



North Carolina Department of Transportation

An ENCOM Wireless Client Success Story





THE CHALLENGE

Dealing with antiquated technology

Excuse Jerry Bagwell for thinking he'd stumbled into a time warp.

Not long ago, Bagwell, who works for the North Carolina Department of Transportation, turned his attention to the faltering entrance signs at various commercial vehicle inspection stations throughout the state.

What he discovered were decades-old electromechanical controllers on their last legs — relics, really, that deserved their rightful place in a museum somewhere.

“All the technology we have was at least 40 years old,” says Bagwell, the Raleigh-based equipment depot superintendent for NCDOT.

“Our signs were mechanical . . . in other words, we had plates in them that had little gears and chains and such. They were wearing out, and we couldn't find replacement parts for them.” —Jerry Bagwell, North Carolina Department of Transportation

“Even the wires that led out to the signs, which were sometimes half a mile or a mile from the stations, they were also 40 years old.

“It was time to upgrade.”

THE ENCOM SOLUTION

Making safety automatic

The NCDOT approached ENCOM Wireless, whose wireless contact closure products provide cost-effective solutions for countless applications involving on/off control or remote data collection.

Six weigh stations in North Carolina, and counting, now use the COMMPAK I/O 8 family of products for wireless contact closure.

Safety is now automatic at these weigh stations, thanks to ENCOM's wireless communication between the COMMPAK I/O 8M unit at the scale house and the COMMPAK I/O 8 unit housed in the new entrance sign.

Should a sensor in the entrance ramp indicate that semi-trailer traffic is backing up, ENCOM's contact closures automatically change the entrance sign from “Open” to “Closed,” allowing truck drivers to bypass the inspection station and avoid hanging out into a high-speed interstate, creating a potentially deadly situation.

North Carolina's two most recent inspection stations fitted with ENCOM wireless contact closure units have relatively short entrance ramps. In these cases, DOT officials also linked ENCOM's units with a logic system built into the inspection stations' scales, using an entry and exit vehicle-count program to open and close the weigh station automatically.



THE RESULTS

‘Exactly what we need’

Bagwell and the NCDOT are very happy with the ENCOM solution.

Truck traffic comes and goes through these North Carolina stations with nary a hitch.

“One of the reasons these new signs were so attractive to us was the radio link, this is exactly what we need from these applications.”

—Jerry Bagwell, North Carolina Department of Transportation

The vagaries of weigh station traffic can be potentially hazardous, notes Bagwell, “especially if you’ve got a human element involved.

“At those two stations with the short entrance ramps, by the time the operator found out traffic was backing up, and turned the sign off, there could theoretically be four or five more trucks in line, hanging out in the highway and causing unsafe conditions.

“The more of that kind of stuff we can automate, the better off we are.”

ENCOM’s wireless network also provided an unexpected bonus, reports Bagwell.

“The good thing about the (ENCOM) radios is they have a hopping pattern,” he says. “We’ve got transponders at these stations that use wireless (communication) to go back and forth with the cabs of these trucks.

“Those (ENCOM) radios can be programmed to hop over frequencies we’re using to do other things, so the sign radio doesn’t conflict with any of the other radios.” —Jerry Bagwell, North Carolina Department of Transportation

No more gears, no more chains

As they wear out, the gear-and-chain-based relics at North Carolina’s commercial vehicle inspection stations will be bypassed in the name of progress — and safety.

“As my older signs give trouble,” says Bagwell, “that’s when we replace and upgrade to the ENCOM system.”



About ENCOM Wireless:

ENCOM, based in Calgary, Canada, provides field-proven, cost-effective wireless data solutions for municipal and industrial clients, with applications in the areas of:

- Intelligent transportation systems
- Public safety communications
- Municipal corporate security and IT networks
- Waste and waste water management
- Electrical utilities
- Oil and gas

ANOTHER SATISFIED CUSTOMER

Easy expansion ahead

What ENCOM provided the North Carolina Department of Transportation:

- Frequency-hopping, spread-spectrum technology, which boasts bulletproof communications for mission-critical applications and prevents traffic accidents;
- Support for all typical system designs, including point-to-point, point-to-multipoint and multipoint-to-multipoint;
- Long-range operation — up to 20 miles line of sight;
- Reliable support with ENCOM's powerful, user-friendly ControlPAK software;
- The flexibility to position and reposition its wireless network at will, since ENCOM's products operate at licence-free radio frequencies, and the flexibility to overcome daunting topographical challenges;
- Protection of its client's investment with one of the best warranties in the business;
- The promise of a lasting partnership and the security of knowing that ENCOM's investment will pay for itself many times over.



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