

Color Publishing Executive Survey

**Summary of Findings
March 5, 1996**

prepared by



Griffin Dix Research Associates

for Apple Computer, Inc.
<http://www.media.apple.com/research/pubnums.html>

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Table of Contents

Introduction	3
I. Objectives and Research Questions	4
Objectives	4
Research Questions.....	4
II. Methodology	5
III. Screening and Qualification of Respondents	6
IV. A Profile of the Sample	7
Median and Average Number of Employees	7
Median and Average Revenue from Design and Pre-press Computers, Average Revenue per Employee - Past Year.....	8
V. Some Definitions	9
VI. Summary of Key Findings	10
Macintosh still dominates in for-profit color publishing	10
Proprietary publishing systems still being used at some sites.....	12
Macintosh rated most cost-effective system.....	13
Macintosh wins in key ROI calculation match-ups.....	14
An interesting note about small sites	15
Replacement of proprietary systems in past 12 months.....	15
Plans for this year call for more replacements.....	15
Multiple Macs replace retired proprietary systems	16
Estimated market size.....	16
Number of proofs lower on Macs at top companies.....	17
Consumable costs lower on Macs.....	18
Three of four color separations done on Macs.....	18
ColorSync 2.0 gets off to great start.....	19
AppleScript use quite extensive.....	19
Apple color displays used at almost half of sites	19

Introduction

Is MacOS really the platform of choice in color publishing? How widely used are proprietary publishing systems? What system really has the best ROI?

The answers to these questions and more can be found in this report prepared by Griffin Dix Research Associates.

Macs are #1

This report shows Apple's dominance in the color publishing industry. It tells us MacOS is #1 in installed units, #1 in calculated ROI, #1 in color separations, has the lowest # of proofs needed at top sites (sites with Macs, proprietary systems, Unix, and Windows), and has much lower consumable costs than Unix and proprietary systems.

Proprietary Systems on the way out

One of the main objectives of this study was to size the installation of proprietary publishing systems and determine the trend of replacing them with Macintosh systems. As you will see, it seems to be a large opportunity for Apple: most of the proprietary system owners are already replacing them.

Markets this study does cover:

This study covers a high-end subset of the publishing industry: "Computer-Assisted Color Print Publishing for Profit" customers. It surveys the "best and the brightest" of all publishing customers, but is not comprehensive of the entire publishing market.

Markets this study does not cover:

This study does not include the following publishing segments: One-color/B&W print publishing, publishing not using computers, "publishing for work" (corporate/in-house), low-end/DTP publishing, new media publishing, multimedia authoring and entertainment authoring. Additional market research surveys will be commissioned by Apple to cover many or all of these segments in the coming months.

I think you will find this information useful and quite interesting. We plan to ask Griffin Dix Research Associates to update this survey yearly and we may also expand it to ask even more questions and cover more color publishing issues and trends.

Please feel free to contact myself or our press contact, Cathy Cloud, with questions or comments on this survey.

Best Regards,

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I. Objectives and Research Questions

Objectives

- (1). Size the installed base and share of Macintosh, Windows, Unix and proprietary computer systems used for “for-profit” color publishing of printed materials.
- (2). Estimate the Return on Investment (ROI) for proprietary color publishing workstations and other computer systems vs. Apple Macintosh systems.
- (3). Size the opportunity of replacing proprietary publishing workstations with Apple Macintosh computers and Apple peripherals.
- (4). Quantify usage of the following Apple peripherals and MacOS technologies:
 - ColorSync 2.0 color management software
 - AppleScript
 - Apple Color Displays

Research Questions

- (1). What are the number of proprietary publishing workstation systems in use in the U.S.?
 - Compare with number of Desktop PC's (Mac and Windows)
- (2). What are the future plans for replacing proprietary systems?
 - When, how many, cost of proprietary systems replaced?
 - How many PC's to be purchased per proprietary system replaced?
 - Will they buy Mac's, Windows PC's, or other systems?
- (3). What is the number and % of color separations being done on Desktop PC's vs. proprietary publishing systems?
 - Details on Mac vs. Windows in desktop space
- (4). What is the reported and calculated Return on Investment (ROI) for the proprietary systems vs. Macintosh systems?
 - How long is each system kept before it is discarded?
 - Quantify some “hidden costs” of using each system, such as, number of proofs and consumables costs. (Future studies to get more qualitative information and add training costs, system administrator costs, repair costs, etc.)
- (5). Quantify usage and with key Apple products and technologies:
 - Color Sync 2.0
 - AppleScript
 - Apple Color Displays

II. Methodology

The survey sample is designed to represent five segments of the “publishing for profit” industry: ad agencies, graphic design studios, printing facilities, publishing companies and pre-press service bureaus using computers for creating, retouching and printing color publishing jobs.

