

SAIPHER
Solutions for Air Traffic and Airports

SAIPHER
Solutions for Air Traffic and Airports

BECAUSE LIFE FLIES



 Saipher ATC

 Saipher ATC

 Saipher

 Saipher

Av. São João, 2.435 - 20ª andar
Edifício Helbor Corporate Tower
São José dos Campos - SP
12242-000 - Brazil
saipher@saipher.com.br
www.saipher.com.br
+ 55 (12) 2112-0200

SAIPHER ATC

Saipher ATC is a Brazilian technology company specializing in the supply of Air Traffic Management and Control Solutions. It was the first to introduce Electronic Flight Progress Strips (EFPS) in 1998 to air traffic control towers and is currently used by over 180 airport facilities throughout Brazil.

In its 27 year history, Saipher ATC has developed systems to optimize the processes surrounding airport operations, air traffic flow management, and airport statistical reporting. The company has pioneered real-time monitoring of air traffic control, and their solutions have resulted in better planning across the entire airport operations spectrum.

Currently, Saipher ATC is upgrading many airport facilities to its more modern and flexible TATIC system. TATIC stands for Total Air Traffic Information Control. It encompasses a set of modules that are integrated for use across different sectors of airport management and planning, as well as air traffic control.

At the center of Saipher's TATIC system is its EFPS database. From this central database, other TATIC modules (TWR, FLOW, and APRON) can be integrated to extract data in real-time on a Collaborative Decision Making (CDM) basis.

The information generated from a control tower through TATIC TWR system is immediately available to other TATIC module users allowing stakeholders across the airport management spectrum, such as billing, statistical, planning, management, and airport operations, to share vital information and make smarter, more efficient and timely decisions.



SAIPHER
BECAUSE LIFE FLIES

ELECTRONIC FLIGHT STRIP USED BY OVER 180 AIRPORTS



SAIPHER
Solutions for Air Traffic and Airports

SAIPHER
Solutions for Air Traffic and Airports

TATIC A-CDM

Enhances the predictability, punctuality
and operational efficiency at the airport



 Saipher ATC

 Saipher ATC

 Saipher

 Saipher

Av. São João, 2-435 - 20ª andar
Edifício Helbor Corporate Tower
São José dos Campos - SP
12242-000 - Brazil
saipher@saipher.com.br
www.saipher.com.br
+ 55 (12) 2112-0200



TATIC A-CDM

The TATIC A-CDM system, together with its modules ACISP (Airport CDM Information Sharing Platform) and PDS (Pre-Departure Sequence), enable the interaction between the following partners: Network Operations (NO), Control Tower (Air Traffic Control – ATC), Aircraft Operator – AO, companies that provide auxiliary services for air transport (Ground Handling – GH) and Airport Operational Control Centers (Airport Operations Center – AOC). Through a platform, they share information to improve operational efficiency, predictability and airport punctuality.

BENEFITS

- Increased situational awareness of the partners (AO, ATC, GH, AOC, and NO).
- Improved match planning allows for better coordination between the arrival and departure of flights.
- Improvement and optimization of ground handling resources.
- Provides ATC and ATFM (Air Traffic Flow Management) with an increase in the predictability of flight departures because there is a commitment that the AO shall call at the proposed target time for startup procedure.
- The operation planned by the A-CDM partners will bring, with the maturity of the use of the concept, a significant reduction in the average taxi time at the airport. According to Eurocontrol research, this reduction generates savings of millions of dollars for the partners involved and reduces tons of polluting gas emissions into the atmosphere.
- Greater passenger comfort due to increased predictability and punctuality in operations.
- Improved situational and operational awareness due to increased predictability and punctuality in operations.

