

NAFC Aircraft Tracking and Event Logging - "AFAMS"

BACKGROUND

Updated June 2016: .

NAFC and its Members (Australian states and territories) have decided to implement a national standard approach to the provision of tracking and event logging services for aircraft involved in firefighting and related operations. It is planned that this will also extend to a short-message system. The adoption of a national approach followed extensive investigation and consultation with agencies and operators throughout Australia. A number of operational trials were also undertaken.

The national aircraft tracking and event logging system is referred to as "AFAMS" (Australian Fire Aircraft Monitoring System).

The approach adopted is a data integration model. This allows aircraft operators to continue to select their own provider of tracking services and to select and install tracking and event logging equipment appropriate to their aircraft and organisation. The aircraft operator's tracking provider must arrange to forward the tracking data (to the required standard) to a central data integrator. In turn, the Integrator stores and forwards the data to the various user agencies and organisations.

This model is also designed to integrate with and to complement systems that are already in place in some states and territories. It provides flexibility to participate at a number of different levels, according to the particular needs of individual agencies.

In June 2016 NAFC renewed an agreement with TracPlus Global Ltd (www.tracplus.com) to provide the integration services. NAFC has entered into a Service Level Agreement (SLA) with TracPlus. The SLA ensures a guaranteed standard of service and also sets pricing.

Key features of the system include:

All aircraft engaged in fire operations are required to participate in the tracking component of the system. Most aircraft are also required to participate in the event logging component of the system. There is also a requirement for some vehicles provided by aircraft operators (eg fuel trucks) to participate.

Aircraft operators will continue to make their own arrangements for tracking services including selection of their preferred tracking provider, but will also make arrangements directly with the Integrator to deliver the tracking data and event data) into AFAMS. This may require the establishment of a "gateway" to the integration system for a particular tracking provider.

Authorised fire agencies and organisations wishing to view or use the data make arrangements directly with the Integrator. There will be a number of different ways of accessing the data, according to the needs of the user.

FAQs

Why have tracking at all?

A. Experience with existing tracking systems over more than a decade in some States has reinforced the value of real-time resource tracking. The technology is currently used to:

- support “manual” flight following (regular position reporting) for search and rescue (SAR) and resource management purposes, reducing aircrew and ground crew workload and reducing radio traffic;
- support SAR missions by providing last known positions;
- aid dispatching and resource allocation and to support resource management;
- improve situational awareness for aircrew, fire managers and supervisors;
- aid verification of operating times and work performed to support invoicing and accounting processes;
- undertake basic mapping;
- automatically provide other relevant data e.g. wind speed and direction, amount of water delivered, type of suppressant;
- automatically integrate aircraft or vehicle data with other electronic systems;
- support effective monitoring of performance of assets e.g. amount of fire control line built in a period of time; and
- provide data for research and evaluation of fire control techniques.

In addition, the communications layer that transfers data from aircraft often provides extra functionality such as messaging and voice communications.

Aircraft operators have also rapidly been adopting tracking services for their own fleet management and safety purposes.

Who pays?

A. The general principle is that the aircraft operator pays to put the data into the system, and the fire agencies and other data users pay to get the data out of the system.

The amount that an operator pays to put data into the system depends on a number of factors. If you already have suitable tracking equipment in an aircraft and an arrangement with a suitable provider you will normally only pay a small additional surcharge to feed the data in. Depending on the circumstances there may be a small monthly access charge and/or an account establishment fee.

Who makes the arrangements?

- A.** The aircraft operator makes the arrangements to acquire and install appropriate in-aircraft terminal equipment and makes the arrangements with a tracking service. The aircraft operator's tracking provider (or event logging provider, if applicable) makes an arrangement directly with the Integrator to pass the data into AFAMS.

Agencies (and aircraft operators) who wish to view or use the data also make their own arrangements directly with the Integrator . There is a range of options depending on the degree of access required.

Even though arrangements are made by aircraft operators and agencies directly with TracPlus (as the current Integrator), all arrangements are covered by an over-arching agreement between NAFC and TracPlus that, amongst many other things, sets out minimum service levels and defines standard pricing for anybody participating in the national system.

Who owns the data?

- A.** Whoever paid for it to be collected. Normally this will be the aircraft operator, but as a condition of engagement on fire operations the aircraft operator grants NAFC and other participating agencies a licence to use the data.

Why an “integration approach” ... why not just appoint one tracking and event logging provider?

- A.** For a whole range of reasons, but mainly to give aircraft operators a much better range of options for participation and hopefully to take advantage of systems and equipment that is already in place.

Also, the agencies viewing and using the data need to get it in a range of different ways, as they all have different information systems. This is really the only practical way of achieving that.

Why not the same approach as Automated Flight Following (AFF) in the U.S.?

(where a data standard is specified, and the data is fed by tracking providers directly into a “government” system.)

- A.** In effect this is what we are actually doing. You could regard the Integrator as our outsourced provider of the Australian equivalent of AFF. Taking this outsourced approach will however provide greater flexibility, especially given the number of parties who will receive and use the data in different ways. It will also ultimately provide greater functionality for more advanced tracking and mapping features. Additionally it allows aircraft operators to take advantage, if they wish, of other value-added services offered by TracPlus.

The Australian system has been designed, as far as practicable, to be compatible with AFF. Aircraft fitted with AFF equipment and complying with the AFF

standard will mostly be able to fit straight into AFAMS.

What about event logging?

- A. Event-logging functionality in AFAMS is currently in the process of being implemented. As requirements vary according to the tasks to be performed by the aircraft, the specifics are will be detailed in individual contract or other procurement arrangements

What about messaging?

- A. We still need to do a little bit more work on standards. Stay tuned See also the answer under “*What in-aircraft terminal equipment should an aircraft operator choose?*” below.

What about voice?

- A. Operational trials have confirmed that for a range of reasons it is best to treat voice communications capability separately. This gives much greater flexibility in selection and ongoing maintenance of aircraft equipment.

What in-aircraft terminal equipment should an aircraft operator choose?

- A. Essentially it depends on what is the best fit for the aircraft and the business, provided it is capable of providing the tracking data and event data to the required standard. We do recommend that consideration be given to installing terminal equipment capable of accommodating future requirements.

More information?

See downloads, below, or

For general information and specifications contact NAFC at: info@nafc.org.au

For other information regarding the system, terminal equipment and for technical and sales queries contact Tracplus at:

- web: www.tracplus.com
- email: sales@tracplus.com or support@tracplus.com
- for phone and fax numbers go to: <https://www.tracplus.com/contact>