To attain these objectives, samples of subscribers were obtained from two publications, *Color Publishing* and *Pre*. Both are controlled circulation publications that were able to contribute samples in the five specific segments, based on the subscribers’ subscription application card responses. Telephone interviews were begun on August 1 and completed on August 11, 1995 .

	<i>Color Publishing Magazine Completed Interviews</i>	<i>Pre Magazine Completed Interviews</i>
Total	300	300
Ad agencies	58	60
Graphic design studios	60	60
Printing facilities	60	60
Publishing companies	60	60
Pre-press service bureaus	62	60

Telephone interviewing disposition

Total ineligible	490
Do not create, retouch or produce color publishing jobs (Q.1)	160
Do not influence purchase of computer systems, work on color publishing jobs or manage people who do (Q. 2-3)	26
Wrong number	110
Number no longer in service	194
 Potentially eligible respondents	 2489
Completed interviews	600
Answering machine	1173
Refusals	144
Only person qualified, not available	106
No answer	355
Busy	102
Refused mid-interview	9

Among potentially eligible respondents who were called, interviews were completed with 24 percent.

III. Screening and Qualification of Respondents

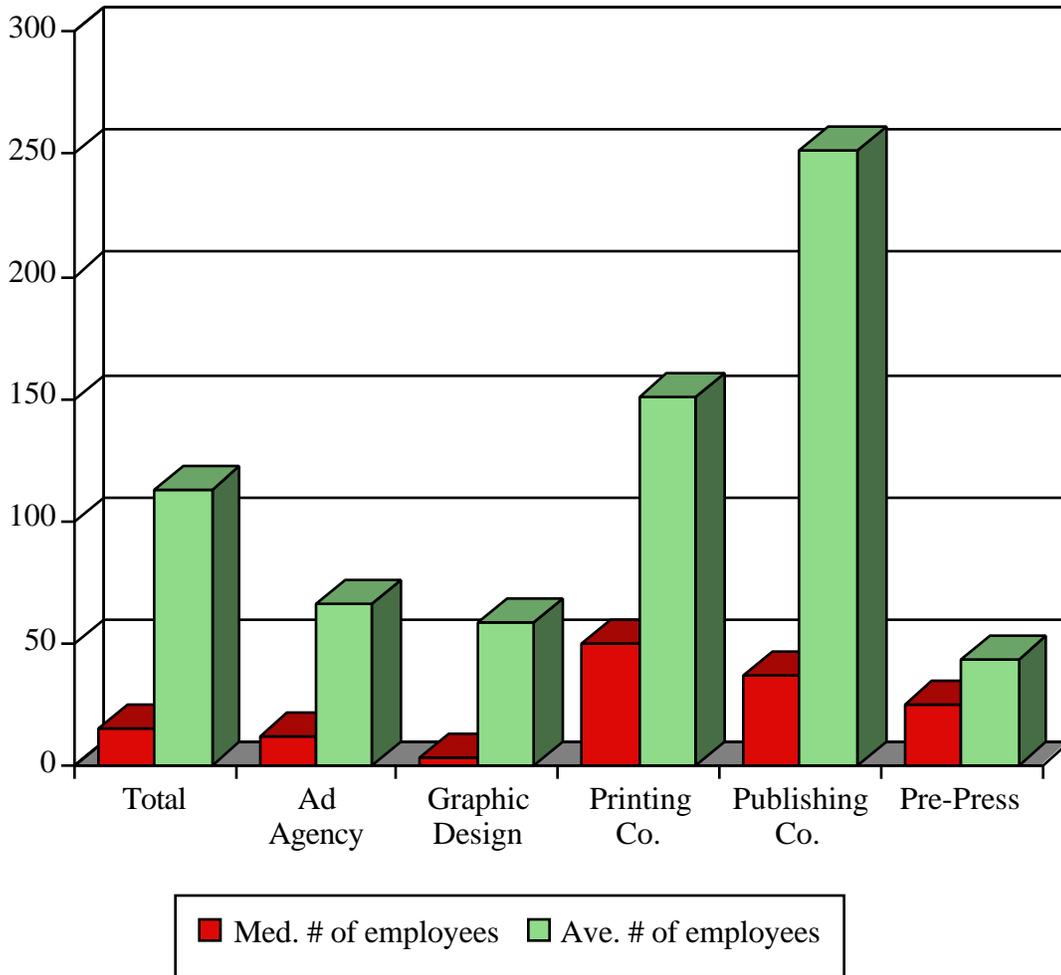
Criteria were developed to qualify both the work site and the individual who answered the questions at that site. To meet the work site qualification, all sites had to “create, retouch or produce color publications or advertisements”.

