

**Abstract**

Two systems are central to the Next Generation Air Transportation System (NextGen) air traffic management program - Traffic Management Advisor (TMA) and En Route Automation Modernization (ERAM). One purpose of both systems is to reduce air traffic control (ATC) delay. The present study reports on an exploratory integration of convective weather, a major source of delay, into the ATC systems to allow early re-route around weather in order to reduce delay. Pseudo-controllers ran a series of simulation-based scenarios with screen capture and video collection to assess delay and safety performance. Results provide evidence that delay was reduced by early rerouting in response to convective weather predictions. Implications for training and research are discussed.