THE HMI (HUMAN MACHINE INTERFACE) OF THE PLATFORM

The ACISP platform organizes and presents information clearly to users through specific tabs. The information referring to the Arrival of flights is separated from that of Departures and in each of these tabs, the user can follow the details of each flight, checking a collection of timely information. Measurement of results concerning the processes is carried out through performance indicators and monitored in a specific tab – KPI (read more below). In addition to the overview, each flight has a collection of additional data that expands the access to information. This information is displayed in the following mini tabs:

- **Timeline:** Lists the chronological history of changes in a flight's data from when the plan is launched on the platform until the time the flight takes off.
- **Alerts:** Presents a robust and configurable alert system responsible for informing non-compliances with rules that could compromise the flight's departure.

- **Chat:** Allows the exchange of information over a specific flight between partners (AO, ATC, GH, AOC, and NO).
- **MLS:** Records A-CDM Milestones, that is, times related to aircraft movement during all phases of the flight.

INDICATORS (KPIs)

The data shared between the partners/Users of the platform will be the basis for the generation of performance indicators or KPIs (Key Performance Indicators). These indicators will provide partners with different views (global or specific) on the fundamentals of operational efficiency, predictability and performance. Using KPIs, it will be possible to:

- Discover possible bottlenecks during flight arrival, turnaround and departure operations.
- Check the individual performance of each AO compared to the others (benchmarking).
- Check the quality of data from sources providing information to the ACISP.



KPI CAN BE USED FOR:

- Measuring OTP (On-time Performance) punctuality for arrival and departure.
- Analyzing early or delayed arrivals or departures.
- Check response times of AO, AOC and ATC for specific processes.
- Verifying the quality of the estimated landing time provided by external systems.
- Verifying the quality of the EXIT (Estimated Taxi In Time) / EXOT (Estimated Taxi Out Time) of flights calculated by PDS.
- Analyzing the difference between the TTOT (Estimated take-off time) and ATOT (Actual take-off time) of flights.
- Monitoring taxi-in and taxi-out times.
- ...And much more

SAIPHER
Solutions for Air Traffic and Airports

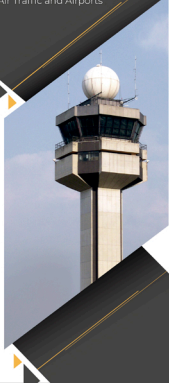
SAIPHER
Solutions for Air Traffic and Airports

TATIC TWR

Using Digital Technology to Take your Control
Tower Operations into the 21st Century



Av. São João, 2.405 - 20º andar
Edifício Helbor Corporate Tower
São José dos Campos - SP
12242-000 - Brasil
saipher@saipher.com.br
www.saipher.com.br



TATIC TWR

For more than seventy years, air traffic controllers have relied on paper Flight Progress Strips (FPS) to track, organize and register the movement of all aircraft under their direction and for which they are responsible.

TATIC TWR control and management system is a powerful digital tool designed to replace outdated paper Flight Strips and assist controllers by reducing their workload with safer, faster, and more efficient Electronic Flight Progress Strips (EFPS). TATIC TWR is flexible and can meet the specific needs of any tower operation, regardless of the intensity of traffic flow, operational procedures, or particular local requirements.

All TATIC TWR managed information is stored in a database on a high-performance server, which can be accessed by any department equipped with any of the TATIC software suite. It provides easy access for tower and airport management to search and compile data for reports, research, and to support operational decisions.

TATIC TWR provides tools to create searches and generate dozens of reports about air traffic movement at your specific facility. These can then be printed or exported to other data formats such as PDF, XLS, HTML, RTF, and XML.

INTERFACE FEATURES

- TATIC TWR provides one standard interface that keeps all system resources and functions in one place.
- Workstation supports touch screen interaction.
- Allows users to view additional information without compromising the visibility and clarity of EFPS.
- Allows instant access to all TATIC functions at any particular location via function panels.
- Ability to load all operational positions into any workstation in a given location.

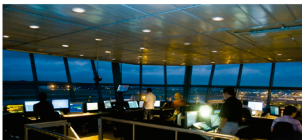


OPERATIONAL FEATURES

- Supports use of two workstations logged in operation simultaneously (one operating and the other assisting).
- Individual action lists allow quick commands to the strips.
- Enables editing of data directly on the strips to speed up the resolution of operational situations.
- Users can easily create strips related to flight plans still processing, accidents, incidents and other usual or unusual operational situations, being visually separated from other strips
- Users may merge two or more operational positions into one workstation.