To meet the personal qualification to be interviewed, respondents had to say yes to one or more of the following questions:

- Do you influence or manage the purchase of computer systems for color publishing or advertising?
93 percent of those who qualified answered yes to this question
seven percent of those who qualified answered no
- Do you personally design, retouch or produce color publishing or advertising jobs using computers?
87 percent of those who qualified answered yes to this question
13 percent of those who qualified answered no
- Do you manage people who design, retouch, or produce color publications or advertising jobs?
80 percent of those who qualified answered yes to this question
20 percent of those who qualified answered no

IV. A Profile of the Sample

Median and Average Number of Employees



- Surveyed sites average 113 employees at their work location. It is helpful to remember that averages can be deceiving because they may be influenced by a relatively small number of very large sites. Half of the surveyed organizations have 15 or fewer employees and half have more than 15. Half of the graphic design firms have four or fewer employees.
- Publishing companies are the largest, with an average of 251 employees and a median of 37.
- They are followed by printing companies, which average 151 employees and a median of 50.

- Graphic design firms (average 59 employees, median 4) and pre-press service bureaus (average 44 employees, median 25) are the smallest organizations.

**Median and Average Revenue from Design and Pre-press Computers,
Average Revenue per Employee - Past 12 Months**

	Total	Ad Agency	Graphic Design	Printing Co.	Publishing Co.	Pre-press Service Bureau
Median revenue from all design and pre-press computers, past 12 months	400,000	1,750,000	75,000	1,000,000	500,000	400,000
Average revenue from all design and pre-press computers	5,896,000	12,281,000	1,267,000	8,544,000	9,788,000	3,127,000
Average revenue per employee	52,177	186,076	21,475	56,583	38,996	71,068

- The median revenue generated by design and pre-press computers during the past 12 months is \$400,000 and the average is \$5,896,000.
- This amounts to an average revenue per employee of \$52,177 per year.
- Ad agencies generated the highest revenue from their design and pre-press computers, an average of \$12,281,000 and a median of \$1,750,000. This amounts to a yearly average of \$186,076 per employee.
- Pre-press services companies' median revenue from design and pre-press computers was \$400,000 and the average revenue was \$3,127,000. The average revenue per employee was \$71,068.
- Printing companies' had a median revenue of \$1,000,000 and an average of \$8,544,000. Their average revenue per employee was \$56,583.
- Graphic design firms had the lowest revenue, a median of \$75,000 and an average of \$1,267,000. Their average revenue per employee was only \$21,475.

V. Some Definitions

Color publishing The focus of this study is on computer systems being used for for-profit color publishing of printed materials; that is for creating, retouching or producing publications or advertisements. In this report, "Design and pre-press computers" are the same as "color publishing computers".

Proprietary systems The survey questionnaire identified proprietary systems to respondents as "not off-the-shelf computers, but entire high-end systems sold as 'complete solutions' specifically for color design and pre-press. They cost \$15,000 or more and use Unix or a non-standard operating system, not Windows or Macintosh. Examples of these include systems sold by Scitex, Linotype-Hell, and Quantel. However, some of these vendors also offer desktop-based (i.e., MacOS) solutions and these systems were not included in the proprietary systems category.

Types of publishing companies

Companies that publish documents can be divided into:

- (1) "Publishing for Profit"--companies whose primary business is document publication or printing, which includes most of the companies studied in this research,
- (2) "Publishing for Work"--companies whose primary business is not publishing, but have in-house departments or individuals who create and publish documents,
- and (3) "Casual/DTP Publishing"--individuals who occasionally do low-end desktop publishing.

The focus of this study is on segment #(1) "Publishing for Profit." Future studies are planned for segment #(2) "Publishing for Work."

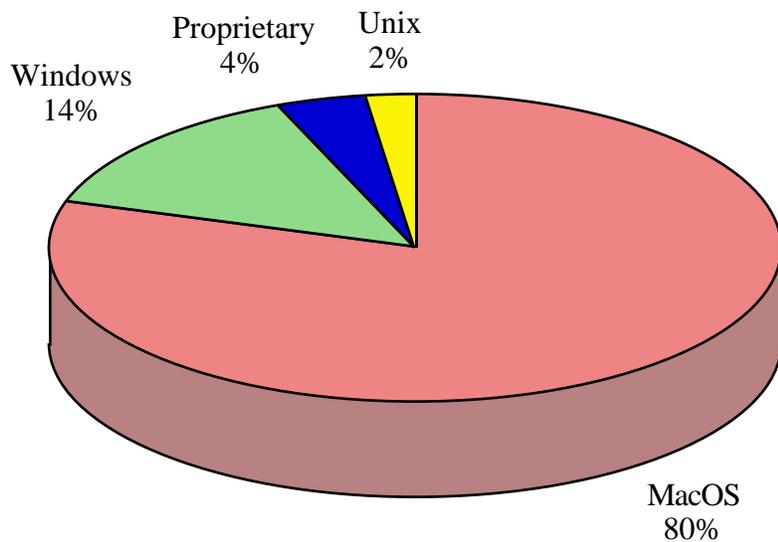
Site This survey asks respondents to answer questions about their own location, rather than all the locations of their company, in other parts of their city and in other cities. They are most likely to have accurate information about their own work location.

