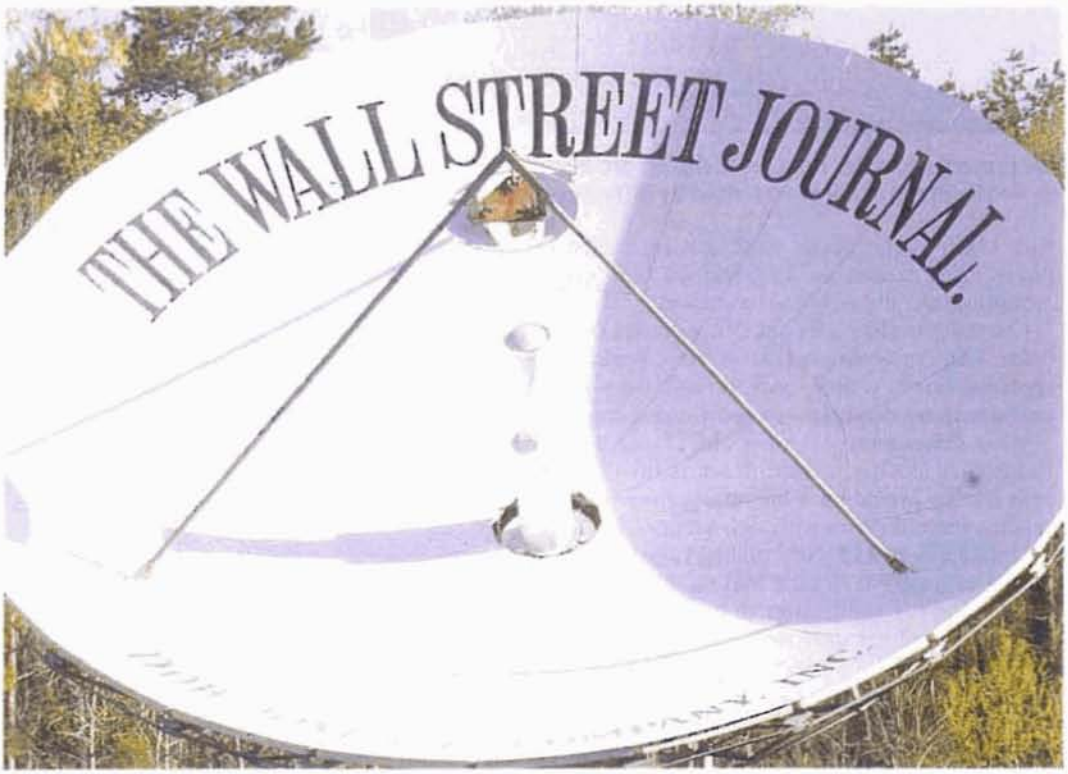
# Winds of Change Buffet WSJ's Charlotte Plant *by Clark Robinson*

On the wall just inside the entrance to The Wall Street Journal's Charlotte, N.C., printing plant hangs a plaque that reads: *In recognition of the hard work, dedicated service, effort and can-do spirit of those employees of Dow Jones & National Delivery Service under extremely difficult circumstances after Hurricane Hugo hit the Carolinas in September 1989.*

"Hurricane Hugo made it 200 miles inland with hurricane-force winds," recalls Michelle F. Bakarich, the plant's production manager. "Some of our employees were without power for two weeks. Some had damage to their homes. People cooked and showered here at the plant, even though we had neither power nor phone service. We even had to get a generator to run the press. But we got all the newspapers out, and our delivery people were jumping over downed trees to make their deliveries."




**A satellite receiving station at The Wall Street Journal's Charlotte, N.C., printing plant stands ready to receive pages from pre-press operations in Chicopee, Mass. By 2001, after the move to full pagination, all editorial pages will be beamed from New York City, ad pages from Orlando.**

## A Massive Color Expansion Project

More than 10 years later, the Journal is tapping into that can-do spirit once again as it unleashes a hurricane of a different sort: a massive color-expansion project that includes all 19 press lines at its 17 regional printing plants nationwide. All of the Journal's plants currently have color capacity on eight of 80 pages; after the expansion, they will have 24 color pages and a total page count of 96.

