, and Commercial Publishers—1999 edition. $295 US (39 pages, 35 charts)

REENGINEERING THE CUSTOMER REGISTRATION PROCESS FOR EARNINGS GROWTH AND HIGHER SHARE OF CUSTOMER—Best Practice Models and Prescriptives for Success in the Aftermarket for Software, Information, and Interactive Entertainment—1997 edition. $495 US (98 pages, 84 charts, 15 tables)

PAYBACK ASSESSMENT FOR MACINTOSH VERSUS WINDOWS—Economic Trade-Off Analysis for Deployment of Macintosh and Windows Platforms in Media-Producer Enterprises—1997/98 edition. $129 US (40 pages, 42 charts, 9 tables)

APPLESCRIPT PAYBACK ASSESSMENT—Return-on-Investment Calculations for the Deployment of AppleScript by Smart Media Producers—1999 edition. $295 US (54 pages, 25 charts, 15 tables)

COLORSYNC PAYBACK ASSESSMENT—Return-on-Investment Calculations for the Deployment of ColorSync by Smart Media Producers—1999 edition. $295 US (56 pages, 29 charts, 13 tables)

QUICKTIME PAYBACK ASSESSMENT—Return-on-Investment Calculations for the Deployment of QuickTime by Smart Media Producers—1999 edition. $295 US (56 pages, 25 charts, 15 tables)

About GISTICS

Founded in 1987, GISTICS conducts a variety of activity-based research programs, investigating critical success factors for rapid, successful deployment of technology for building brands and interactive relationships. As a research-driven executive education firm, GISTICS investigates the marketing activities of technology companies, benchmarking the most successful methods—Best Practices—associated with how they profitably find, serve, and satisfy customers, as well as how end-use customer enterprises *have successfully deployed new technology.*

GISTICS has conducted 47 client-funded research projects, performs an annual industry assessment for the media-producer industry, and has developed from this data a comprehensive database of empirical benchmarks—the foundation for its executive education program that includes seminars, workshops, and a variety of publications.

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