

THE ACADEMY OF ELECTRICAL CONTRACTING

**Paper Presented by
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THINGS THAT ARE DIFFERENT AFTER THREE SCORE YEARS

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Periodically, Chewning and Wilmer, Inc. in Richmond, VA—the company I’ve worked for since 1946—honors its employees of longstanding with service pins. Recently, the company went to some lengths to celebrate my 60 years of involvement by holding a reception in which my own family members were conspirators. It was a surprise to me when a limousine picked me up, my daughter and son-in-law from New Orleans were inside, as well as six members of my family from this area. I was dumfounded but very thankful for the acknowledgement.

At that party, many of the younger people asked me about how things had been “back in that day.” I answered many questions about the specific ways in which things have changed, and was gratified to know that some of the relative newcomers to the industry were curious about our collective history. In response, I thought I might write down some of my recollections about the minute as well as the gigantic changes that have occurred—not only in the electrical industry, but in business in general—over the six decades I’ve been involved.

Contractor/Distributor

In 1946 most contractors were their own Distribution Centers. Remember that transportation was not easy: the depression and WWII had limited the number and quality of cars and trucks. We had a stock room with all sorts of gadgets, nuts and bolts, wiring devices, porcelain receptacles, pull chains, and fuses—to say nothing about conduit, wire and fittings. Our inventory would run upwards of \$50,000, a *lot* of money in those days. Everything had to be counted on December 31 and priced by January 25 for the year end closing of the books.

Taking inventory was the most disruptive activity of the business. We would do it on New Year’s Eve, because it *had* to be done. Not counting the building, which we owned, inventory was our principal asset—not vehicles, not tools. Up until the sixties I expect inventory was of *more* value than the building.

In the mid-Twentieth Century, the trucking industry may not have been in its infancy but it wasn’t more than a young teenager. Anything less than entire carload shipments were real messes. Railway Express could handle soft goods but hard

goods were often damaged in shipment. Adjustments were not easy. Trucking breakage was at least as high as the railroads. Panel boards and panel boxes were especially vulnerable, to say nothing about lighting fixtures—keep in mind, this was the time when the four-foot-long fluorescent was coming into its glory.

I believe the decrease in shipping damage is one of the most significant changes I have seen. I give little credit to the shippers, although they do have smoother highways. The credit goes to the way products are packaged, the pallet, and the forklift. Complicated corrugated boxes, Styrofoam, bubble paper, and shrink-wrap have virtually put an end to damaged shipments.

Communications

Communications have seen tremendous change. When I joined Chewning and Wilmer in 1946 they had a *very* advanced communication system. It consisted of two telephone lines with a rotary interchange. Having been a Signal Corps officer I knew how that worked. In the Army we called it a “hunt-the-not-busy-line.” About 1947 we had a third line installed, and in 1948, a fourth line!

Keep in mind, these were dial lines: slow and prone to misdialing. Touchtone started in the late sixties but didn’t take off for a long time. There was no answering machine, no voice mail.

Long distance was even worse: every call had to go through an operator. Ashland and Petersburg—merely 20 miles from Richmond—were long distance. As I recall, even calls to Midlothian, now a suburb of Richmond, carried a long-distance toll.

I remember well my first experience with the enormous technological advancement of Long Distance Direct Dialing. It was in the early sixties. We had just been awarded the contract to do the electrical work on P. Lorillard’s new Stemmerly in Danville, VA, about 150 miles southwest of our operations. We had erected our job site office and ordered a telephone line installed. When the technician finished, he told us that Danville had this “new thing” and we could dial our Richmond office (and nearly any place) directly. I couldn’t believe it. So I tried—and behold, my partner in our Richmond office answered the phone.

Copying

The ease with which we duplicate papers today masks the long road copying technology has taken to arrive here. If you needed an additional copy of an invoice back then, the process was enormously frustrating. There was virtually no way to get it except to ask the vendor to type it again using carbon paper. Then it had to be delivered either by courier, snail mail, or, *you* could drive to the vendor and pick it up yourself.

In the mid 50s, Daniel Construction awarded us the electrical contract at the new Babcock & Wilcox Nuclear Fuel Facility being built just east of Lynchburg, about 130 miles west of us. Unbeknownst to us, Daniel's accounting system required our billing to be supported by six copies of a vendor's invoice—three of which had to be stamped "Paid" and signed by the vendor. Imagine!

Many of us fondly remember the characteristic smell of mimeograph ink. In the sixties, the mimeograph was the *only* inexpensive method of producing multiple copies—other than a printing press, on which the type had to be set by hand. With a mimeograph you had to type onto a matrix and then run it through a machine which was a crude model of a rotary press. Few offices of our size had one. We just used oodles of carbon paper.

Photocopiers came onto the market in the 70s and improved fast. I can't tell you what a blessing this technology was. It was followed in the early 80s by the fax machine. At last you could send a message to a vendor without spelling half of it out over the telephone. But the recipient usually *still* didn't get it right...

Then came e-mail. Wow!

