Implementation of a Pagination System

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If you were to create an adage about the installation of a pagination system it might go something like this:

> *Installing a pagination system is much like building a ship while already at sea — it is possible, but be prepared to get wet.*

The newspaper industry is unique —something we all know, confront and (very occasionally) embrace daily; even more unique are the processes used to create or manufacture our product. With the exception of the installation of new press units, seldom does a newspaper install a new system as a separate and stand-alone process. More often, we install our new systems layered over existing manufacturing methods.

For example:

• If you are in the auto industry and want to create a new type of car, you would create a new production line to build your product. Just ask General Motors about the Saturn.

• If you want to bake a new kind of chocolate cookie, you would build a new production line to bake and package your product.

• If you are a newspaper and want to produce your product using computers instead of Xacto knives and keyboards instead of paste-up boards, you would patch together an interim solution. You might figure how to do some of your less important production on the new system as you brought more and more equipment into the building.

That, unfortunately, is the way we install pagination or new production systems at our newspapers. Clearly, this can't be the most effective, most productive way of bringing in new technology.

Defining Pagination

It probably is a good idea to give you my definition of pagination, that process that always seems to be five years away from today: Pagination is the process of output of totally composed pages with halftones and graphic elements in place. This output can be on paper or on film. Anything less, using my rigid definition, is something called "area composition."

In most cases, however, we can use pagination in its sweeping definition as we look at what you need to think about during the installation process.

How big is this universe? While there hasn't been a definitive study of all 1,600 daily newspapers, let me share some information from a newly released 1992 survey of Society of Newspaper Design's 2,300 worldwide members worldwide.

The survey — which had a return rate of 35% — found the following about the status of pagination:

Complete, with text, photos, graphics	9.7%
Complete, with text only	16.9%
Incomplete, with text, photos, graphics	22.9%
Incomplete, with text only	14.8%
No pagination, planning installation	23.3%
No pagination, no plans	12.4%

Installation of a new page production system is often a matter of definitions. Your definitions. Your vendor's definitions. Your staff's definitions. On the basis of my experiences, I can safely say that all the definitions will be different.

It is much like a group of blind scientists standing around an elephant. Each one has hands on a different part of the animal; each one describes something very different from his or her colleague.

Why Definitions Matter

Let me give you some examples as to the areas where the need for common definitions is vital:

Output: How many pages can you push through a typesetter?

Creativity and Production: Covers vs. agate stock table pages.

Control: Who runs the equipment and who makes decisions.

Color Imaging: Where and when?

Leadership: Who's doing what.

Each one provides unique opportunities for shaping the installation. And conversely, each has pitfalls and problems. Here are some of my experiences and thoughts to consider when installing a new pagination system:

OUTPUT

Output is often a subject of great discussion between the newsroom, the production department and vendors. In Phoenix, it was a long and often unpleasant discussion based on some early misunderstandings about how fast you could create a page. The issue was divided into two parts:

First, how long does it take a 'designer' to create a page and get that information to output? Our biggest problem involved the "creation" of the page. It was taking longer than what the newspaper's managers had heard the vendor say was the time factor per page. In fact, it was taking almost twice as long and that had a major impact on the company's bottom line as more resources were shifted to page creation there was less savings in production.

During the installation phase, detailed records were kept as to how much time it took to produce each and every page. No matter has hard we pushed, no mater how often "efficiency experts" visited, *The Republic* couldn't get its numbers much above half of what the vendor was quoted as promising. Without other newspapers at that time working on a similar system, there was little opportunity to compare how well or poorly the paper was doing.

The debate ended shortly after Phoenix Newspapers Inc. completed a pagination installation at its second newspaper —*The Phoenix Gazette*. The numbers didn't change (actually, they were a little lower).

The second issue: How long does it take a page to go through the production cycle? Not just the typesetter, but all of the computer systems between the "front end" and the output device. While there wasn't a major disagreement in this area, it was a learning process that the newsroom and other departments needed to go through.

You can discuss "throughput" as a measure of one page going through one typesetter and measure that page and have an accurate yardstick. However, how do you

explain throughput when it involves five different departments all trying to move pages for the first edition at the same time. It doesn't matter who is "early" or "late." What matters is how fast the computers can process the material before it can send it to the typesetters and then how fast can the typesetters set the page.

For example, output for *The Republic*'s front page must involve the art department and the time necessary to process the page's "overline" element. This graphic is handled by our Information International Inc.'s Postscript Interpreter. If we are trying to figure out if a page is late, we need to look at sometimes two or three computer processes — the image network processor, the Graphics Connection (for Scitex color files) or the Postscript Interpreter.

This is a critical area for any installation. Make sure you and your vendor understand what each of you mean when it comes to defining page creation and output.

And if you choose to create a pagination system with off-the-shelf equipment, make sure all of the newspaper's player's understand how long it will take to perform each function.

In the newsroom, there is another consideration when dealing with the "output" issue: How many machines will you install for the production of pages. Not just how many machines for editing and design, but how many machines for production? This number, of course, is often reached by trading off several factors — mostly costs versus work scheduling.