"The Journal routinely sells out the six color pages it devotes to advertising," says Vice President of Production Michael Sheehan. This is true even though the paper has been offering color for less than five years, having printed its first full-color ad on Oct. 22, 1995 (TechNews, May/June 1996, p. 19). Additional ad revenues are expected to more than cover the cost of the color expansion, estimated at about $230 million.

Nine of the press lines at nine Journal plants run Japanese TKS presses, while the remaining 10 lines at eight plants use presses from Goss Graphic Systems of Westmont, Ill. The TKS and Goss plants are adding color capacity on parallel schedules, and Charlotte is the first TKS plant to upgrade. All plants are scheduled to be fully operational by early 2002.

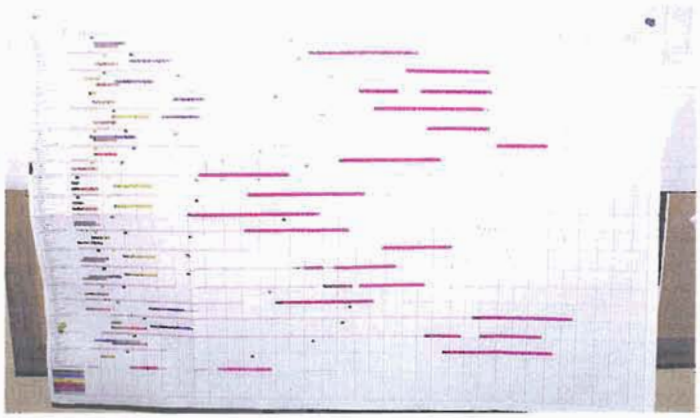
Each plant will add color capacity in four phases: the facility will be expanded, press drives will be converted from DC to AC power, press lines will be "balanced," and two color towers will be added to each line. The Journal hopes to accomplish this with no downtime or page-capacity loss at any of its plants and plans to retain all currently installed press couples.

Balancing the press lines involves moving units to create six webs to the left of the folder and four to the right to make room on the right side for the color towers. After the towers are added, there are six webs on each side. "The business reason for balancing is to give us more flexibility in the design of each issue in terms of section sizes, section splits and the positioning of color pages," says Sheehan.

Since most plants were built at least two decades before the Journal first printed color, that's proven easier said than done. "The facilities were not designed for the press lines to be that long," says Dario DiMare, principal of Dario Designs Inc. of Framingham, Mass., the project's primary architect. Since plans called for units to be added to each end of each press line, "we had to add units where there were boilers, electricals, switch gear, press controls. It was like heart surgery."

At presstime, the expansion—a complicated daisy chain of overlapping work schedules involving an army of contractors—was proceeding on schedule.

The Charlotte plant, which prints about 80,000 newspapers a day for distribution in the Carolinas and surrounding areas, broke ground last March. Its expansion involved adding room at the nose end of the press for two TKS Color Top 6000 towers



**The project schedule. Printing facilities are along y-axis, time on x-axis. Projects are represented as different-colored lines.**

**Charlotte Production Manager Michele F. Bakarich demonstrates the new ABB press console that controls ink-and-water balance.**

with digital page packs, and moving its loading dock. Many plants must extend the building on both ends of the press to accommodate the new configuration.

Charlotte replaced its old DC press drives with new AC drives from ABB Automation Inc. of New Berlin, Wis. Motors were replaced one at a time, and the new ones were tuned and balanced with no downtime or lost production.

"Our drives were 17 years old," Bakarich says. "The energy industry is moving toward deregulation, and our relationship with energy providers is becoming more critical. We wanted to replace the old drives with new technology."

Unlike many of its sister plants, Charlotte didn't have to move any press units—it already had six webs to the left of the folder and four to the right. After the towers were added, it had a balanced line with six webs on each side.

