



# COMPASS

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## ENGINEERING GROUP

### **Case Study: AT&T**

Memphis Distribution Center

Dealing with outdated and obsolete technologies, Compass Engineering Group updated and renewed the control system solutions for AT&T, increasing efficiency and productivity of the warehouse.

9/17/2007

**COMPANY OVERVIEW:**

For more than a century, AT&T has consistently provided innovative, reliable, high-quality products and services and excellent customer care. They are recognized as one of the leading worldwide providers of IP-based communications services to businesses. They also have the nation's fastest 3G network and the largest international coverage of any U.S. wireless carrier, offering the most phones that work in the most countries; the largest Wi-Fi network in the United States; and the largest number of high speed Internet access subscribers in the United States<sup>1</sup>.

**THE CHALLENGE:**

The Memphis Distribution Center for AT&T needed a comprehensive modernization and upgrade of the existing case conveyor control system. With the control system solutions becoming unsupported over the years of use, Compass Engineering Group had to address many issues:

- Many critical components were becoming obsolete and difficult/impossible to purchase
- Unsupported software components increased the risk of extended downtime
- Proprietary hardware and software support was restricted by each original supplier
- The original system employed a complex, outdated communication architecture
- Poor system performance and reliability
- Insufficient supplier support

**THE STRATEGY:**

As the systems aged, the challenges listed above contributed to reduced reliability and higher maintenance costs. Compass Engineering Group offered a control system upgrade consisting of the following technologies and capabilities to reduce costs, improve efficiency, and increase production:

- Removal of all proprietary and obsolete components
- Conversion of communication architecture to a single Ethernet system
- Single control system supplier
- Simplified, nonproprietary design to allow customer self-efficiency
- Flexible design to allow future enhancements and expansion

**THE SOLUTION:**

An upgraded network communication utilizing a single Ethernet system provided a more well-organized and competent communication structure for the Memphis distribution center. Serving as the focal point for all I/O devices, this arrangement facilitated the ease of communication between each implemented technology. Additionally, an upgrade from the obsolete components enabled us to incorporate Allen-Bradley ControlLogix PLCs into our control designs. These sophisticated controllers housed our electrical engineering designs and enabled all serial devices on the conveyors to be connected on the single

Ethernet system. This retrofit plan allowed fast and simple changeovers between the old and new control systems.

Our Compass Order Routing System (CORS) provides supervisory control and diagnostics for Compass Engineering Group conveyor applications. For the needs of AT&T, the CORS package provided real time data to the sortation equipment controllers (PLCs) via the Ethernet system. Our user friendly interfaces and graphical displays allowed AT&T to have a simplistic, yet complete, control over their control systems.

#### **THE END RESULT:**

Upon project completion, the warehouse center in Memphis had a completely revamped and updated solutions control system. With state of the art technologies and Compass Engineering Group's intuitive approach, AT&T has been able to improve production and lower costs at the same time. With another affordable approach to warehousing needs, Compass Engineering Group was successfully able to meet their customer's needs in a timely and professional manner that adheres to the highest standards of control and software solutions.



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<sup>1</sup> Information from [www.att.com](http://www.att.com)