KEY ADVANTAGES AND BENEFITS

- Significantly reduces air traffic controller workload and improves productivity and overall safety of air traffic operations.
- The system offers a robust set of tools and features made available through the utilization of the latest information technology.
- A scalable system that can be easily modified to meet changes in the operational environment.
- The system provides real-time remote monitoring of aircraft movement on the airfields through the integration of other TATIC Systems.
- It is operationally ready for CNS(ATM, providing DCL [Data Link Clearance Delivery] without the operational need for parallel systems (requires a connection to a DSP).



SAIPHER
Solutions for Air Traffic and Airports

SAIPHER
Solutions for Air Traffic and Airports

TATIC FLOW

Real-Time, System-Wide Airport Traffic
Monitoring System



 Saipher ATC

 Saipher ATC

 Saipher

 Saipher

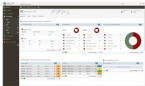
Av. São João, 2.405 - 20º andar
Edifício Helbor Corporate Tower
São José dos Campos - SP
12242-000 - Brazil
saipher@saipher.com.br
www.saipher.com.br
+ 55 (12) 2112-0200



TATIC FLOW

TATIC FLOW is a web-based, air traffic management tool, which allows ATFMU (Air Traffic Flow Management Unit) stakeholders to monitor real-time status of flights in different airports simultaneously or individually by using data supplied by TATIC TWR® and uses this data to accurately forecast departing and arriving traffic throughout the system, thereby reducing delays and enhancing safety.

TATIC FLOW is a vital component of the Saipher ATC Integrated TATIC® System. Together with TATIC TWR and TATIC APRON, they form the foundation of Saipher ATC's Collaborative Decision Making (CDM) process, which makes available critical information on aircraft movement to all airport stakeholders in real-time.



FLEXIBILITY IN ACCESSING SYSTEM DATA

TATIC FLOW can display operational information in real-time, or it can be used to retrieve historical data to generate reports, establish trends, and extrapolate future traffic flow. It is possible to create several WebParts for one location or select several locations for the same WebParts. Because of the system's flexibility, TATIC can present information in multiple ways to meet any requirement or preference, thus improving the efficiency and safety of air traffic control and airport management.



TATIC FLOW IN OPERATION

Here are a few examples of the information available through TATIC FLOW:

- Real-time flight monitoring from all TATIC TWR equipped airport
- Airport operational condition: VFR, IFR, runway in use, and others
- Proposed flight plans or flight plans already in operation
- Aborted landings/go-arounds
- Number of aircraft departures in the last 30 minutes
- Delays and their associated causes: EOBT, AOBST, TEID, and others
- Detailed progress of the hourly movement
- Departure forecast (TEOBT, Target EOBT)
- Forecast restricted to the airport (PHOCAP: Practical Hourly Capacity)
- Airport EBOT forecast
- Traffic volume per operational status
- Ranking of airport movements

SIMPLE, EASY TO USE INTERFACE

TATIC FLOW, based on "WebParts" module technology, which enables the user to customize information from control towers and airport operations to meet their specific needs, brings flexibility that allows a quick data creation, modification, and updating, according to the needs from TATIC's central database.



SAIPHER
Solutions for Air Traffic and Airports

SAIPHER
Solutions for Air Traffic and Airports

TATIC AFIS

Increasing efficiency and safety of
operations in AFIS stations



Av. São João, 2.405 - 20º andar
Edifício Heber Corporate Tower
São José dos Campos - SP
12242-000 - Brazil
saiphen@saiphen.com.br
www.saiphen.com.br
+ 55 (12) 2112-0200

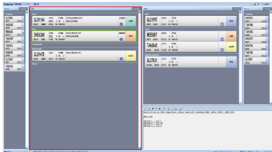


TATIC AFIS

TATIC AFIS is formed by a set of applications specially developed for use in Remote Flight Information Service. The system provides the automation of functions, task simplification, process improvement, and increase of efficiency and safety of operations in AFIS stations.

