



Surface to Air Missile-Position Ranking and Analysis System

OVERVIEW

SAM-PRAS assists in the protection of aircraft and airports from stand-off threats such as Man Portable Air Defence Systems (MANPADS), lasers, rockets, mortars, RPGs and snipers. Using data about flight paths, taxiways, key potential targets, buildings, terrain and weapon types, the software quickly identifies and prioritises the threat from each of these weapons from attack points around airfields.

The analysis is presented in a variety of formats for briefing protection teams and commanders. If flight paths alter due to weather and changing tactical situations, the software reprioritises each threat so that protection teams can be quickly re-deployed. Surveillance and mitigation plans can be overlaid onto the calculated threat areas to ensure coverage and provide situational awareness.

SAM-PRAS is deployed worldwide with governments and militaries. It is used by UK Police Forces, the US Transportation Security Administration (TSA), the Australian Department of Defence, the Australian Federal Police, the French Government and the UK RAF Regiment, amongst others.

KEY FEATURES

- Calculate MANPADS footprint for multiple combinations of flight paths
- Calculate Direct and Indirect Fire sites, with Audit Trail of decisions
- Import military and civilian mapping formats. Import flight path data from DAFIF, Mode S IFF and Radar tracks
- Create a database of surveyed sites and carry out low-level intelligence gathering
- Plan and visualise patrol routes and their terrain coverage
- Construct and maintain a surveillance plan for the airfield, including optimisation of sensor coverage
- Configure weapon data - Unclassified to Secret
- Display in 2D, 3D, and overlaid on Google™ maps and aerial imagery
- Laptop/Tablet variant enhances data capture in the field during reconnaissance and patrol
- Enables rapid re-tasking of protection forces as the tactical situation changes

DESCRIPTION

SAM-PRAS calculates a footprint of potential attack points from MANPADS, rockets, mortars and snipers surrounding an airfield, while considering those areas which may be out of scope due to terrain elevation or weapon range.

Potential attack points can then be systematically categorised, ranked, and mitigated using aerial photography or earmarked for further survey. A database provides an updatable record of all potential attack points identified, and allows teams to record evidence of mitigation using notes, photos, videos, maps and sketches.

All data can be studied on screen, exported to standard geographic information systems (GIS) and Adobe PDF files, or printed in various reports useful for situational awareness, reconnaissance, incident control, patrol teams, and command briefings.

SAM-PRAS assists force and incident commanders to deploy teams to the areas of most risk first. It also facilitates pragmatic dialog between airport operators, air traffic control and security forces protecting aircraft and facilities within the threat area.

A Tablet-based Recce variant facilitates rapid data entry while on reconnaissance and patrol, with optional data input from GPS and laser range-finding equipment.

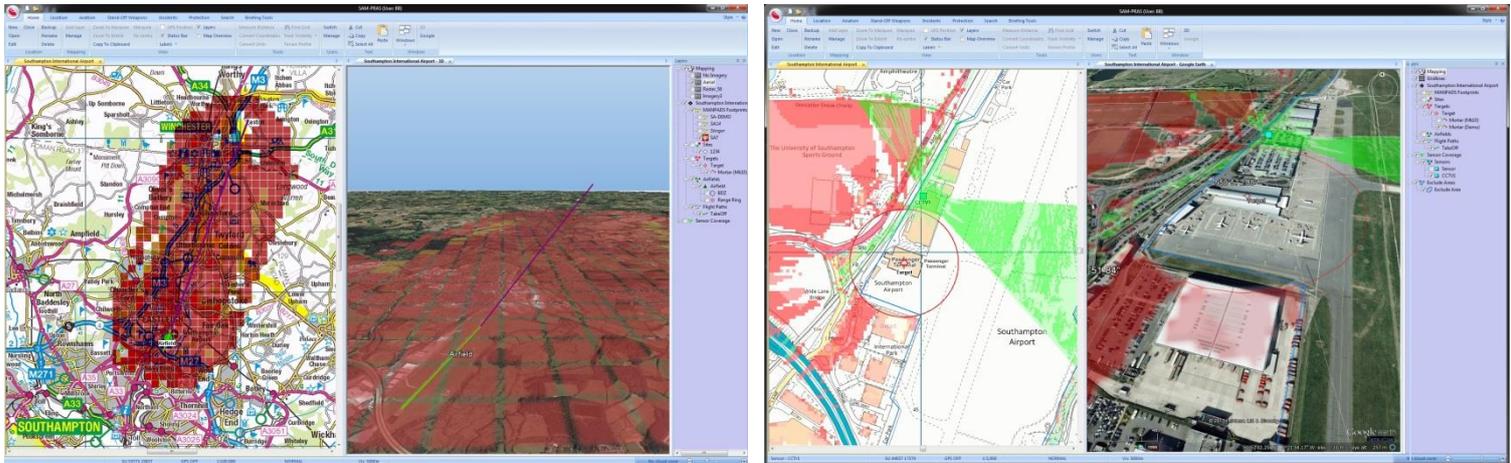
Most military and civilian mapping standards and formats can be imported into SAM-PRAS, e.g. ASRP, DTED, ADRG, CADRG, CIB, VMap, OS, NTF, Shapefile, Intergraph, Esri, TIF, SID, ECW, JPEG. Mapping conversion and management can also be supplied as a service by us if required.

SUMMARY

- Threat assessment of MANPADS, lasers, rockets, mortars, RPGs and snipers
- High resolution maps and aerial photography
- Survey tools with audit trail to justify mitigation decisions
- Calculation and maintenance of surveillance and patrol plans
- Generation of reports for law-enforcement, security and Force Protection communities
- Improved situational awareness, and information sharing, across networks
- Display of patrol 'truth traces' derived from GPS data logger input
- Display of flight paths derived from AIP, Real or Virtual Radar Systems, and DAFIF
- Views in 2D, 3D, and overlaid on Google™ mapping and aerial imagery
- Plan and task UAVs, store and retrieve their output

TECHNICAL SPECIFICATIONS

- Microsoft Windows Win 7 and 8.1 (32-bit and 64-bit)
- Link to Google Earth™ (if permitted by Security Regulations)
- Proprietary 3D terrain generation, graphics and rendering engine when Google not available
- Network deployable or stand-alone as required
- Uses Microsoft SQL Server, Esri ArcGIS and Safe FME Technology



MANPADS threat footprint in 2- and 3-D

Mortar and CCTV coverage in 2D and Google

For further details of SAM-PRAS or to arrange a demonstration, please contact us at:
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Threat Visualisation for the Real World