VI. Summary of Key Findings

Macintosh dominates in for-profit color publishing

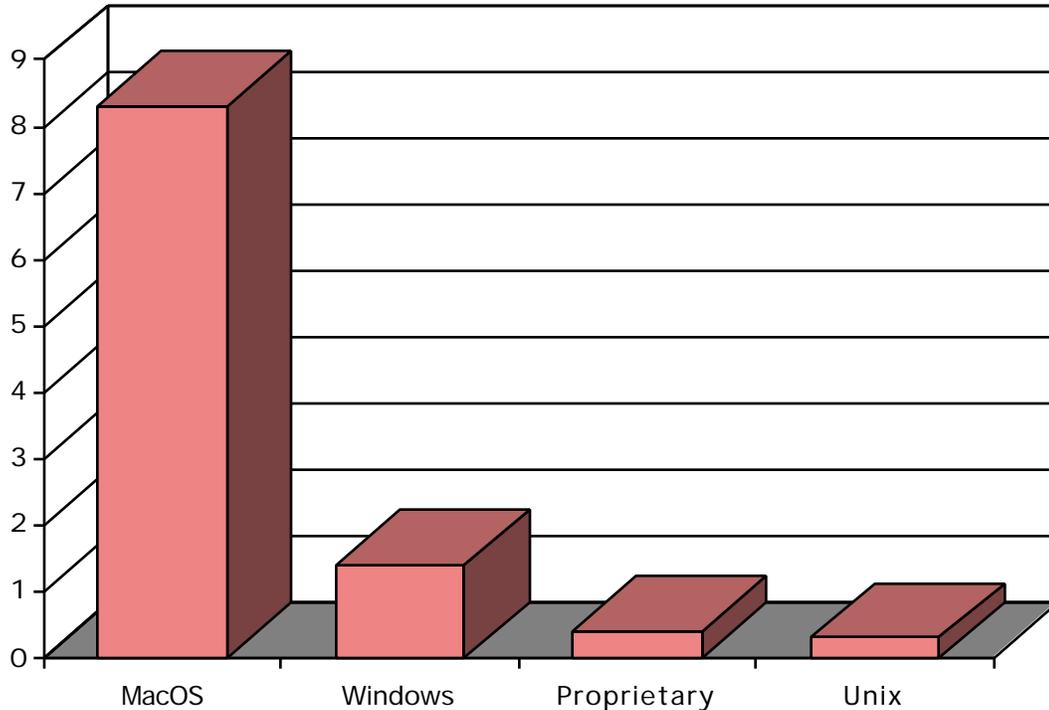
- In the five industries studied (advertising, graphic design, printing, publishing and pre-press services), nearly **9 out of 10 use at least one Macintosh** for color publishing jobs. 36% use at least one PC with Windows, 14% use proprietary publishing systems, and 11% use at least one Unix workstation.

Share of Color Publishing Computers



- Of the sites surveyed, **Macs make up 80%** of all color publishing computers used to design, retouch or produce color publications or advertisements at sites that create color advertisements or other color publishing jobs. Only 14 % of computers used for this purpose are Windows PC's, 4% are proprietary systems and 2% are Unix workstations.
- At medium to large sites (those with more than 5 employees), the **share of Macs installed jumps up to over 85%**.

