ITWS
Integrated Terminal Weather System

Airline Connectivity

Des Keany
American Airlines SOC
Benefits

• Airline and the FAA are working off the same product (fewer misunderstandings)
• ATC Coordinators use the forecast and wind function for
  – Runway configuration planning
  – Arrival rates.
• Dispatchers can provide real time information to flight crew.
  – This reduces diversion risk
ITWS Data

Guidance Products

Thunderstorms approaching DFW

Terminal Winds

Storm Cell Motion

Gust Front indication

Hail, Circulation, & Echo Top Information

Runway oriented warnings

Lightning & Tornado information

Pre-production display courtesy Raytheon ITWS Brochure
Website Interface

ITWS Airports
Click for TRACON Display
[Color of icon shows status]

Airport Status Legend

Legend:
- Red: Active Alerts
- Green: Operational
- Yellow: TRACON Systems Towed
- Gray: Not Available
Prototype ITWS

• For many years American Airlines had access to the Lincoln Labs prototype system
• Dispatchers could access via the web.
• ATC Desk used a dedicated terminal.
• Advantages
  – Direct access to the prototype application
  – Low cost of ownership
• Disadvantages
  – Very few sites e.g. DFW, New York, MCO, MEM
Production ITWS

• High Cost of access
  – Only available via private wire connection
  – Not available via AOC/CDM Net

• Normally available as a browser display only
  – Users have to be aware and keep the display open
  – Not all features work on the web version

• Airlines can obtain a raw data feed

• Major increase in number of available sites.

• Can view multiple sites simultaneously
Desktop Configuration Example 1
Desktop Configuration Example 2
ITWS Connectivity Options!

AOC Net not an available option
Connectivity - Issues

• American Airlines originally connected to the production site via a T1 connection.
• This worked for about 15 simultaneous users.
• Have a need for 30-35 users at AA
• American Eagle need 10-15 additional
• Switched from T1 to bundled T1’s to DS3
• Bottom line – expensive
The Future - SWIM

• ITWS Prototype Service
  – Deliver ITWS data over the Internet, using Virtual Private Network (VPN) technology
  – Distribute real-time ITWS digital data in an industry-standard data format (XML)
  – Slated to being in September 2008
  – Initial Deliverables
    – Microburst
    – Gust Front
    – Configured Alerts (Ribbon Display)
    – Terminal Text
SWIM Methodology

• Advantages
  – Delivered in XML format and thus easier to integrate.
  – If successful, expect more and more data types to be added.

• Disadvantage
  – Necessary to commit scarce resources to a long term project.
  – Airlines outsourcing/purchasing 3rd generation products from vendors.
  – Need to integrate data. Not really useful as a standalone data set.
Questions ??