Simulation Tool Enables Quick Assessment of Air Traffic Procedures

The Terminal Area Route Generation and Traffic Simulation (TARGETS) tool offers a unique combination of capabilities for the design, analysis, and operational assessment of air traffic procedures and airspace. Developed by MITRE’s Center for Advanced Aviation System Development, under the sponsorship of the Federal Aviation Administration (FAA), the TARGETS tool is currently being used by a variety of FAA and non-government users in the implementation of area navigation and required navigation performance operations within the United States and internationally.

Applications

The TARGETS tool incorporates data visualization capabilities with readily accessible design elements to enable procedure designers to rapidly and easily take advantage of TARGET’s simulation capability. Through the resulting simulations, air traffic controllers can become more familiar with new arrival, departure, and en route procedures to ensure that air traffic is compliant with constraints—for example, testing what routes are acceptable or subject to modification because of geographical, safety, or environmental concerns. TARGETS supports collaboration among stakeholders, including the airlines, FAA, chart makers, Air Transport Association Carriers, Aviation Systems Standards organization, Terminal Radar Approach Control facilities, unions, and other agencies.

Benefits

The integrated capabilities of TARGETS enable quick assessments of alternative design concepts, leading to robust solutions that satisfy operational needs and comply with design constraints. Using TARGETS significantly reduces the time to capture requirements and expedites the overall design process. The tool integrates with standard office applications, making it easy to prepare presentations or document procedure design. The data output is formatted to support operational, certification, and charting needs. Information that previously took weeks to generate can now be completed in hours.

Additional Information and Links