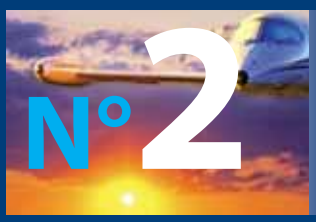


Airspace infringements call for urgent safety improvement measures

Safety Letter

EUROCONTROL

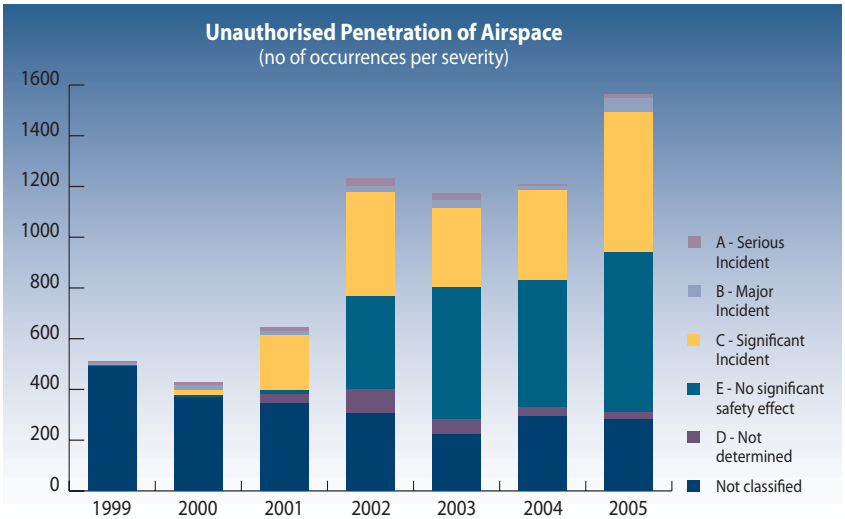
FOREWORD

by Alexander Krastev, Coordinator Airspace Infringement Initiative

Unknown aircraft stray into the busiest areas of Europe's airspace every day. This happens mostly in airport control zones, terminal areas and in en-route airspace.

Recognising the severity of the threats to aircraft operations posed by airspace infringements EUROCONTROL launched beginning of 2006 the Airspace Infringement Safety Improvement Initiative.

Airspace infringements are not new. Despite efforts made in several European countries, these incidents continue to occur with a frequency which calls for an increased effort to develop preventative actions. Major causes have already been identified, however, effective remedies are not so simple to recognise and put in practice. Therefore it is considered that more benefits could be drawn from a coordinated European-wide initiative.



Source: EUROCONTROL Safety Regulation Commission annual safety report 2006

The ultimate goal of the Airspace Infringement Initiative is to develop, agree and implement an industry-wide risk-reduction action plan. The key success factor is the involvement and cooperation of all key stakeholders, including national regulators, air navigation service providers, general aviation (GA), military authorities and professional organisations.

SCOPE OF THE INITIATIVE

The focus of this safety initiative is the infringement of controlled airspace, which can be defined as a flight into notified airspace made without prior approval from the designated controlling authority of that airspace in accordance with international and national regulations. The "controlled airspace" referred to comprises ICAO airspace classes A to E.

Infringement of restricted airspace may also pose serious risk to the "infringer" and the operations being carried out in that airspace. The generic term "restricted airspace" is used to designate Prohibited, Restricted and Dangerous Areas, Temporary Reserved Airspace or airspace notified by a restriction of flying in accordance with national requirements.

Typical occurrence

An air traffic controller was about to turn a Boeing 737 onto a closing heading for the instrument landing system and to clear its pilot to descend from 4,000 to 2,000 ft. But he noticed a 7,000 transponder squawk from an unidentified general aviation aircraft which was not displaying Mode C. Since the base of controlled airspace in that area was 1,500 ft, the controller assumed that the squawking aircraft was flying below its boundary. Shortly afterwards, the B737 passed within about 1 nm of the unknown aircraft, and an adjacent ATC unit called to advise that it had been in contact with the intruder. The infringing aircraft had at that time been inside controlled airspace and flying at 3,000 ft. Its pilot said he was lost.

CHALLENGES

In order to capture the magnitude of the issue of airspace infringement, the reporting of incidents relies almost entirely on air traffic controllers, since GA pilots flying under visual flight rules (VFR) tend to be constrained by less mature reporting systems than those implemented today in military or commercial air transport organisations. The challenge will be to provide simple means of educating GA pilots of the need to submit reports on such events.

