



# Wi-Fi



**GREATER ORLANDO  
AVIATION AUTHORITY**

# Background

- The GOAA Wi-Fi network provides the foundation for current and planned services, as well as, supporting the GOAA Mobile App currently in development.
- A major expansion in the number of APs will be completing early in 2014, which will provide for in-airport navigation and wayfinding, targeted advertising, and security queue and flight information.
- According to Aruba, GOAA will have the highest density of APs of any airport in the world.

# Background

- GOAA first offered no-charge (free) Wi-Fi services to the public in 2006.
- Wi-Fi services were offered to airlines and concessions beginning in 2007. Services to tenants are fee based.
- Initial Wi-Fi infrastructure included approximately 170 APs.
- APs targeting ramp operations are configured for coverage to the tail of the aircraft.

# Background

- Utilizing a Cisco core network with Aruba APs.
- GOAA's Wi-Fi traffic is currently supported over a 300 Mbs circuit, soon to be expanded to 1 Gb.
- GOAA's network is supported by in-house IT staff.

# Airlines & Concessions

- Airlines and tenants paying for services include United/Continental, Delta, Virgin, Air Canada, Aubon Pain, LiveTV, Disney. Jetblue will be added soon.
- Current annual revenue from dedicated Wi-Fi is approximately \$53,000.
- Typical airline applications include baggage reconciliation, roving agent, and ground support.

# Airport

- Currently no GOAA applications are using Wi-Fi.
- Field-based applications currently are using 3g and 4g cellular connectivity.
- Near future (next 3 months) GOAA will launch its Mobile App which will leverage the Wi-Fi system for Location Based Services.

# Considerations & Lessons Learned

- Demand for Wi-Fi has grown exponentially:
  - From initial 170 APs to nearly 900
  - Bandwidth from 50 Mbs to a projected 1 Gig
- Wi-Fi, even when offered free of charge, is considered mission-critical by both patrons and tenants.
  - Be prepared to offer the required support, AP density, and bandwidth requirements
- Personal hot spots (My-Fi) are a constant source of Wi-Fi signal degradation and poor user experience.
- Revenue opportunities may exist through offload of cellular traffic by telecoms and from Wi-Fi services providers (e.g.; Boingo).

# Considerations & Lessons Learned

- Large metal objects (aircraft) tend to disrupt Wi-Fi signals.
  - Be sure to conduct ramp site surveys with aircraft parked at the gate.
  - Be prepared to fund additional APs and antennas to compensate for the Wi-Fi signal degradation from aircraft.
- Have a professional certified hacker attempt to breach your Wi-Fi security on dedicated SSIDs.
  - Last thing you want is for a hacker to attack the airline's baggage reconciliation system.