Installing a "proprietary" pagination system has taught Phoenix Newspapers a unique skill — musical chairs (or musical design workstations). Five years ago, our design/pagination workstations cost close to $80,000. Hence, making maximum use of each station became an important consideration. Two shifts became a cost effective way of dealing with the work rather than spending $500,000 for additional workstations. However, as we develop new products and sections, a major factor in our decisions involves how we will fit the new product into our current production work flow.

CREATIVITY AND PRODUCTION

This is often a area that gets overlooked when installing a system. Yet is has some of the most potential for success or for major problems.

When we created pages with "paper dummies" and sent them off to a production department who understood its role in the manufacturing process, there was little problem in creativity vs. productivity.

But what happens if you no longer have a composing room that handles such routine pages as the comics or stock tables? Who will be responsible for the Television

book? A visual journalist? A former composing room employee now working in the newsroom?

We often talk about how "people are our most important asset." That's probably true. But do newspapers have much awareness what motivates the visual journalist? How to hire designers or get "production workers" to buy into the editorial process?

Understanding these issues prior to installation can make for a more successful project.

Part of that understanding involves deciding how many pages you expect each designer or editor to produce. And that issue becomes linked to output and to the number of machines you have to produce pages.

(The "human" factors in pagination are so great that there is a separate discussion on that topic later today.)

CONTROL

This tends to be a newsroom issue. However, it isn't such a small or minor point that it should be overlooked. Clear and well-defined areas of responsibilities are vital to the successful installation.

This often means establishing a design department and giving one manager the responsibility of getting the newspaper out of the design workstations and into the typesetters.

Establishing a new department often has the potential of becoming a political decision rather than a production or editorial decision. Given the powerful responsibilities that design and presentation bring to the table, it doesn't seem surprising the difficulties many newspapers face when shifting responsibilities (read that as "control") from one department to another.

Traditionally, the news desk has maintained the tightest grip on the presentation and production process. However, content editors —from sports to features— also can resist the opportunity to restructure their work with the establishment of a design department.

At *The Republic*, the first attempts at a design department revolved around the idea that each section would be responsible for its own pages and that pages without a natural home would be handled by a "core" group of designers and paginators. This core group would also provide backup and technical expertise to the section editors who would split their week between traditional duties — working with reporters and their stories, selected wire copy, etc.— and their new electronic responsibilities.

This idea never really worked because of a key missing element: the technical nature of the equipment demanded consistent use and that no matter how we trained you at the

start, the occasional users couldn't handle the production nature of the job. Is this unique to the specialized triple-i equipment we installed? I don't think so, as I see the same challenges using off the shelf software and hardware, such as the Macintosh and programs like Quark Xpress.

In addition, from purely an editorial view point, the lack of a centralized department, meant many different editorial styles and a page flow nightmare.

The Republic's experiment with a decentralized approach lasted less than a year.

There are other areas of control or responsibility that need to be dealt with. For example, just when does a newspaper go "off the floor" and to platemaking? Here are some different ways of thinking about this question:

 • Off the floor means when the final page comes of the typesetter
 • Off the floor means when the "print" button is pushed.
 • Off the floor means when the final page hits the RIP

Each one of these "deadlines" can make the difference between being on-time and late. And these days that can mean jobs and money.

COLOR IMAGING

It is a simple statement: Imaging color is much more difficult than imaging black & white. And not just by a factor of four. However, this issue can get overlooked during the installation of a pagination process. Handling color on the variety of production systems can be a logistical nightmare and an experience in conflicting standards. None of which matters when you are trying to push out the final color pages on deadline.

When installing a pagination system, we've learned to look at time spent at these system for what they cost "up front" as much as how they fit in the production process.

With the transition to desktop, there needs to be careful examinations of options such as Open Pre-press Interface (OPI) as a way to increase design productivity while handling the large color files generated by Scitex or desktop scanners like Nikon, Kodak or Leaf.

There are other areas to think about when dealing with a pagination installation:

 • Make sure there is a "installation team" in charge of dealing with vendors and the newspaper's various departments.

 • Develop a written form of communication about the status of the project, the status of problems. You can't document too much — for either the end user or the vendor.

 • Make sure there is a backup system. Or be prepared to lose sleep. Once the composing room is closed, how will you get pages out of your system if the file server

crashes?

The Republic and *Gazette* have been completely paginated with color images and remote typesetting for more than three years; for black and white pages, we've been completely paginated for more than five years.

In that time we've learned that being on the cutting edge has its advantages. We've saved money, created a better looking newspaper, increased the amount of color in the paper easily, developed more flexible deadlines and established design as an important part of the editorial process.

But that cutting edge is on both sides: We've come too close to not publishing at least twice. And we still don't have all the pieces in place for a smooth and effective backup system. However, as we get ready to install our second wave of pagination equipment, we have confidence that we learned many of the hard lessons and fought many of the political battles that will make what ever direction we do go much smoother and just as successful.

And, of course, it doesn't hurt to remember to smile and laugh regularly.