



## CAROUSEL AUTO GROUP



CASE STUDY

ASTERISK IP-PBX

### OVERVIEW

When lightning strikes, power surges can cause damage to equipment, as happened to the phone system at Iowa City's Carousel Auto Group last spring. Luckily, the organization already had the wheels in place to replace their antiquated phone system - driven by the need for increased functionality to compliment their expanding business. So, they sped up their plan to install Digium's Asterisk, the industry's first open source telephony platform. Through the deployment, the organization gained the ability to better communicate across multiple locations, queue and route calls, and easily transfer extensions as sales members moved desks on the showroom floor. In addition, the solution also enabled multi-location paging capabilities and variable ring tones for the many departments across the dealership's multiple facilities.

Offering fine automobiles to Eastern Iowa since May 1983, Carousel Auto Group originated as a Volkswagen, Audi, Mazda and Porsche dealer and has since grown to include Lincoln, Mercury, Nissan and Mercedes Benz franchises, employing more than 100 employees across three locations. A combination of highly trained professionals coupled with determination and business excellence has led to the meteoric rise in the business helping the dealership earn their moniker as "Number One on Highway One."

### CHALLENGE

A commitment to quality service and customer satisfaction prompted the auto group to begin looking for a replacement for their existing Teleconnect phone system. As the system aged, functionality declined rendering some phones inoperable. Plus, the addition of multiple facilities created other challenges. Calls couldn't be transferred easily between locations. When sales professionals left or moved to another group within the company they could not take their phone extensions with them, creating confusion for the reception staff and delaying the time it took for callers to be connected to their sales agent. Although an overhead paging system alerted employees to inbound calls, the inability for variable ring tones meant departments did not know which calls were for them, creating more confusion and delay in servicing customers.

"When the phones would ring, there was only one tone so nobody knew if incoming calls were for the sales or detail department," explained A.J. Mahler, an IT manager for hire that handles technology needs for the

Carousel Auto Group. “Calls that did get answered often needed to be transferred to other departments or callers would be asked to hang up and phone another location. Without a variable ring tone pattern, the sales department was also spending a significant amount of time answering calls for the detail department, taking time away from helping customers. We knew we wanted increased functionality in the phone system as well as the ability to fuel some internal efficiencies.”

## SOLUTION

A lightning storm sparked an accelerated need for a new solution as well as for rapid implementation across the dealership. One of the challenges was the need to connect multiple buildings, as well as have a VPN connection for a third building, that was not connected to the auto complex. Interested in VoIP, the organization installed a proprietary system in one location at the company’s Ford showroom only to learn that the system did not have the bandwidth to support functionality at Carousel’s other facility with used vehicles. Peaked by the advanced functionality offered through VoIP and keen on following technology trends, Mahler learned about Asterisk and knew he found a solution that would meet the dealership’s telephony needs.

Created by Digium, Asterisk is a complete PBX in software. It runs on Linux, BSD and MacOSX and provides all of the features you would expect from a PBX – and more. Asterisk does voice over IP in many protocols and can interoperate with almost all standards-based telephony equipment using relatively inexpensive hardware. Providing voicemail services with Directory, Call Conferencing, Interactive Voice Response and Call Queuing, Asterisk also has support for three-way calling caller ID services, ADSI, SIP and H.323, as both client and gateway.

The initial installation was in the original auto dealership building, which is not part of the company’s auto complex, where eight departments including used cars, the company’s business development center, repairs, Internet and Ebay sales and detailing were housed. There, Mahler installed the Asterisk server, supporting 25 phones (with the capability of handling 75 phones) and a Digium TDM 2400 Analog Interface Card with 12-line capability. Carousel also purchased 75 Grandstream GXP-2000 series telephones to work with both the Asterisk solution and the company’s Valcom paging system, totaling 100 phones in the three buildings.

“We did the roll out in the used car location, got the phones installed, the employees trained and proved that with Asterisk in place we could communicate over the VPN successfully,” said Mahler. “We then continued with the Motors building, which is a much more complex set up that has both T1 and analog phone lines and another TDM 2400 card with eight FXO (foreign exchange office) ports and four FXS (foreign exchange subscriber) ports installed. Based on performance and cost, they were the best choice.”

## RESULTS

Mahler notes that Asterisk is meeting the organization’s need for better routing of calls, call queuing, paging and call forwarding. Making the biggest difference is the improved ability to communicate between buildings and the ease and increased efficiency in moving phone extensions.

Like other dealerships, Carousel experiences turnover and movement within their sales group. Like other sales environments where customers may just walk in, desk location is a perceived factor in success, and when a prime desk is vacated, other sales people want to lay their claim. In the past, when employees changed departments, the receptionist and team members needed to consult a printed directory to locate their colleague’s new phone extension. These printed directories needed to be updated with each extension change. With Asterisk, moving a phone extension is easy and employees are able to keep their same number regardless of where they are in the complex.

“One limitation Asterisk eliminates is the ability to add additional phones, which is as easy as plugging one into the network,” said Mahler. “When sales people move, they not only can take their phone with them, but they can keep their same extension as well. Beyond eliminating the need to continually reproduce phone extension lists, the solution also makes sure that data collected through the organization’s customer relationship management system is accurate by continually tracking the right extensions to the right employee.”

Communication between buildings is also improved thanks to the variable ring tones. Now, the detail department knows which calls are for them and which may be for another department such as sales. Locating employees as they move about the buildings is also eased because announcements made over the paging system can be heard in all three buildings. The administrative staff frequently travels between facilities and in the past, routing calls for them often meant telling callers to hang up and dial the phone number for another building. Other staff members sometimes needed to use their time to go hunt the appropriate person down. Now, with the solution delivering the ability to page different buildings as well as having variable ring tones, individuals are easily located, different departments can identify when an incoming call is for them and everyone is able to focus on their core business – increasing organizational productivity.

“Installing Asterisk has absolutely increased efficiencies,” said Mahler. “It allows for fluid movement of the staff, accessibility, and greater integration of departments. I am very pleased with Asterisk’s capabilities and look forward to doing more implementations. It is really the future of my business.”

*Digium’s vision is a world based upon open communications.*

*Our mission is to transform the way businesses acquire and operate their communications systems through the application of open source software.*



**Digium Headquarters**  
445 Jan Davis Drive NW  
Huntsville, AL 35806 - USA  
Phone: +1 256-428-6000  
Fax: +1 256-864-0464  
[www.digium.com](http://www.digium.com)

