

# Improving Capacity of Dual and Triple Converging Configurations

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FAA/MOIE

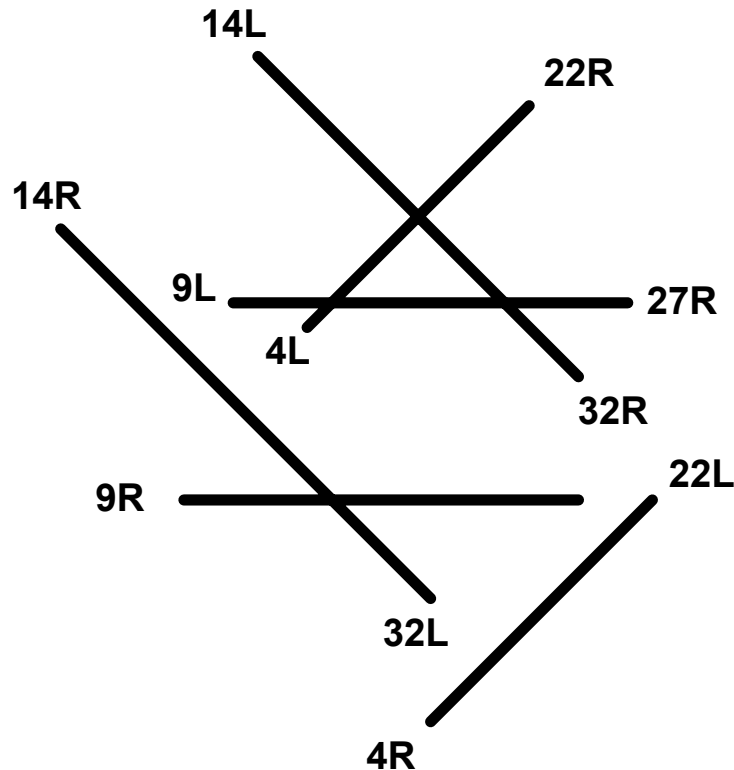
The logo consists of a cluster of 3D cubes in yellow, orange, and blue, arranged in a stepped pattern. To the right of the cubes, the text "MITRE Technology Program" is written in a bold, sans-serif font.

MITRE  
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# Problem

- The capacity of converging runway configurations decreases drastically under instrument meteorological conditions (IMC).
- Traditional solutions may be *inadequate* or may remain *unimplemented*.
- Traditional solutions could be *implemented or improved* for important airports.

# Background



## Capacity of Chicago O'Hare

- **Visual Meteorological Conditions: 90-110**  
(depending on the configuration)
- **Instrument Meteorological Conditions: 70**

# Objective

- **Develop procedures and technology concepts for improving capacity in IMC**
- **Use existing procedures as basis and consider simple technology increments**

# Activities

## ■ Air traffic control feasibility

- Laboratory simulations with Chicago Terminal Radar Approach Control and Tower controllers
- Emphasize classic Converging Runway Display Aid (CRDA)
- Make progress on Dynamic CRDA

## ■ Accuracy of predicted landing speed

- Define and conduct data collection with an airline

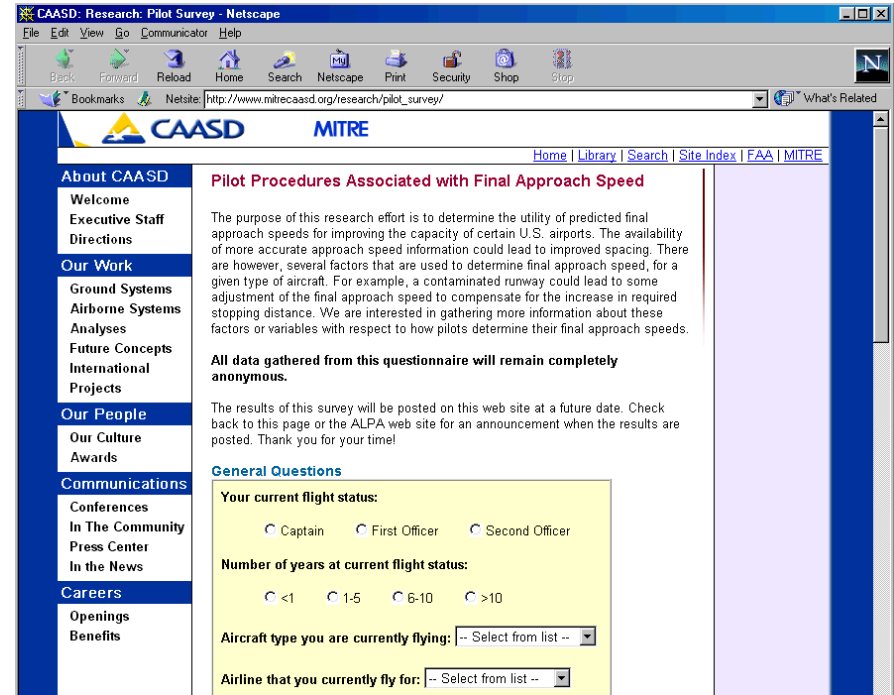
# Highlight

## ■ On-line flight crew survey

- Identify pilot judgment factors affecting final approach speed planning
- Link to CAASD from Airline Pilots Association Newsletter

## ■ Survey Results

- 292 Captains, 205 First Officers, and 5 Second Officers
- 92% Indicated their estimated speed would be within 10 knots above and 5 knots below their planned speed