Color Publishing Systems Per Site

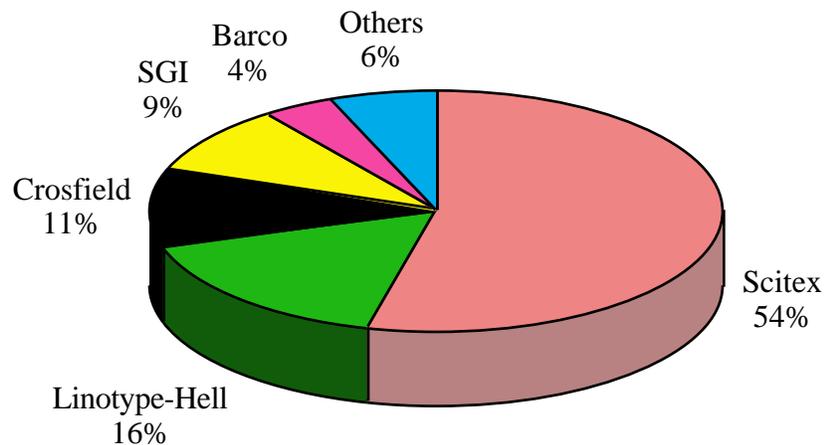


- The average site producing color publishing or advertising jobs has **8.3 Macs installed per site**, 1.4 PC's running Windows, 0.4 proprietary publishing systems and 0.3 Unix workstations. Sites that have at least one Mac for color publishing have an average of **9.3 Macs installed per site**. Two industries surveyed, publishers and pre-press/service bureaus average over **12 Macs installed per site**. And sites with 51 or more employees average over **20 Macs installed per site**.
- An estimated over **600,000 Macintosh systems** are in place in the U.S. in these industries used to design, retouch or produce color publications or advertisements. The estimated **total value of these Macintosh systems** in these U.S. industries to produce color print publications (including displays, graphics cards, and drives) is nearly **\$4.5 Billion**.

Proprietary publishing systems still being used at some sites

- Of all the sites surveyed, **14% use at least one** proprietary publishing system. However, **32% of service bureau's** and **24% of printing companies** use at least one proprietary publishing system. In addition, of companies surveyed with 51 or more employees, **33% have at least one** proprietary publishing system.
- An estimated **27,000 proprietary publishing systems** are in place in the U.S. in these industries used to design, retouch or produce color publications or advertisements. The estimated **total value of these systems** in these U.S. industries to produce color print publications is nearly **\$4.2 Billion**.
- Although proprietary systems account for only 4% of the *unit* share of computer systems used for color publishing at these sites, they account for **38% of the total dollar share of all systems used**.
- Of those sites using proprietary systems, **98% are also using at least one Macintosh**. In fact, on average, these sites with proprietary systems have more than **15 Macs per site**. So, these sites are using Macs in conjunction with proprietary systems, but have not yet switched ALL of their proprietary systems to Mac.

Share of Proprietary Systems Installed

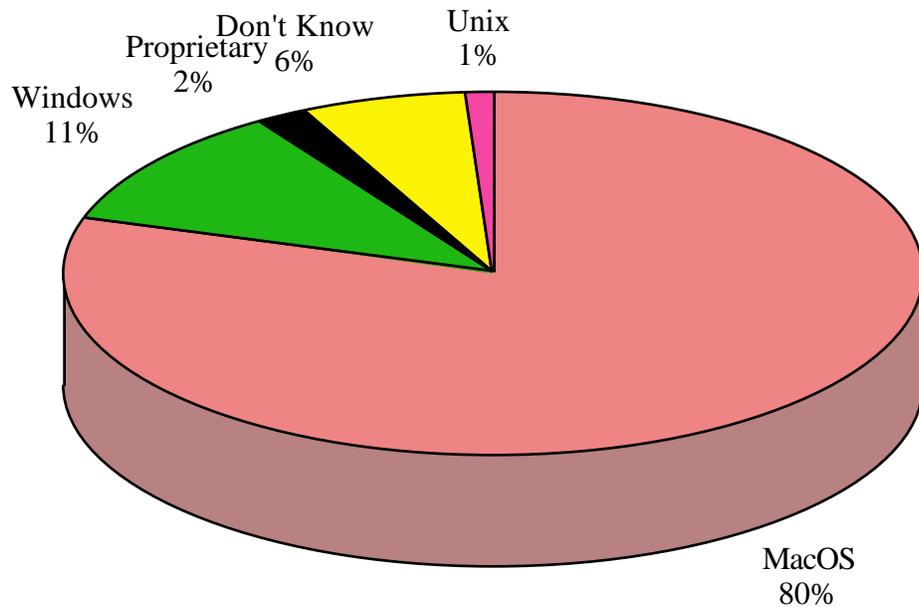


- **Scitex** has the largest share of installed proprietary systems (54%), followed by **Linotype-Hell** (16%), **Crosfield (DuPont)** (11%), **Silicon Graphics publishing systems** (9%), **Barco** (4%), **Quantel** (1%) and **others** (5%).

Macintosh rated most cost-effective system

The respondents in the survey were asked which computer systems were the most cost-effective for color publishing at their sites.