INTERVIEW WITH PHILIPPE HAUSER, AOPA SWITZERLAND

Airspace infringements are (also) a concern for GA pilots and organisations. In order to capture views on the issue, we submitted a number of questions to Philippe Hauser, Chief Executive Officer of AOPA Switzerland. He is an active pilot and flight instructor, and has as such been instrumental in providing support and training to GA pilots in order to ensure that they understand the implementation of the new Zurich TMA in 2005. The training package, named "Turicum" (the Roman name for Zurich) has helped to build confidence and reduce airspace-infringement-related incidents.

Are airspace infringement incidents perceived as an issue by AOPA?
"The short answer is definitely 'yes'. Our goal is 'safety first', which means that IFR traffic should, to a certain extent, have its own airspace. AOPA represents a wide variety of general aviation pilots and aircraft owners holding IFR and VFR licences, and therefore using both controlled and uncontrolled airspace. We feel that it is in the interest of all airspace users to find the most appropriate solutions which mitigate the risk. These can be found only by working together with a focus on safety."

You concede that airspace infringements are an issue; how are they perceived by those flying according to VFR rules in comparison with other risks in general aviation?
"The perception from a pilot's point of view is probably less (severe) than the statistics on airspace infringements indicate. In general, the main preoccupations of a pilot, when preparing his/her flight, are the weather conditions and fuel management. Airspace structure is more abstract and sometimes perceived to be less of an issue. However, the majority of pilots are keen on information (regarding airspace) and want to get it right, since they realise that there is latent danger."

What, from the point of view of the airspace users, are the main causes of AIs?
"There are several causes of airspace infringements. One of them is certainly flight preparation – flight planning. It is not that the pilots do not prepare their flights, but that adequate preparation is sometimes lacking. For example, the choice of a route which is not easy to navigate may be more likely to lead to an airspace infringement than one with distinct landmarks. Airspace boundaries are often a straight line on a map, with very little reference to navigate on. Once in flight, these lines become virtual and difficult to correlate with the path to be followed. Adding poor weather conditions, situational awareness becomes an issue as the workload for the pilot rises."

Could you list some of the "cures" that would prevent airspace infringement?
"The creation of awareness is certainly one of the best cures for the prevention of airspace infringement. This can be obtained through (basic) training, but has to be repeated periodically. The means can vary from articles in specialised magazines to activities within aero clubs and discussion of the subject in safety seminars. Dissemination could also be through monthly AIP revisions. However, national authorities or regulators are sometimes reluctant to include prevention material with their official updates. In general, it can be said that pilots are keen on obtaining information that increases safety. The difficulty is reaching all pilots."

How do you see your suggestions implemented in practice?
"In our opinion, awareness can only be created via concerted actions involving all concerned stakeholders. These are the regulator, the air navigation service provider and the airspace users."

If you could start with a "blank sheet" in resolving the airspace infringement issue, what would be your first proposal?
"It is probably utopian to address this issue with a 'blank-sheet' approach, as there are many 'givens' that cannot be changed, such as political issues. Our proposal would be to take a fresh look not only at the airspace structure, but also at the procedures and services provided."

WAY FORWARD

The airspace infringement occurrence analysis led by EUROCONTROL will be completed by mid 2007. It will identify the airspace infringement causal and contributory factors in sufficient detail in order to enable the establishment of effective safety improvement schemes and adequate risk reduction recommendations.

Throughout the initiative lifecycle close contact will be maintained with all identified risk stakeholders, in particular GA pilots, to ensure that all important aspects of the airspace infringement risk have been given proper consideration. Once the findings have progressed sufficiently, an industry-wide workshop will be organised to consolidate the knowledge acquired and agree a set of risk reduction recommendations for coordinated implementation across Europe. This workshop is likely to take place at EUROCONTROL Headquarters in Brussels during autumn 2007.

Risk reduction will be set out and implemented through a European action plan. A dedicated tool kit will be developed to support implementation of the risk reduction measures by General Aviation establishments, Air Navigation Service providers and National Authorities.

Further safety letters, publications and reports will be used to promote the initiative and keep the GA and ATM community informed of progress and involved in the implementation of the Airspace Infringement Initiative.

SUMMARY

Airspace infringements are a recurring theme. Numerous ATM incidents have occurred between IFR and VFR flights in controlled airspace. Some of them presented a high risk of collision. Solutions exist, but can only be implemented in collaboration with all actors concerned. The idea is not to restrict VFR operations or limit airspace available for General Aviation activities, but to make the sky safer for ALL airspace users.

For further details, please contact:

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