



**AIM EFFECTIVENESS FOR SINGLE PILOT VFR  
OPERATIONS**

**PROPOSALS FROM FASVIG**

Version 2.0

Final

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## **AIM EFFECTIVENESS FOR SINGLE PILOT VFR OPERATIONS**

### **PROPOSALS FROM FASVIG**

#### **Introduction**

1.0 The FASVIG Implementation Programme (FASVIP) contains an AIM efficiency enablers element which has significance to airspace safety and infringement reduction. FASVIG sought views from VFR stakeholders and from providers of GPS mapping devices and services commonly used by pilots flying VFR in the UK. Its objective was to identify policies that tend to make the user interface less effective than it might be and propose potential changes to improve airspace safety and support infringement reduction. As GPS mapping devices are developed the displayed AIM information and warnings are increasingly focussed and reliable pilots rely on the information and honour warnings and information messages. However, where displayed information is not relevant to the route flown or the time of flight, pilots have to make a decision to honour or ignore the information. Forcing pilots to make such decisions invites error and reduces airspace safety.

1.1 FASVIG produced a report of the same title as this proposals paper dated 28 Sep 2016 that was submitted to the CAA (<http://fasvig.org/reports/vee-1234-report-aim-effectiveness-for-single-pilot-vfr-operation> ). This proposals paper is to move the matters forward as a series of proposals that can be progressed as work packages. Due to FASVIG funding there is a need to gain agreement from the CAA's NATMAC AIM Working Group for these proposals as soon as possible, and definitely by early September 2017.

1.2 The paragraphs that follow discuss these areas by FASVIP package. This work is closely allied to other FASVIG work on Listening Squawks and Airspace Infringement reduction. Where there is overlap we indicate this in the text.

#### **FASVIP Packages of Change**

##### ***A.3.1 NOTAM Compatibility with Graphical Display***

*Most civil aircraft intending to operate VFR use a graphical presentation for NOTAMS, but too many NOTAMs are not fully compatible with this format. FASVIG would identify areas of issue and propose changes.*

2.0 Whilst the standard of the Digital NOTAM has been set internationally and so are not within UK control to unilaterally change there are a number of issues that impinge upon the ability to accurately transfer that data on to the various available graphical presentation tools:

2.0.1 cost, the products currently supplied to the GA world vary from full commercial products to completely free volunteer created ones. As this is a safety issue and a

national obligation to provide data FASVIG proposes that the data be free to suitable people/companies/organisations

2.0.2 availability, FASVIG understands that the products currently supplied to the GA world get the base data from a number of sources which creates a variability of product. This variability is not always visible to the pilot. Therefore FASVIG proposes that, to the suitable people/companies/organisations (as mentioned in paragraph 2.0.1 above), there is a standard method of delivery.

2.0.3 how the data is presented within the various fields particularly Field E, whilst most of the fields in a Digital NOTAM are tightly defined some are not. The AIM WG has already seen some work from NATS on a "NOTAM Bible". FASVIG proposes that this work is progressed, including a validation exercise to make best use of the fields that have a looser definition with respect to quick, accurate and simple automated processing within graphical display systems.

### **A.3.2 NOTAMs Relevant to Time**

*Certain NOTAMS cover an omnibus period with the actual activity period detailed in text. This is incompatible with the majority of VFR user NOTAM interfaces and results in clutter, complexity and unnecessary funnelling of VFR traffic.*

2.1 To some extent multiple time window NOTAMs may have come about as a function of a stated desire to reduce NOTAM proliferation. However the ready availability of graphical systems means that the desire to reduce the number of NOTAMs needs to be focused on the need for all NOTAMs to be raised with a view to being displayed graphically.