Systems Rated Most Cost-Effective

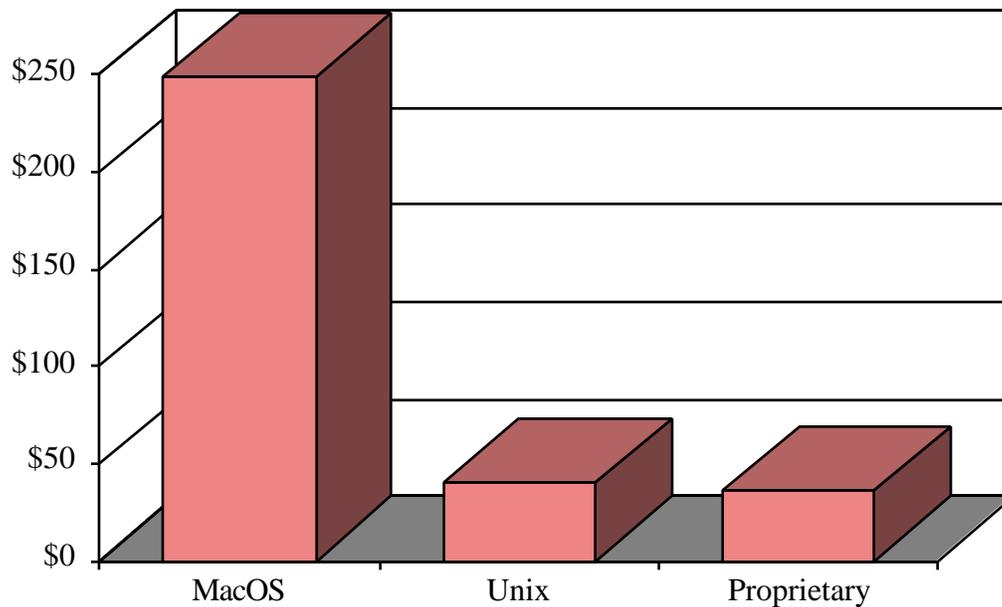


- **80%** of all respondents said Macs are the most cost-effective type of computer for design and pre-press.
- **90%** of sites that use one or more Macs for design and pre-press said Macs were the most cost-effective. **60%** of sites that use one or more Windows PC's said Macs were most cost effective and **31 percent** said Windows PC's were most cost effective. No matter which computer systems sites were using for design and pre-press, all types of sites indicated Macs were the most cost effective by far.

Macintosh wins in key ROI calculation match-ups

In addition to asking respondents which systems were most cost-effective, Griffin Dix Research also quantified the ROI for each system by asking a series of questions relating to complete system purchase price, revenue generated per system, and length of ownership. The focus was placed on Macs vs. proprietary systems.

ROI per month



- The return on investment (ROI) from Macs is nearly **7 times higher** than that of proprietary publishing systems and over **6 times higher** than that of “off the shelf” Unix workstations. This data gives strong support for these companies to move color publishing from proprietary systems to Macintosh desktop systems. Qualitative research is currently in progress to provide additional info in this area.
- The ROI calculated for Mac systems at medium (5-50 employees) and large (more than 50 employees) sites in these industries is higher than any other system including Windows PC's:
- At medium size sites with 5 to 50 employees, the ROI for Macs is **39% higher than Windows PC's** (\$566 per dollar invested, compared to \$408 for Windows PCs).
- At large sites with 51 or more employees, the ROI per computer from Macs (\$179 per dollar invested) is **more than 2 times higher** than that of Windows PCs (\$87 per dollar invested).

- Sites that use Macs and no PC's generate almost **2 times** as much revenue as sites that use PC's and no Macs. The average revenues are \$5,630,000 per year from all design and pre-press computers at Mac (and no PCs) sites vs. \$2,838,000 at sites using PC's and no Macs.

An interesting note about small sites

- Although firms with 1 to 5 employees make up 29 percent of all the color publishing firms surveyed, they account for **only 11.2% of the total revenue** generated in the industry. These sites do much less overall volume of color publishing work.

Replacement of proprietary systems in past 12 months

- The ratio of proprietary systems retired in the past 12 months to the current proprietary installed base is **8%**. This compares with a ratio of 16% for Macintosh, 9% for Windows PC's and 5% for Unix workstations. However, most Macs were probably replaced with new Mac models (as shown in other Apple studies).
- Of the respondents who were able to answer the question about which types of computers proprietary systems were replaced with*, **45% replaced proprietary systems with Macs**, 45% with other proprietary systems and 5% with Unix workstations. **NONE** replaced them with Windows PC's. *caution: small sample size.

