

After installing AeroScout Wi-Fi-based RFID tags and RTLS software, the company's French factory is producing 5,000 more tires per day, while decreasing waste of materials by 20 percent.

By Claire Swedberg

Tags: [Automotive](#), [Manufacturing](#), [Asset Tracking](#), [Inventory / Warehouse Management](#)

Apr 25, 2012—The [Continental Tire](#) factory in Sarreguemines, France, has increased its production of tires from 33,000 tires per day to 38,000, thanks to a real-time location system (RTLS) it installed in September 2011 to track tire components. The RTLS has also helped the company reduce wastage of tire components, known as "semi products," by 20 percent.

The system, which uses [AeroScout's](#) Wi-Fi tags and MobileView software, was installed in the company's Sarreguemines plant with the goal of reducing bottlenecks and production delays caused by missing materials, as well as increasing productivity. Continental Tire has also installed AeroScout's system at its plant in Mount Vernon, Ill. Both sites are using AeroScout's Wi-Fi tags and software in conjunction with [Global Data Sciences'](#) material inventory tracking system (MITS) software for inventory data management.



Christian Matejcek,
Continental Tire's IT
director

Continental Tire produces 1,000 different kinds of tires at its Sarreguemines location, which encompasses 138,000 square meters. In the past the plant's staff relied on grid lines painted on the floor and handwritten details about the location of carriers—the various large wheeled carts that are loaded with sheets of rubber or other components and are transported from storage to workstations as tires are built. If a carrier was not where it was expected to be, a worker had to start looking for it manually. "Manual tracking was not only inaccurate and time-consuming, we often lost track of semi products altogether, which impacted production," says Christian Matejcek, IT manager at Continental Tire in Sarreguemines.

Growth in its business made it necessary for the company to find a way to increase its production capacity. Therefore, Continental Tire went to Belgian systems integrator [Phi Data](#), seeking a solution. Phi Data selected AeroScout's software and Wi-Fi tags, which would work with the Sarreguemines site's existing Cisco Unified Wireless Network solution.

The Sarreguemines plant mounted AeroScout T2-EB Industrial Tags to the sides of its carriers (thus far 1,100 have been tagged). As the carriers are moved from storage or one manufacturing station to another, the movement and new location of the cart is sent to AeroScout's MobileView software based on transmission of the active 2.4 GHz tags to nearby Cisco Wi-Fi nodes. The MobileView software interprets the location and depicts the carrier on computer screens as an icon on a map of the facility. Continental's RTLS system also includes 15 [Honeywell](#) Dolphin 6500 and [Motorola Solutions](#) MC9190 handheld computers that are used to confirm that a carrier has been loaded with components or has been received at a specific workstation.

Seven of the plant's tuggers—small trucks used to haul the carriers around the plant—are equipped with [DLOG](#) mobile computers, with plans to install the computers on eight additional vehicles. The tuggers' drivers, when seeking a specific component, can go into the MobileView system, pull up a map of the facility and see an icon indicating where a specific component carrier is located.

"We introduced the AeroScout solution to provide real-time inventory of all semi products used in the tire factory," says Matejcek.



A tugger's driver can view his vehicle's computer screen to identify the locations of carriers he needs to move.

The plant's management considered several RTLS solutions, but it selected AeroScout because it operated over a Wi-Fi network, eliminating the need to install readers for RTLS tags. Not only would a proprietary infrastructure have been expensive to install, Matejcek says, its installation would have disrupted the plant's 24-7 operations.

The system begins tracking a component as soon as it is placed in a carrier. First staff use one of the Honeywell or Motorola handhelds to scan a bar code label attached to the component and also scan the bar-coded label on the carrier, which is associated, in the MobileView software, with the ID number transmitted by the RFID tag mounted on the carrier. The act of scanning the bar codes is stored in the MITS inventory-management software, and the carrier is then transported to a storage area. During this process, the MobileView software tracks the carrier's whereabouts, including the location where it is placed in storage, and the MITS saves that data to assist others in finding the carrier quickly.

When the components are needed for manufacturing, a tugger's driver views the DLOG mobile computer screen to identify the location of the carrier containing the required components, and goes to that location. Once the carrier is retrieved and taken to a workstation, an employee at that station uses one of the handheld computers to scan the carrier's bar code, updating the system to indicate the needed components have been received. The process then is repeated if the carrier is taken to another location.

By using the system the company has been able to increase its productivity by ensuring the tuggers' drivers can locate components in a timely fashion. The MITS system also ensures that materials do not get misplaced or overlooked, and are therefore used instead of being thrown away because they have expired. The system can send alerts, for example, if materials have been sitting too long in one spot.

Since the system was implemented in September 2011, Matejcek says it has "completely transformed operations at Continental. As soon as AeroScout was implemented, we conducted training for all production employees—including truckers,

tire builders and management layers—on the new functions of the AeroScout and MITS system." He notes that the company also provided workers with instruction cards printed with detailed descriptions of the system's functions, so they can refer to this information if necessary.

The Sarreguemines plant plans to also install AeroScout tags with temperature sensors so that it can monitor the water temperature of its boilers, which are used for the tires' curing process. The AeroScout tags could also be used to monitor the status and condition of tuggers, Matejicek says. The plant continues to mount tags to additional carriers, with plans to have a total of 2,000 tagged carts.