2.2 The work on the "NOTAM Bible" mentioned in paragraph 2.0.3 needs to also consider this aspect

### **A.3.3 NOTAMs Relevant to Route**

*As part of their definition, some NOTAMs have a geographic centre and radius specification that indicates the area affected. It is not uncommon for the area specified to be different from the actual area affected by the subject matter of the NOTAM. Recent prime examples include a NOTAM covering the whole of the UKFIR announcing the ban on flights in Ukrainian airspace and a NOTAM covering a significant part of the UK land area concerning a TMZ offshore.*

*Use of the NOTAM system in this way causes information to be presented to GA pilots that is totally irrelevant to their planned route. The resultant information 'clutter' increases the chances of pilots missing important details that are relevant to their planned route. This practice should be stopped.*

*It is accepted that this type of information is important for those planning flights which are affected by the true geographic area of the subject of the NOTAM. If using the true location of the affected area in the NOTAM definition is deemed insufficient, then a different method should be employed to provide general notification to those truly affected.*

2.3 Whole FIR warnings about hazardous situations beyond the FIR continues to be a concern for VFR pilots who will never be affected by them. Pilots scanning NOTAMS skip through such entries and are more likely to miss more important matters. If such notifications have to be in NOTAMS we would encourage a single short NOTAM listing all the countries with cross reference to the relevant AICs because skipping over a single entry is less likely to lead to missed entries than making multiple skips.

2.4 There have been cases of a wide area of influence being depicted when the actual area of concern is small. An example would be an offshore TMZ with a large circle of interest. Other cases occur where administrative changes at aerodromes are depicted as a NOTAM with an area of interest. In both these cases pilots are presented with a warning on their GPS device but may ignore it. They have to remember what to ignore and what to honour and that is liable to introduce error. Moreover, pilots will tend to avoid all the red circles and warnings on their GPS map even when they may not need to. Whilst this reduces the risk of error it tends to funnel traffic unnecessarily.

2.5 We propose that methods of eliminating such “false positives” be developed and deployed. This has an impact on airspace infringement risk. Again the work on the “NOTAM Bible” mentioned in paragraph 2.0.3 needs to also consider this aspect

#### **A.3.4 Temporary Reserved Airspace Depiction for VFR Airspace User**

*The presentation of TRAs and other airspace notifications in the AIP and through NOTAMS tends to be set out in a way that is convenient for the author but is ineffective as a source for airspace users. This is particularly important for the VFR user where there is no intermediate service provider to translate the source data into a more useful format as is usually the case in commercial operations. This represents an airspace safety hazard.*

*Although significant airspace reservations which are planned well ahead are commonly depicted in the AIP the presentation is usually an IFR-type chart, centred on the airport or facility in question and showing its position from that viewpoint. However, the VFR user needs to be able to understand the reservation as viewed from outside the airspace and for the VFR pilot this increases workload and infringement risk. The VFR user is familiar with CAA topographical charts but these are rarely used to depict airspace reservations.*

*Shorter term airspace reservations are only described by text only NOTAMS and whilst that is legally sufficient it is of little direct value for navigation and manual plotting is difficult on plastic-surfaced charts and is prone to error.*

2.6 Since FASVIG first built its packages of change, the development of GPS devices has largely overtaken paper map requirements so improving the layout of AICs in describing TRAs is perhaps less important. However, paper maps are still in use. It was clear that a depiction of a TRA in a way that is relevant to the airspace regulator and the ATS unit is not usually suitable for the VFR airspace user and plotting from what is essentially an enhanced airway chart onto a VFR chart is difficult and prone to error. If in an AIC, a TRA was depicted against the background of a standard VFR chart it would enable the user to easily and accurately transfer it to their own map which would promote TRA avoidance and deliver a user-friendly notification.



2.7 We propose that policy on graphic practice within AICs and supplements be reviewed. This has an impact on airspace infringement risk.

2.8 FASVIG also found that certain activity areas are marked on charts as "by NOTAM" when they are rarely if ever used. Because they are on the chart they are presented on GPS devices and most pilots will choose to avoid them at all times resulting in traffic funnelling and choke points as well as adding to chart and airspace complexity. Because of the capability of GPS mapping devices to depict NOTAM areas during the time they are active, where an activity area is rarely used it would be better if the symbol and area was not permanently displayed. This identifies a difference in charting requirements for paper charts and GPS moving map devices. For paper charts, users need by-NOTAM only areas displayed so they can reference them and mark up where necessary. Providers of GPS devices need to be able to display only that which is active at the time. This is already functioning in an informal way with certain user groups who manage their own data taking out items which are not relevant to their operation. This facility needs to be available to mainstream commercial GPS mapping providers and should be regularised and documented so that users know what they get from all systems and devices. A single AIM policy is no longer appropriate.

2.9 We propose that policy on data for paper charts and GPS devices be reviewed with a view to providing appropriate data and policies to both elements. This has an impact on airspace infringement risk.

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