Plans for this year call for more replacements

- During the next twelve months, **14 percent** of those with proprietary systems (12 sites of 85) plan to discard or replace them.
- If these results are typical and 14% of sites with proprietary systems plan to replace one or more of them in the next 12 months, then **in five years 70%** of sites with proprietary systems will be replacing one or more of them.
- The fact that **48%** of all installed proprietary systems are at pre-press services companies indicates they are the best prospects for replacing proprietary systems with Macs. The next best prospects are printing companies (who have 24% of installed proprietary systems) and publishing companies (with 17% of installed proprietary systems).
- Of the respondents who expect to replace proprietary systems in the next 12 months, **42% expect to buy Macs instead of other proprietary systems**, 17% expect to purchase other proprietary systems and 17% expect to purchase off-the-shelf Unix workstations. None expect to purchase Windows PCs. 3 respondents did not know which systems they would buy in place of proprietary systems. Although this sample is much too small for a reliable projection to the market, it is interesting to

note that 5 of 9 who answered this question said they expect to buy Macs in place of the proprietary systems they are discarding.

Multiple Macs replace retired proprietary systems

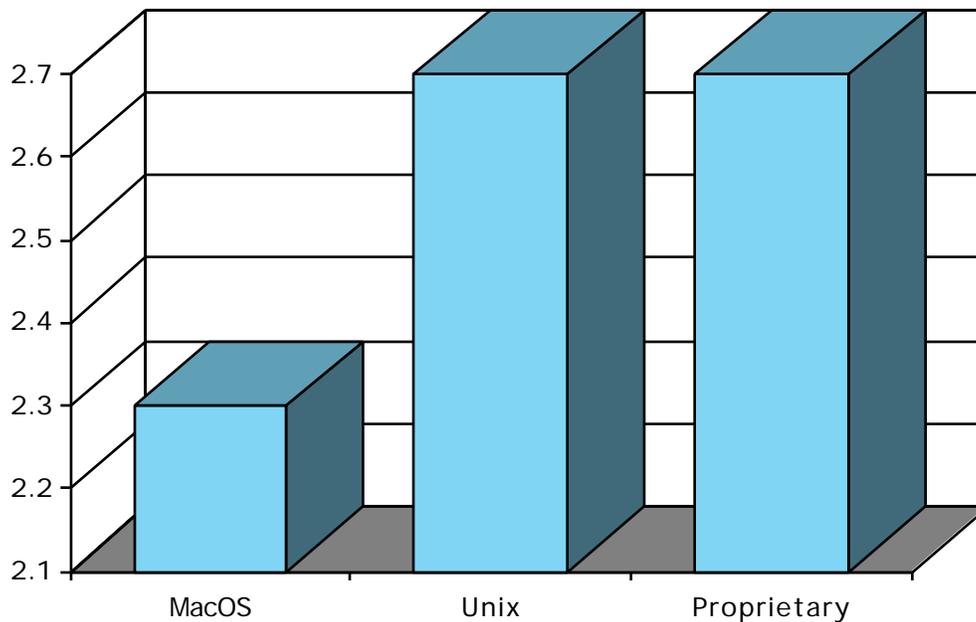
- Although the total sample size for those who reported how many systems will be replaced was very low and should be used with caution, an average of **2.5 Macs** will be bought to replace each proprietary system retired. Future studies will explore the Mac to proprietary system replacement ratio in more depth.

Estimated market size

- Combining Griffin Dix Research Associates survey data (three surveys with a total of 1,390 respondents) with estimates of the size of different market segments from American Business Lists and *Color Publishing Magazine*, estimates. Griffin Dix Research estimated there are 125,000 total color publishing sites and over half of them (57 percent), or **71,250, are color publishing sites in the five industries studied**. The remaining 43 percent of the market included corporate in-house color publishing sites (38 percent) and educational institutions (five percent) doing color publishing jobs in-house.
- The 71,250 color publishing sites in these five industries average 8.3 Macs installed for design and pre-press work. This amounts to nearly **600,000 Macs in these industries alone**. It is also estimated that the number of sites doing color publishing has grown since the last data was available and that the number of Macs per site since August 1995 has probably also increased.
- The 71,250 color publishing sites in these five industries average 0.38 proprietary systems installed. This amounts to over **27,000 proprietary systems installed in these industries**.
- The total original price paid for all systems in these five industries is **\$10.9 billion**.
- The total original value of installed **Macs is estimated to be \$4.5 billion**. The total original value of these **proprietary systems is estimated to be \$4.2 billion**.
- Macs account for 42% of the total cost of installed systems, proprietary systems account for 38%, Unix workstations make up 15% and **Windows PCs have only a 5% share of the total original cost**.