THE SYSTEM MEETS THE DEMANDS OF THE AFIS STATION CONCERNING:

- Replacement of conventional paper flight progress cards with electronic flight cards (EFPS - Electronic Flight Progress Strips) which contain the operational information of a flight plan. AFIS workstations manage EFPS.
- Availability of tools to Remote AFIS Station Operators to support their assignments.
- Integration with other systems that make up the SISCEAB - Brazilian Airspace Control System to guarantee the exchange of information between the various systems and control bodies.
- The system has a Workstation with appropriate features for screen layout, workflow, and operational status sequence to meet local specificities.



SYSTEM CHARACTERISTICS

- The system can operate on a cost-effective hardware platform, optimized for its operations.
- Allows integrations with Flight Data Processing (FDP) systems, ATFM systems, among others.
- The operational status sequence workflow, as well as the screen layout and electronic flight strips, are configured according to the AFIS Station needs.
- Intuitive interface for easy adaptation and use.
- Operating data can be stored for historical queries and searches.
- Allows verification of data received from other systems and data entered by the user, creating pre-configurable alerts in case of indications of inconsistency in operation or conflicting information.
- Based on the use of electronic strips to assist the flight controller in organizing air traffic.

SUPPORTED OPERATIONS

- ARR - Arrival Sequence
- DEP - Departure Sequence
- CVF - Crossing Sequence
- TGL - Touch-and-Go Landing Sequence
- LOW - Low Pass Sequence



SAIPHER
Solutions for Air Traffic and Airports

SAIPHER
Solutions for Air Traffic and Airports

R-AFIS

Real-Time, System-Wide Airport Traffic
Monitoring System



-  Saipher ATC
-  Saipher ATC
-  Saipher
-  Saipher

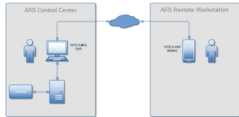
Av. São João, 2.405 - 20º andar
Edifício Helbor Corporate Tower
São José dos Campos - SP
12242-000 - Brasil
saipher@saipher.com.br
www.saipher.com.br
+ 55 (12) 2112-0200



TATIC R-AFIS

TATIC R-AFIS is formed by a set of applications specially developed for use in the Remote Flight Information Service. Each TATIC operating station for a remote location consists of:

- TATIC R-AFIS CWP - for flight controllers in the control center.
- TATIC R-AFIS Mobile - for operators in the AFIS location.



THE SYSTEM MEETS THE DEMANDS OF THE AFIS REMOTE STATION CONCERNING:

- Replacement of conventional paper-based flight progress strips with electronic flight strips (EFPS - Electronic Flight Progress Strips), which contain the operational information of a flight plan, where AFIS workstations manage EFPS.
- Availability of tools to Remote AFIS Station Operators to support their assignments.
- The system has a workstation with appropriate features for screen layout, workflow, and operational status sequence to meet local specificities.



SYSTEM CHARACTERISTICS

- Use of the same infrastructure to serve multiple locations.
- Direct communication with the remote location.
- New operational positions to serve other remote locations may be added to a Central Server until the calculated capacity for the server is reached.
- The system can operate on a cost-effective hardware platform, optimized for its operations.
- Allows integrations with flight data plan systems (FDP), ATFM systems, among others.
- The operational status sequence workflow, as well as the screen layout and electronic flight strips, are configured according to the AFIS Station needs.
- Intuitive interface for easy adaptation and use.
- Operating data can be stored for historical queries and searches.
- Allows verification of data received from other systems and data entered by the user, creating pre-configurable alerts in case of indications of inconsistency in operation or conflicting information.
- Based on the use of electronic strips aiming at assisting the flight controller in organizing air traffic.

SUPPORTED OPERATIONS

- ARR - Arrival Sequence
- DEP - Departure Sequence
- OVF - Crossing Sequence
- TGL - Touch-and-Go Landing Sequence
- LOW - Low Pass Sequence