Accounting & Payroll

Calculators have changed all offices, including those of electrical contractors. In 1946 Mr. Wilmer, who did most of our billing, was using a manually-operated (i.e., no electricity) adding machine that printed the figures on a roll of paper. It was mounted on a roller stand. When not in use, it was covered by a removable, fitted canvas cloth. To multiply on it you had to shift the columns by hand, almost like an abacus. (P.S. He was still using it when he retired in 1970).

After Mr. Wilmer, our bookkeeper-payroll person, Turnley Fraker used what was considered a sophisticated calculator. It had the beginnings of what we now call "programmable." For example he could set a multiplier to .005 and then multiply a column of figures—one at a time of course—without changing the multiplier. Wonderful, we thought!

Incidentally, that .005 figure was the one we used to calculate Social Security payroll deductions. The Social Security contribution rate was 1%, half by the employee and half by the employer.

Speaking of payrolls, all payments were in cash. Few employees had checking accounts—most had fruit jars at home, which the wife guarded.

Therefore, on payday, we had to make a "change list." We went to the bank with a check for, let's say, three thousand seven hundred and eighty-four dollars, and twenty three cents. There were 33 people on the payroll, each of whom received a different amount. We had to give the bank a list saying how many twenty dollar bills we wanted, how many tens, fives, and ones we would need. Then how many 50 cent pieces, 25, 10, 5, and 1 cent pieces we needed. In due time we would go back to the bank pick up the bag of money, carry it to the office, and stuff the right amount in each of the 33 pay envelopes.

We didn't use payroll checks until the early sixties.

Tools & Equipment

Outside electrical work—line building, transformers on poles, and H-structures—required the workmen to climb poles and work from "climbers." Climbers were steel and leather frames attached to the feet and lower legs. On the inside ankles was a triangular, pointed spike. The user would stand in front of the pole, spread his legs at least the width of the pole, and raise a bended knee about two feet. Then he would lower the leg swiftly, driving the spike into the wooden pole. He would then raise himself until he was erect, supported by the spike he had driven into the pole, and repeat the process with the other leg.

When the lineman reached working level he would wrap a husky safety belt around the pole, so he could lean back into the belt and have both

hands free to work. The first job was to attach a pulley to the top of the pole so that items to be installed could be raised. It was tough, tedious work. Chewning and Wilmer gave up outside line work in 1946.

Another major change came with the development of the pad-mounted transformer. It has made distribution much more simple, safe, and fast—to say nothing about improving the looks of the installation.

Virginia Power started using them in Northern Virginia during the late fifties, and they came to Richmond about 1960. The first in Richmond was installed at the new Collegiate Middle School on River Road. The Henrico inspector was skeptical, at best. He decided it wasn't going to be used in *his* county. After a month of research and negotiation, it was agreed that the pad-mounted transformer could stay only if the school built a fence around it. So the school put up a post-and-chicken-wire fence ten feet from the transformer. It was finally approved and stayed about five years. The transformer is still in use.

Computer Technology

As with virtually every other business, the biggest change in our industry has been the computer. The first ones I saw were in the sixties—by the seventies, I knew a number of contractors venturing into their use, with mixed success. Dave Aderhold, my inside accountant, and I decided in 1982 that we would try one. Dave took courses, did the research, and we finally bought one, using it mostly for accounting. Shortly thereafter, we got a word processor. An estimating computer didn't join the team until the early nineties—and the network didn't arrive until the late nineties.

I am constantly amazed by how computers increase the individual's output. Project managers and estimators write their own correspondence—clerical skills like shorthand have been eliminated, as have many costs associated with postal mailing. The output of estimators today astounds me. And so does the amount of information we can access daily about how things are going or went. Most of all, spreading information and instructions to any and all employees is much, much improved over typed memos or word of mouth.

Summary

The era between WWII and today has been one of monumental changes in our industry. It is good to remember how things were “once upon a time,” and to appreciate the ways in which so many processes and systems are genuinely better today. From deliveries to correspondence; from equipment and tools to automated payroll—our lives are measurably easier, our output is higher, and our knowledge base is greater. These have all made us better electrical contractors—better business people—today than in the past.

But to fully appreciate what we have today, I believe it is helpful to remember how life was decades ago, and be thankful for our progress to date. We should also remember to look forward to the technological and process advances we haven't yet thought about, but that are waiting for us just around the next corner.

In the early spring of 2007, I took my first ride in a car that had sort of an “anti-tailgating” feature. If you drove too close behind a car, it automatically slowed you down.

Wow!

Charles P. “Jed” Wilson was inducted into the Academy of Electrical Contracting in 1969. With 38 years of service, Mr. Wilson has remained on active status within the Academy longer than any other Fellow. He was active in NECA's Virginia Chapter, now the Atlantic Coast Chapter, for over 50 years serving as the Chapter Governor for eight years and as the Chapter President for four years. In addition, he was the Vice President of District III for four years. His service to NECA includes membership on the Executive and Government Affairs national committees. Mr. Wilson is a trustee and, for the past 25 years, Chairman of the Local 666 Benefit Health and Welfare Trust Fund. During that time he has signed checks for benefits to Richmond area electrical workers totaling approximately 135 million dollars. This is Mr. Wilson's third presentation to the Academy.