Number of proofs lower on Macs at top companies

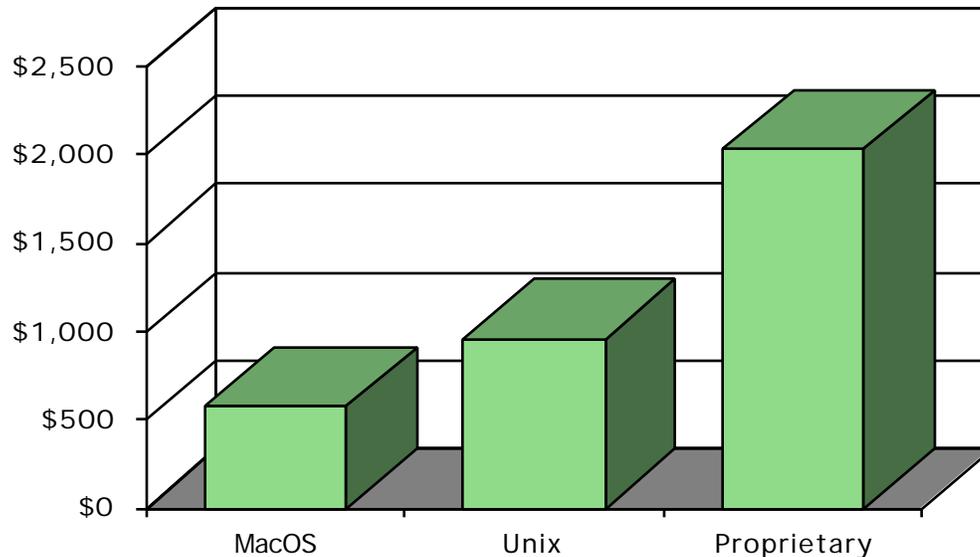
of Proofs Before Final



- For the top high-end companies* (those with Macs, PC's AND proprietary systems), **Macs have the lowest number of proofs required--15% less than proprietary systems and Windows PC's.** *The sample size here is small, so please use with caution.
- A Mac to Windows comparison can be made between sites using Macs and no PCs vs. sites using PCs and no Macs for color publishing. When this comparison is made, we find that **18% more proofs** are made on the Windows PCs (average 4.7 before the document is final) than on the Macs (average 4.0).

Consumable costs lower on Macs

Consumables Per Computer Per Month



- Sites using proprietary systems have **3.5 times higher consumables costs** per proprietary system than sites using Macs per Mac used--\$2,030 per month per system compared to \$580 per month per system.
- Sites using Unix systems have **66% higher consumables costs** per proprietary system than sites using Macs per Mac used.

Three of four color separations done on Macs; proprietary systems still being used, however

- **47% of the sites** surveyed do color separations in-house. However, **82 % of service bureaus** and **61% of printing companies** are doing color separations in-house.
- **75% of all color separations done** in these industries are done at either service bureaus or printing companies.
- **74%** of all color separations done in these five industries are carried out on **Macs**. 13% are done on proprietary systems, 10% on Windows PCs and 3% on Unix workstations.
- **Advertising agencies** do **88%** of their in-house color separations on **Macs**. 12% are done on Windows PC's.

- **Printing companies do 36%** of their color separations on **proprietary systems**. Furthermore, almost 40% of these printing sites do **76% or more of their separations on proprietary systems**. Once again, this shows a great opportunity for replacement with Macs.
- Large sites (51 or more employees) do **31%** of their color separations on proprietary systems.

ColorSync 2.0 gets off to great start

- Apple's ColorSync 2.0 software was released on March 28, 1995. This study was fielded about four months later, in the first week in August. Already, ColorSync 2.0 had a **93% awareness** among those surveyed. In addition, **14% of color publishing sites were already actively using ColorSync 2.0**.
- Of **advertising agency sites**, the number jumps to **23% already using ColorSync 2.0**. Of graphic design sites, 19% were already using it.
- Among users of ColorSync 2.0, **75% said ColorSync 2.0 was helpful in managing color**.
- At commercial publishing sites, **90% say ColorSync 2.0 has been helpful in managing color**; at advertising agencies, **80% say ColorSync 2.0 has been helpful in managing color**.

AppleScript use quite extensive

- **18% said someone in their organization uses AppleScript** and 10% of all respondents said they personally use it.
- When looking at publishing sites and pre-press service bureaus, **the number using AppleScript jumps to over 1 in 5 (21-22%)**.
- At sites with more than 51 employees, the number jumps to **over 1 in 4 using AppleScript (26%)**.
- Of those respondents who were personally using AppleScript, they said that they had created an average of **over 10 scripts** in the past year.

Apple color displays used at almost half of these sites

- **42%** of the sites use at least one Apple color display. That number is highest at advertising agencies where nearly **50%** use at least one Apple color display.