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Real Time Fatigue Analysis in Leon

Managing crewmember fatigue is truly the science of performance at work.

Performing fatigue analysis on schedules requires a proven and validated biomathematical model to estimate sleep patterns around work duties and then estimate performance levels, accounting for circadian function, homeostatic sleep reservoir, and sleep inertia.

Leon is happy to announce that it has partnered with the Institutes for Behavior Resources, Inc., to integrate the SAFTE-FAST Real Time solution. *"With the addition of SAFTE-FAST to our ecosystem of integrated solutions, the versatility of Leon's scheduling capabilities has been extended once again"* said Paweł Kruk, CEO of Leon Software. *"Above all, newly provided features should positively affect crew planning departments, where operational excellence is always in high demand."*

SAFTE-FAST is the most widely utilized biomathematical model in the world. The SAFTE model evolved from research conducted by the US Army on sleep deprivation and performance at the Walter Reed Army Institute of Research. The model has been extensively tested and subsequently validated by the US Federal Aviation Administration (FAA) against PVT (Psychomotor Vigilance Test) and was found to demonstrate a clear relationship between performance effectiveness predicted by SAFTE-FAST and objective PVT performance outcomes in the field. Thus, reinforcing the validity of the SAFTE model within the exceptionally dynamic operational environment of commercial and general aviation.

Fatigue Risk Analysis in Leon

SAFTE-FAST Real Time is an API solution integrating validated SAFTE-FAST performance metrics directly into Leon's powerful scheduling system. Real Time enables crew planning staff to perform on-the-fly, instant fatigue analysis to support their operational scheduling decisions.

Fatigue analysis can be done on individual crewmembers for flights or the entire crew over a selected period by accessing the Crew Timeline panel in Leon.

On doing so, users will have the ability to view SAFTE-FAST metrics for Departure, Arrival and Flight. Departure and Arrival metrics will include SAFTE-FAST Effectiveness and Reservoir scores. Flight metrics will depict the percentage of time where the Effectiveness of a crewmember has fallen below 77%.

In SAFTE-FAST, a 77% Effectiveness score is equivalent to 18.5 hours of wakefulness and a blood alcohol concentration of .05%. A Reservoir score of 75% is equivalent to missing 8 hours of sleep.

Like FTL violations in the Crew Timeline panel, lines related to each crew member will be displayed in either orange or red should the Effectiveness or Reservoir fall below the appropriate threshold (77% and 65% for Effectiveness and 75% and 65% for Reservoir, respectively).

"General aviation is a fast-paced and dynamic environment where quick decisions need to be made that consider multiple factors." said Murray McGrath, Commercial Services Director at SAFTE-FAST. *"Being able to make Real Time decisions that consider fatigue analysis, will give operators a competitive advantage while allowing them to maintain operational efficiency."*

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For more information about scheduling solutions provided by Leon Software, please visit **www.leonsoftware.com**.

Not yet a member of the Leon community? Contact their sales team to request a demonstration or jump straight into a 30-day free trial.

For more information on fatigue risk management solutions provided by SAFTE-FAST, please visit **www.saftefast.com**.

SAFTE-FAST

Institutes for Behavior Resources, Inc.
2104 Maryland Ave. Baltimore. MD 21218 USA

www.saftefast.com