



Aviation Safety Technologies, LLC

NBAA

Friends/Partners in Aviation Weather

November 19, 2015

Discussion Points



- **Short video:**
 - Problem Statement:
 - ***Subjective PIREPS can be un-necessarily disruptive***
 - AST Solution:
 - ***Objective friction measurement using aircraft data as information source***
- **Expanded Detail of AST Solution**
- **Q & A**

Problem of Surface Conditions



- PIREPS are subjective, can lead to unexpected runway closures and operational chaos through
- Ground device measurements don't correlate to airplane braking capability or other ground devices; requires closure of runway to measure
- Sub-optimal overrun risk and operational efficiency environment
- Obsolete FICONS and METAR information is often the norm
- Incomplete information for flight planning and dispatch; costly equipment, load and balance decisions made under conservative assumptions



What if every airplane that lands were to transmit an accurate real time runway condition report?

**Runway condition updated accurately
and continuously**

- Unnecessary runway closure is avoided
- Earlier and coordinated closing for treatment has safety and operational value

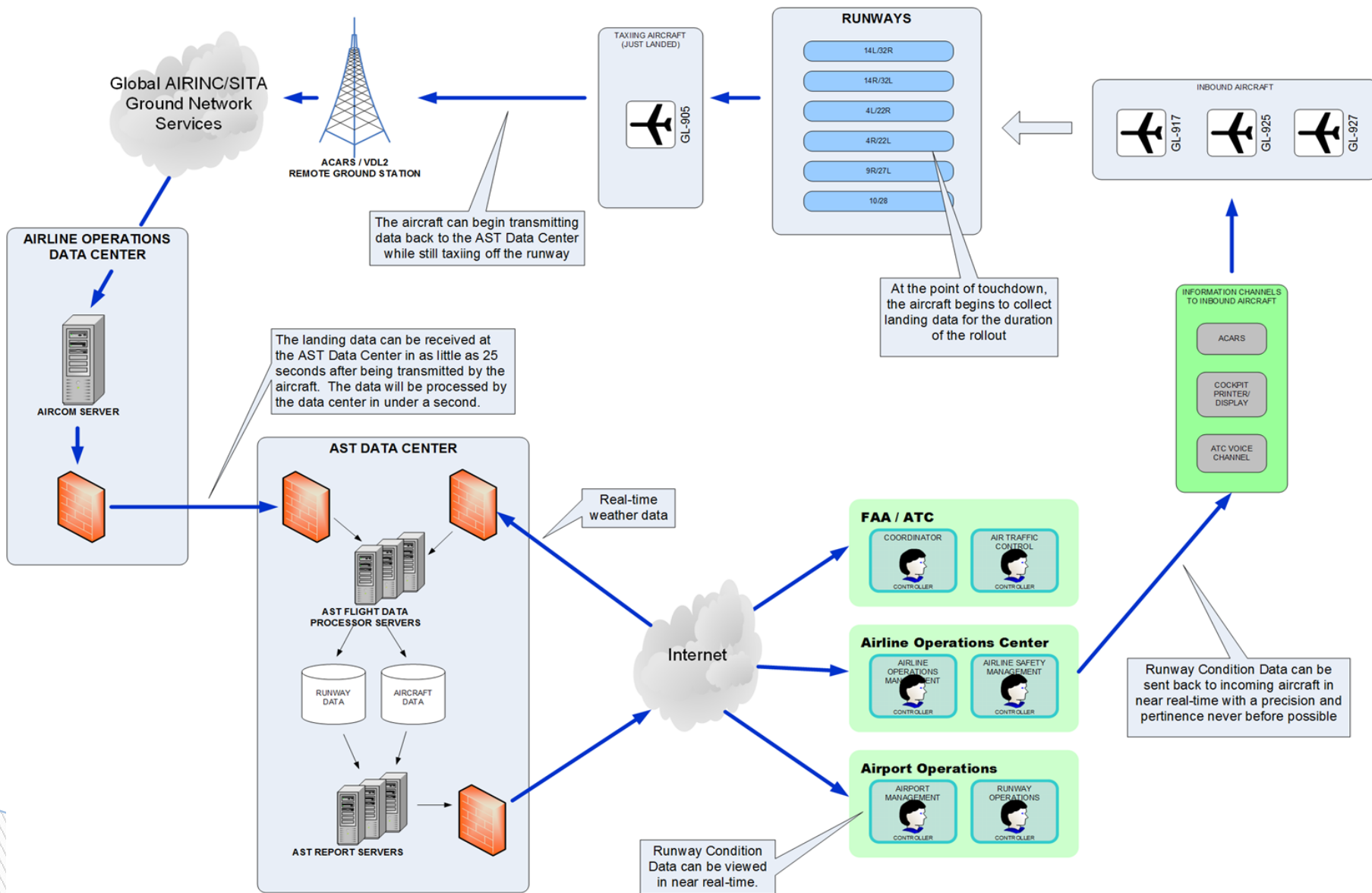


AST Solution:



- Utilize landing aircraft as runway condition measurement devices
- 16 Patents, 5 US Airline Partners, >2M landing recorded
- AST runs landing simulations from airplane data + environmental data + Airplane/Airport data + tire/surface interface model
- Landing reports generated for any runway utilized, with minimal latency (60 seconds from end of roll out), presented in conventional or RCAM nomenclature (Good, Good to Medium, Medium, Medium to Poor, etc)
- Connected fleets, AST upgraded weather capability, surface condition detection and other technologies provide a robust situational awareness advisory network

AST Information Flow



Contaminate Detector

- AST is testing new runway contaminant sensor technology that can uplink runway condition data into SafeLand computational models
- Sensor Data can define surface characterization for end of landing runway, departures runway, taxiways



Output Display



WEB Based Display

- Color coded for contaminate type, depth and air & surface temp.
- Ramps / Taxiways / Runways
- Click on display for detail

