Boeing Introduces the Technology Demonstrator Airplane

Boeing Commercial Airplanes Gives Flight to New, Emerging Technologies

Boeing Commercial Airplanes today unveiled its Technology Demonstrator airplane. The aircraft, a 737-900, has been outfitted with a suite of new and emerging flight deck technologies to assess their value for enhancing safety, capacity and operational efficiency across the Boeing fleet of airplanes.

In the coming weeks, the company will demonstrate the technologies' capabilities to airlines, government regulatory agencies and the media.

"The objective of these demonstration flights is to show Boeing's leadership in bringing aircraft to market with leading-edge technologies that enhance safety and efficiency," said Hank Queen, vice president of engineering and product integrity for commercial airplanes. "The Technology Demonstrator is a forum to evaluate these benefits to our customers and the flying public."

Technologies onboard the airplane include:

- **Quiet Climb System (QCS)** -- Reduces community noise and pilot workload during takeoff by consistently and automatically reducing thrust over noise sensitive areas. (Boeing product)
- **Vertical Situation Display (VSD)** -- Enhances safety by displaying the vertical profile of the airplane's flight path. Indicates the presence of terrain in the current flight path. (Boeing product)
- **Navigation Performance Scales** -- Can minimize flight delays and increase airspace capacity by allowing the airplane to navigate through a much narrower flight path with higher accuracy. (Boeing product)
- **Global Positioning Landing System (GLS)** -- A highly accurate satellite-based landing system that opens new airports and runways. (Honeywell supplied ground-based components; Rockwell Collins provided Multi Mode Receiver which supports GLS, SGS, SVS and HUD)
- **Integrated Approach Navigation** -- Minimizes pilot workload and training by allowing a common approach procedures -- reduces 18 complex approaches down to one. (Boeing product)
- **Head-Up Display (HUD)** -- Expands operational capability and enhances safety by providing conformal flight path information to the pilot. (Rockwell Collins Flight Dynamics product)
- **Surface Guidance System (SGS)** -- An emerging technology under evaluation that improves taxi safety and airport efficiency during poor visibility and darkness. Reduces the risk of runway and taxiway related incidents. (Rockwell Collins, Smiths Aerospace and Jeppesen products)
- **Enhanced Vision System (EVS)** -- An emerging technology under evaluation that provides pilots with an accurate and clear view of obstacles, traffic and potential incursions at night and in reduced visibility conditions, thus enhancing safety. (CMC Electronics Inc. and Max-Viz products)
- **Synthetic Vision System (SVS)** -- An emerging technology under evaluation that provides a computer-generated view of the outside world, enabling easy-to-follow paths for takeoffs, landings or taxi guidance. (Rockwell Collins product)

"While Boeing is initially offering these features on the 737, the company is committed to providing these capabilities across its product line," Queen said. "Timing for the 717, 747, 757, 767 and 777 is dependent on both market interest and airplane model development plans."

In addition, it is Boeing's intention to offer after-market solutions for those features. This will be dependent on the airplane model, customer interest and cost effectiveness of a feature specific retrofit.

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