



Success Story

Australia's Metro Trains Melbourne Bridges Legacy PBX to VoIP

THE CUSTOMER

Metro Trains Melbourne's (MTM) network consists of over 3,000 employees and interconnects more than 40 three-car train sets with 215 railway stations along 520 miles of track across Victoria's capital city.

The trains travel over 18 million miles, providing more than 228 million customer boardings each year. The trains offer over 14,000 services each week, and carry over 415,000 passengers each weekday.



CHALLENGES

An Australian railway system was looking for a solution to convert their legacy PBX system to VoIP, allowing them higher-quality communications over 215 stations.



SOLUTIONS

With access to the necessary expertise, Asterisk proved to be the perfect solution for Metro Trains Melbourne.

MTM was able to customize their VoIP system and maintain complete control of their transition by using Asterisk's open source toolkit.

BUSINESS CHALLENGES

MTM has over 900 telephony end-points across the network, many of which are auto-answer units designed to present public address information to customers at railway stations, while others are on-demand service information units that present service information when requested.

The primary challenge was the interface to the existing PBX system. "As capacity had become an issue for MTM, we began a requirements-gathering exercise focused on our Customer Information System's interactions with the legacy PBX system," says Marcus Morrison Principle Software Engineer at MTM. "We already have a high quality IP network interconnecting our stations, but we were experiencing an increasing number of line faults on the older PBX system and we needed a way to stage a migration from the legacy analog PBX to VoIP."

MTM had endpoints at every railway station, yet it wasn't feasible to make the migration to VoIP in what Morrison refers to as a 'big bang' fashion. Instead, the system needed to be capable of delivering digitized audio message to newly provisioned IP end-points and be able to route calls out to the existing PBX system for stations that did not have IP end-points installed yet.

THE SOLUTION FROM SANGOMA

"While we knew we would realize cost savings with our transition to VoIP and Asterisk, our primary motivation for the change was to improve the quality of our communications infrastructure to better deliver accurate service information to our customers," says Morrison.

Sponsored and maintained by Sangoma, Asterisk is an open source telecommunications framework used to create customized telecom applications by turning an ordinary computer into a communications server. Asterisk has become the world's most widely used telecommunications platform for powering IP PBX systems, VoIP gateways, and conference servers. It provides ample flexibility for experienced telecom engineers to tailor applications to the needs of small and large businesses, call centers, and even government entities.

"We did not hesitate in building our own customized Asterisk installation and found it to be quite straightforward," says Morrison. "Due to the size of the railway, we knew Asterisk had good support for interfacing between IP endpoints and legacy PBX systems," says Morrison. "We needed to procure phone sets and a number of analog telephony adapters in order to bridge our Asterisk installation with the legacy PBX system."

Sangoma analog telephony cards utilize VoiceBus™ technology to maximize system compatibility and to prevent systems conflicts. They make it possible to connect analog phones and POTS (Plain Old Telephone System) lines with VoIP PBX hardware using Asterisk.

THE RESULTS

Ultimately, the new Asterisk installation delivers digitized audio to each station, along with MTM control centers and select maintenance facilities.

"We are no longer capacity-bound regarding the number of lines that could be provisioned," says Morrison. "We also have many more options available to us with regards to integrating various software packages with Asterisk. We transitioned our Customer Information System to deliver audio messages over SIP via Asterisk."

Morrison says exact cost savings are hard to quantify, as MTM is still transitioning away from the old PBX installation. "Once the transition is complete and we are no longer paying line rental and maintenance for the legacy equipment, I believe we will realize a significant reduction in costs, estimated at around 60 percent."