

Developing Excellence thru Training – Automation and NextGen Needs



Captain Joe Burns
Managing Director
Technology and Flight Test
United Airlines

19 May 2010
Presentation for NTSB
Professionalism Forum

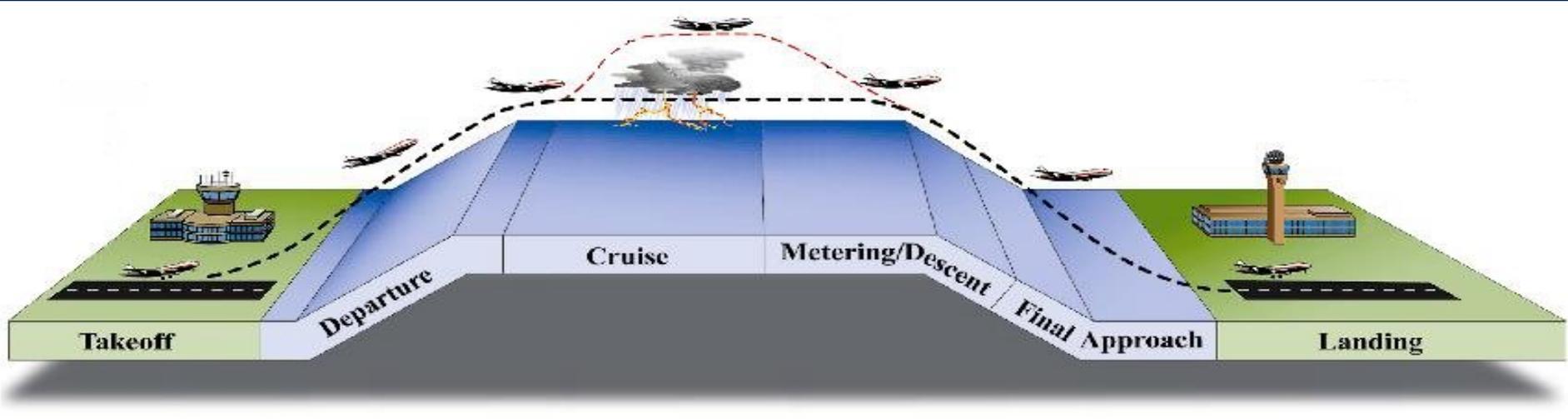
The “Base”

- Automation and Future NAS Access will require a solid “Base”
 - Basic Flying Skills and SOPs
- How to get there:
 - Basic Flight Training
 - Consistency, Redundancy, Clear understanding of roles → Flight Standards
- United’s Tool Set:
 - AQP Training (data-driven, 5 point grade scale)
 - Checklists and Briefing Cards for phase of flight
 - C/L/R (CRM) elemental training
 - 9 Month PC/PT (CQ) Training Cycles including Flight Management and basic flying practice
 - Data sets – AQP, FSAP, FOQA
 - Data review processes – SRTs, I-SRT, SMS
 - Distance Learning

Understanding the Distractions

- “What’s it doing now”
- Taxi in/out confusion (Runway Incursion training)
- Tarmac Delay Rules
- PDC’s, other ACARS messaging and changes
- Maintenance status change requirements
- Security issues – FFDO, Threat Levels, General Security Levels
- NOTAMS
- Airspace complexities
- System Failures and aircraft complexity
- System Warnings and False Alarm bias
- Weather – TRW, Icing, Turbulence, AFP’s, Volcanic ash,...
- InFO’s, SaFO’s, Bulletins, other information management...
- “Just one more training item...”

NextGen Now-2025



- 1. Surface** – Improve traffic management, enhance safety, efficiency and situational awareness providing same data to pilots, controllers, ramp towers and ops centers
- 2. Runway Access** – Increase runway access especially in low viz to converging, intersecting and closely paced parallel runways.
- 3. Metroplex** – Relieve congestion and tarmac delays at major metro airports and at satellite airports. Focus on de-conflicting of adjacent airports airspace
- 4. Cruise** – Disseminate real-time airspace status and schedules. Use time-based metering and implement data comm between ATC systems and airline capabilities.
- 5. Access to NAS** – Implement more precision based approaches and departures and expand surveillance services especially at non-OEP airports.

NextGen Specific Training:

- Navigation
 - RNAV/RNP
 - LAAS/GLS/GPS/WAAS
 - HAR
 - New Flight Planning Routing systems
 - GPS/FMS Accuracy and Displays vs raw data
- Communications
 - CDPLC/FANS
 - AOC Datalinks
 - Tailored Arrivals
 - 3D-Path Arrival Management
 - Enroute Optimization Tools
 - OPD's/CDA's

NextGen Specific Training:

- Surveillance
 - ADS-B
 - ITP
 - FANS
 - Surface Management – ADSE-X, TIS-B
 - RAAS
 - EFB – Paperless Cockpit
- NextGen Aircraft
 - B787, A380, A350
 - New RJ's

Thank you!