All phases of the project relied heavily on outside contractors. In addition to architect Dario Designs, ABB installed the new drives, while Press-Tec Inc. of Altoona, Iowa, installed the TKS presses. "A large number of vendors has come together and responded very well to the challenge," says Bakarich.

Which is not to say that the project is finished. The next steps are press-operator training and acceptance testing.

"We are going to bring pressmen from other plants here to train them. They are used to running mono presses, and now they have to learn towers," says Bakarich. "There is also a need for auxiliary equipment. For example, we will test automatic registration systems, which we may or may not end up using. We will be studying the impact on our productivity and makeready times. We are looking at the impact of adding pages. We will be looking at the performance of the folder and of the entire press."

One result of all this installation, startup and testing will be a report on what the Journal's other TKS plants must do to ensure a smooth implementation. "We are putting together a document on what we've learned and what to look out for," Bakarich says.

Ironically, despite all of this up-front work, Charlotte will not experience the pleasure of running its new presses at full capacity right away. It will, however, use its towers to produce the current configuration of eight color and 80 total pages. "We won't be using the extra capacity here until all the plants are online," says Bakarich. "We will all come online together."

## Touring the Charlotte Plant

A tour of the Charlotte printing facility offers a fascinating contrast between old and new technologies. It starts in front of the building at a large satellite receiving station, which proudly displays the Journal's logo.

"We receive all of our black-and-white pages via satellite," says Bakarich. "Unfortunately, we receive our advertising color negatives via Federal Express." To eliminate FedExing, the plant is installing 11 Dolev 4News VXL imagesetters from Israel-based Scitex during the first week of May for a month of tests. "We expect to be transmitting color ads nationally by the fall," says Sheehan.

Adding to the theme of technical change is the fact that the Journal is moving to full pagination, and pre-press is moving into the news department. Later this year, all editorial pages will be arriving

electronically from New York City, and all ad pages from Orlando.

The next stop on our tour is Charlotte's pre-press area, which includes film developers and platemakers from Western Lithotech of St. Louis, and an empty space for the new Dolev imagesetters.

The quiet room in the press area also exhibits a contrast between old and new. The folder console, which controls press feeds and web tension, was built in the 1960s by Dow Jones engineers in South Brunswick, N.J. Open its cabinet, and you will see a tangle of wires from the era before desktop computers. It stands next to a sleek, new computer-driven ABB console that allows press operators to adjust ink-and-water balance on any press unit.

Enter the pressroom, and you will again see new technology standing alongside the old. In this case, however, it is perhaps more appropriate to say that the beige Color Top 6000 presses tower over the early 1980s-era TKS presses.

After a quick visit to the newsprint-

**Two new Japanese TKS Color Top 6000 tower presses (foreground) stand to the right of older TKS mono units.**

storage area, featuring 25 days' worth of newsprint rolls stacked to the ceiling, we enter Charlotte's mailroom.

"We don't do any inserting currently, although we used to," says Bakarich. "GMA was living here for two years in the early '90s." Ultimately, the year-and-a-half experiment was deemed unprofitable and abandoned, at least for now.

Charlotte labels 80 percent of its newspapers, printing customer names and addresses, as well as postal barcodes and route codes. Forty percent of deliveries are by mail and leave the Charlotte plant broken out by ZIP code in bulk-mail containers. The remaining 60 percent is delivered via "nonpostal delivery," including partnerships with the Spartanburg (S.C.) Herald Journal and The Herald-Sun of Durham, N.C.

"It's a win-win," says Bakarich. "The local papers increase their revenues. From our perspective, it is not efficient for us to go into neighborhoods where we have only three customers. Also, our subscriber-retention rates are better if we deliver in the early morning, which the post office obviously can't do. Our circulation department is aggressively expanding nonpostal delivery."

Which will, of course, involve more change—but nothing that the hurricane busters of Charlotte can't handle. ■

*Clark Robinson is the editor of TechNews. E-mail, robic@naa.org; phone, (703) 902-1686; fax, (703) 902-1700. Photographs by Charlotte, N.C., free-lance photojournalist Robert Padgett.*