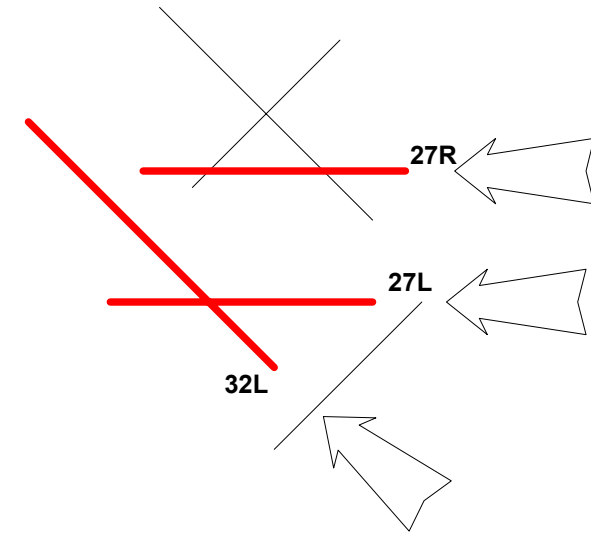
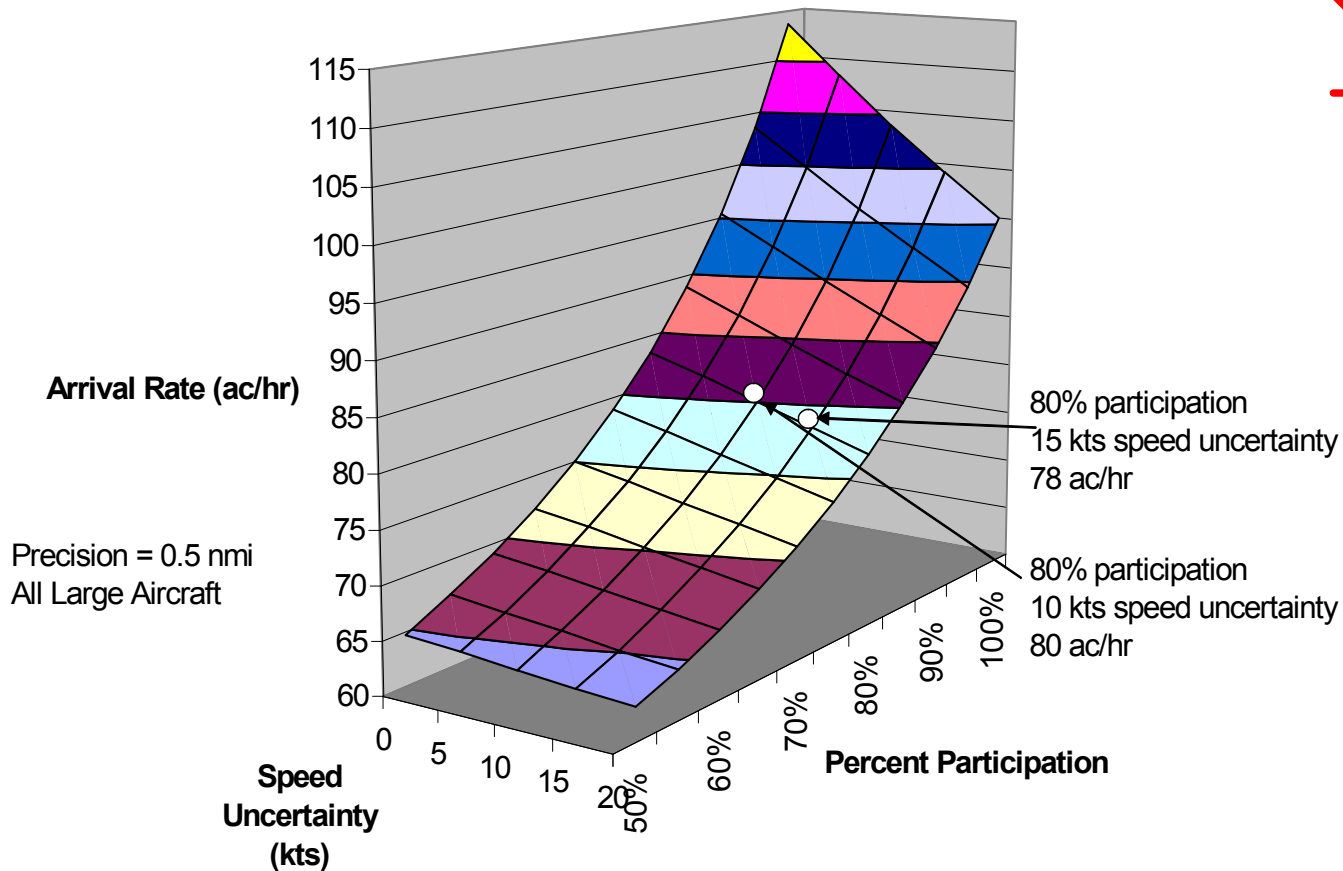


	Boeing	Airbus	Other	Total
Within	225	59	178	462
>10	5	2	11	18
< 5	11	3	7	21
>10 and <5	0	0	0	0

501

# Highlight

## Participation vs. Speed Uncertainty: Plan A



# Impacts

- Identification of near-term airport capacity enhancement possibilities for airports such as O'Hare in IMC as well as visual meteorological conditions (VMC)
- FAA consideration of CRDA for reducing certain system inefficiencies in VMC
- RTCA reconsideration of expected final approach speed message in 1090 downlink Minimum Operational Performance Standard (DO-260A)

# Future Plans

- **Advise FAA on merits of procedures using CRDA and Dynamic CRDA**
- **Work with FAA and industry groups on analysis and specification of potential datalink capabilities**
- **Work with airlines to define business case for new capabilities**