SMARTROUTES™ provides continuous automatic analysis of live en route air traffic to identify high value route optimization opportunities that minimize flight time and maximize fuel savings.

**Significant Flight Time Savings**
SmartRoutes™ generates route advisories for en route flights that can save significant wind-corrected flight time and are likely acceptable to both pilots and air traffic control.

**Real-Time Analysis**
SmartRoutes™ works by analyzing nearly every aircraft en route in the National Airspace System for more efficient routing options every 12 seconds.

**A Powerful Solution**
SmartRoutes™ employs flight trajectory prediction and analysis, and considers severe weather, winds, restricted airspace, traffic conflicts, traffic congestion, and airspace operations in its route change considerations – making it the most powerful rerouting solution available.

**State of the Art Technology**
SmartRoutes™ is powered by NASA’s Dynamic Weather Routes (DWR) technology* – built over multiple decades with tens of millions of dollars of NASA research & development spending.

**Real World Results**
SmartRoutes™ underlying DWR technology has been successfully tested in a major airline operational center, resulting in material flight time reductions and meaningful cost savings for over 500 revenue flights. SmartRoutes™ will soon be in operational use by major airlines.

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**SMARTROUTES™ Benefits**

**Decreased Flight Time**
- Lower direct operating costs
- Lower aircraft maintenance costs
- Improved on-time performance

**Fuel Savings**
- Shorter wind favorable routes = less fuel consumption

**Lower Emissions**
- Less fuel = lower emissions
- Makes the world a bit greener

**Decreased Operational Complexity**
- Fewer missed connections
- Rebooking and overnight cost savings

**Happy Customers**
- Build goodwill with customers
- Improve brand reputation

**Dispatcher Friendly**
- Extremely helpful on high workload heavy convective weather days
- Automatically identifies valuable reroutes and ensures they are ATC friendly
- Planned interfaces to major flight planning and flight following systems

**Low Risk**
- No aircraft equipage costs
- Only pay for successful advisories
SMARTROUTES™ provides “best in class” data, routing methods and user’s choice of dispatch or direct to cockpit Electronic Flight Bag (EFB)

**Best in class data sources**
- ARTCC ERAM surveillance radar track and flight plan data (12 sec update) enables advisories to avoid traffic conflicts
- National TFMS data feed for traffic congestion ensures advisories are acceptable for controller workload
- Active FAA Traffic Management Initiatives, includes time since initiation, informing dispatcher of likely acceptability of advisories
- SUA/SAA analysis enables advisories to avoid closed airspace
- FAA 28 day Airspace Adaptation updates provide continuous valid airspace configuration
- NOAA Rapid Refresh winds and atmospheric data and Corridor Integrated Weather System (CWS) convective weather forecast model provide accurate current and projected weather
- High fidelity BADA aircraft performance models and NASA trajectory engine (over 30 years of development) ensures accurate climb, cruise, and descent trajectory modeling
- MosaicATM Clearable Routes Network (CRN) / Trajectory Option Set (TOS) provides advisories that are familiar and acceptable to controllers

**Delivered to your location**

SMARTROUTES™ Flight List snapshot from a day in June 2019

B757 from Atlanta to San Diego

Potential flight time savings of 17 minutes

**U.S. Provisional Patent.**

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