SMARTROUTES™

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.

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

www.routedynamicscorp.com

info@routedynamicscorp.com

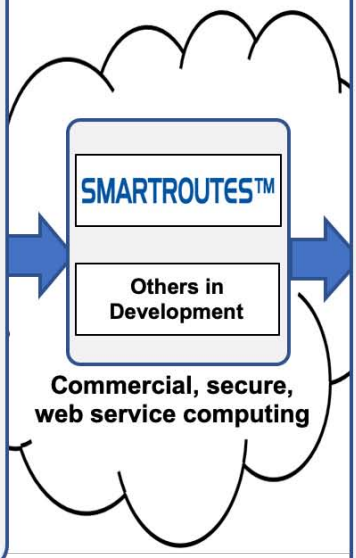
SMARTROUTES™

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 (CIWS) 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

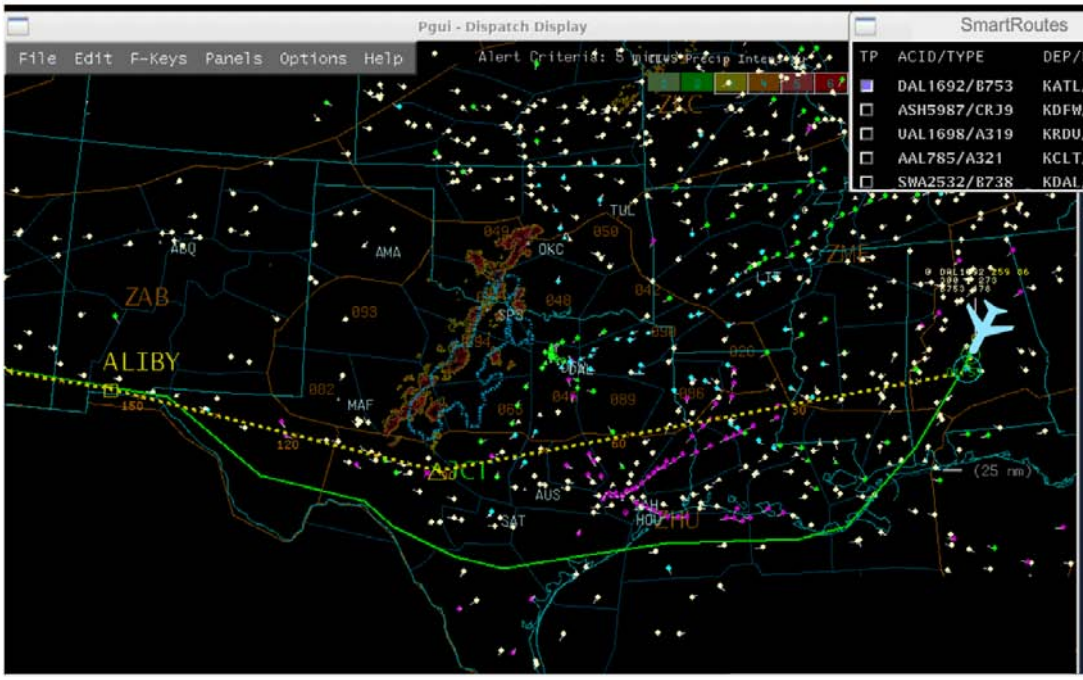
Best in class Route Engine**



Delivered to your location

** U.S. Provisional Patent.

SMARTROUTES™ user display of actual advisory



SMARTROUTES™ Flight List snapshot from a day in June 2019

Flight List only for south central U.S.

B757 from Atlanta to San Diego

Potential flight time savings of 17 minutes

* "Licensed from the National Aeronautics and Space Administration under U.S. Patent No. 6314361 Method and System for an Automated Tool for En Route Traffic Controllers, U. S. Patent No, 9171473 Method and System for Dynamic Automated Corrections to Weather Avoidance Route for Aircraft in En Route Airspace, U.S. Patent No 7702427 Air Traffic Management Evaluation Tool (FACET), U.S. Patent No. 9558670 Method and System for Air Traffic Rerouting for Airspace Constraint Resolution (NASCENT)."

www.routedynamicscorp.com info@routedynamicscorp.com