APM Express

The Newsletter from APM Consulting, LLC

Welcome to the Fall 2007 edition of the *APM Express*, the newsletter from APM Consulting. In this edition we have reports on the activities at eight different airports utilizing APMs. We will also discuss the role and importance of the APM owner representatives. I hope you enjoy this edition of the *APM Express*.

Charles de Gaulle International Airport

On April 3, 2007, CDG inaugurated its new APM known as CDGVAL. The system was produced by Siemens Transportation Systems and consists of seven VAL 208 two-car train sets, the Operation Control Center, ATC systems, wayside equipment, PDS equipment, platform screens for five stations and maintenance equipment.

The CDGVAL Line 1 has a revenue service capacity of 1900 pphpd with fixed equipment designed for 4100 pphpd. Each of the VAL 208 train sets is capable of carrying 120 passengers and their baggage. The system's normal mode of operation will be a pinched loop with train speeds of 26 km/h.

Aéroports de Paris has awarded Aérosat (a joint subsidiary of Keolis and Siemens Transportation Systems) a seven-year contract to operate CDGVAL. Other airports utilizing the VAL systems include Paris-Orly and Chicago O'Hare.

Dallas/Fort Worth International Airport

The Skylink system availability for the first 6 months of 2007 was 99.70%.

The APM system Radiax replacement project, was temporarily disrupted to attend to other issues but is now nearing completion.

The APM recently had the first in-service tire failure. The Rodgard Runflat devices worked properly and the passengers were not inconvenienced by the incident. The guideway did not sustain any damage and there was only minor discoloration to the vehicle wrap material where the train rubbed against the station docks.

DFW has asked Bombardier for a quote to alter the station graphic sign messages to better assist the traveling public in deciding which loop to take to their destinations.

Denver International Airport

With passenger traffic continuing to rise, DIA has taken steps to increase the capacity of their APM system.

Software modifications have been implemented that will allow DIA to operate 6 4-Car trains on their system during peak passenger periods. This modification will reportedly raise the system capacity to slightly more than 16,000 passengers per hour.

Although DIA's current fleet of 27 vehicles is sufficient to handle the 6-train operation, it would not allow for any hot spares in the event of a train problem. To avoid this situation DIA, has ordered four more vehicles from their supplier. This will bring DIA's total number of vehicles to 31.

The voice messages on the vehicles and in the stations have also been updated using the voices of two local personalities.

Hartsfield-Jackson Atlanta International Airport

The average system availability for the Atlanta APM was 99.73%.

Ongoing site projects include the following:

- Vehicle Floor Carpet Replacement
- Pedestrian Mall Signage
- Station Audio and Warning Light Upgrades
- Maintenance and Storage Facility Floor Renovation
- E-Control Room A/C Replacement
- ATC Replacement Project
- New Mitsubishi CONRAC APM

San Francisco International Airport

The APM system continues to run well with an average system availability of 99.81%.

August is proving to be SFO's best month since the start of operations. The availability for the month is currently at 99.95%.

On August 14 SFO successfully opened the new Terminal 1 AirTrain connector bridge. Prior to this bridge, passengers had to use several different escalators and elevators before finally arriving at the AirTrain station. Passengers can now walk directly from Terminal 1 via the new bridge to the AirTrain station.

SFO is currently in the process of replacing the carpet on all of their AirTrain vehicles. The new product is made by the Pawling Corporation and is a rubber based product made from 100% recycled material. It is very durable and is expected to last approximately 15 years.

SFO is currently going through their tri-annual audit with the California Public Utilities Commission (CPUC). Every 3 years the CPUC performs an audit on the 23 elements of the AirTrain Safety and Security Plan. This year the CPUC decided to include the Transportation Security Agency, Rail Division as part of the audit team. The TSA group will audit all security related elements and the CPUC will audit all Safety related elements. To date, the TSA has been very impressed with SFO's security plan.

Tampa International Airport

The shuttle car replacement project for Airside "F" is progressing on schedule. The power/signal rail replacement will be accomplished during the next month and the 4 new cars will be placed on the guideways in the May-August time frame of 2008.

The other APM system at TPA, the TGI monorail, is undergoing an ATS software upgrade which is scheduled for completion late in 2008.

Availability for the past 3 months has been 99.6% and 99.4% for the shuttle and monorail systems, respectively.

Toronto Pearson International Airport

It has been a year since the opening of the GTAA LINK train system for public service on July 6, 2006. GTAA LINK trains continue operating in the shuttle modes, alternating between dual train shuttle mode during the peak hours and single train shuttle mode during off-peak hours. Before the system opening, a single train demand mode was planned during the off-peak night hours; however, the demand mode was not practical due to the volume of passengers and employees at night and was switched back to a single train shuttle mode.

The 2006 average system availability was 99.7%.

Since early spring of 2007, the daily Terminal 1 employee traffic has dropped due to the construction of the parking garage at the 6B area lot. All Terminal 1 employees had to be moved to the old Terminal 2 parking garage for the duration of the construction and won't use the LINK system until the construction is finished in 2 years.

Year 2006/07 was the first winter operation for the LINK system. According to Environment Canada this was the second warmest winter in Canada since 1948; however, the winter season had a number of heavy snow and ice storms. The open tube truss guideway did not have a significant accumulation of snow and ice, and there was no impact on the train operation. GTAA implemented a procedure to continuously operate both trains during the abnormal weather conditions to eliminate any accumulation of snow and ice on the running surface. DCC has implemented new train snow brushes which successfully removed blowing snow from the guideway during the train movement.

Technical Standards & Safety Authority (TSSA) has finished the 2007 annual functional safety inspection of the LINK system. TSSA was a safety consultant to GTAA for certifying the functional safety-related features during construction, testing and commissioning. The annual inspection included system components inspection, reviews of the O&M manuals, safety bypasses and safety features.

GTAA has retained APM Consulting, LLC to provide an audit of the LINK maintenance program to be in compliance with the new ASCE-21 Part 4. The 2007 second quarter audit was completed in early August. Items covered during the audit included maintenance reports and logs, review of the maintenance practices, equipment and site inspection.

Washington Dulles International Airport

Washington Dulles has received four of their new Mitsubishi Crystal Mover vehicles along with the system Maintenance vehicle. An additional eight vehicles are scheduled for delivery in October of this year. The vehicles are being stored in the new maintenance facility. Victor Howe, MWAA manager for the new APM, has now moved his office into the new maintenance facility as well.

The stations at Dulles are beginning to take shape with the construction of the glass tubes. This architectural feature will highlight the station areas in the concourses.

President's Commentary

What is the role of the APM owner's representative?

Having been in the APM business for the past 30 years, I have had the unique opportunity to work as both the supplier of O&M services and the customer representative responsible for interacting and overseeing a large O&M contract. What I have learned is there is no one-size fits all approach for the owner's representatives responsibilities.

As a consultant and former President of the International Airport Automated People Movers Association, I have had the opportunity to meet with many customer representatives and discuss with them what they believed their roles were in regards to their airports APMs. The array of answers I received, as you can imagine, were quite diverse.

Some of the individuals I spoke with considered their role to be simply that of a contract administrator making sure the O&M supplier met all of the contractual obligations. Their main concern was that the system availability was in the acceptable range and a few admitted that they rarely interfaced with the O&M contractor.

Other representatives took a far more active role in the day-to-day activities of the APM system. Some even believed it was their role to manage the operation as if the employees were directly employed by the airport.

As you can see, there is clearly a wide range of expectations perceived by the APM system owner's representatives. Although, these expectations will never be exactly the same from site to site, I believe there are a few things that should be accomplished by the individuals in these positions.

- Become thoroughly familiar with the basic configuration of your sites' APM. You do not have to be a system engineer to understand the basic operations and terminology associated with your APM.

- Maintain lists of all tools, equipment, inventory, drawings, and specialty items made for your site that belong to you, the customer. If a special device is made at your site for performing some kind of maintenance task, make it clear to your contractor that the device belongs to you. After all, it was made on your site by people you are paying to operate and maintain your system!

- Keep a list of serial numbers of all parts and equipment for your records. Be especially sure to have software revision numbers for all Central, vehicle, and wayside software. You should also make sure you have copies of all system software. Your contractor should not mind if you have copies of the latest revision of the operating system software as this does not contain proprietary source code. The latest revision of the operating system software is necessary should your system crash and you need to reinstall the software on your computer. The latest revision of the operating system software is also necessary should you ever decide to change O&M suppliers or bring the O&M in house.

- Be aware of the software versions being used on your system and never allow the software to be changed or updated without your knowledge!

- Maintain an open items status list for all projects or temporary changes being made on your system.

Finally, be aware of the status of your spare parts. If you have spare electronic boards or modules, make sure they are in good working order. Make sure you know if any of your parts or equipment have been sent out for repair or loaned to another site.

This list is not all-inclusive, but it will give you an idea of things that should be monitored by the customer at any APM O&M site. I realize that many airports have had long relationships with their O&M suppliers; however, in the event of some unforeseen circumstance, having these items addressed will be in your best interest. An excellent way of ensuring these items are addressed is by having your system audited by an independent 3rd party.

Best regards,

John Champ
President
APM Consulting, LLC