

# Let's get rid of the bad pilots

By Professor Sidney Dekker

“I'd be interested to know what you think of our proposal,” the woman said to me innocently. As representative of an ANSP in a European country, she explained how her country had been struggling with airspace infringements, particularly by VFR traffic. The problem seemed intractable – whatever the ANSP did, traffic kept entering its airspace without permission. Controllers would have difficulty getting in touch with such rogue traffic. It created problems for IFR traffic flows, separation and of course safety.

It wasn't the first time we had spoken, and I expected a proposal based on a thorough analysis of the problem. I expected that she would show me an investigation of the deeper reasons for airspace infringements in her country. There was no shortage of reasons. My mind had been running wild with ideas. Was it the lousy availability of VFR charts in that country (because, really, where do you buy those things?) so that hobby pilots had no up-to-date information in their cockpits? Or was it the extortion-like purchase prices of those charts once you'd found them?

Was it perhaps the proliferation of GPS systems in general aviation aircraft? I could imagine how this tech-

hardly any European countries with serious investment in training programmes so that general aviation pilots actually know what they are doing and seeing with their new gadgets.

Or was it the rise of a new generation of general aviation aircraft, faster and more capable than their aluminium forebears, surprising pilots with their speed and progress along a route, and in weather that would be much more marginal than they would have dared to fly in before?

Was it the surge of instructional flights in the economic boom times (yes, we did have those not long ago) in which everybody and their grandmother had the resources to learn to fly, while pilots could still move on to other jobs, which caused a shortage of experienced instructors?

Or was it the fact that the airspace which was continually being infringed upon was itself a dynamic, moving target as the result of airport and runway construction, and approach and departure procedure changes?

Or was it the arcane, hieroglyphic language of NOTAMs, a prehistoric leftover of numbers, latitude-longitude digits



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nology could give pilots with little proficiency or experience a false sense of security and positional certainty, while they are actually tumbling into various display and mode error problems. After all, the enthusiasm with which such new GPS navigational technology is bought and installed (and the way prices have dropped) is matched in

and abbreviations so absurdly abstruse, and meant perhaps more to get an authority off the liability hook than to inform a hapless pilot?

I mean, really. Here's the hobby pilot who is going to pick up a sleek new Cirrus SR22 with a spread of displays the breadth of the entire cockpit, for a €300 hamburger run to a nearby strip. His last landing was 89 days ago because it has been a lousy winter. He's in sales in his normal life, or something, and his most pressing concern is that he hopes he remembers how to prime the engine before starting (it was an injection engine on this one, right?). His three kids are hungry. “We wanna eat now dad, now!” Suppose the pilot even has the memory or wherewithal to go and find the

NOTAMs relevant to his flight (which is an amazingly generous assumption in many clubs, where this is easier said than done, mind you). "And we're hungry, dad! You promised us that hamburger!" He fends off the children for a few seconds and he then reads something like "VALID 251730-262159 ALL FL CS:WWWESOS INSIGNIFICANT NOTAM INCLUDED, EXCEPT OLD PERM NOTAM AREA: 6100N01300E 6100N01919E 5915N02100E". Uh, say again? Board the kids, crank it up, go feed the hordes.

We in the ANSP establishment apparently continue to have serious hopes that a VFR pilot will be able to translate a hieroglyph like the NOTAM above into something meaningful, that he'll say: "Ah, now I see, there's the boundary today!" (Because, among other things, where's that OLD PERM NOTAM AREA? You mean it's older than our hapless hamburger pilot's 89 days on the ground? Not even a German Enigma machine could crack that one and draw a line on a map). The hopes which we in ANSPs have border on the insane.

Pilots today, like most members of our global society (at least on this side of the digital divide), are increasingly used to getting information from little quick snippets on sites like YouTube. On YouTube, our hamburger pilot can probably learn how to perform an Immelmann on the snappy red Extra 400 of his Microsoft Flight Simulator to the beat of Queen's "We are the champions". His son's little iPhone-recorded film of the Cirrus he's about to rent is on there too. That's how pilots learn stuff, share stuff, and get information today in 2010 A.D.

NOTAMs, in contrast, are stuck in the Telex Jurassic. 1935 A.D. Messaging and coding modelled on technology which was developed for pulse dialling and circuit switching, and for data sent by Baudot code (do you even know what those words mean?). Our hamburger pilot's father wasn't even born in 1935. Our pilot would probably be just fine, and not bumble into your airspace if you gave him a little YouTube animated film of a chart and a line across it after you've changed it around (again). That's when his generation will more likely say: "Ah, now I see it!"

But the ANSP woman whose proposal I was about to hear had a much better solution. And I was amazed. "Here's what we'll do," the woman said. "We are introducing a system of successive penalisation. If the pilot makes a first in-

fringement, we will put all the information on him and the flight in a national register. He will be informed by letter that he is now on file, and will be watched from now on." A slap on the wrist. I was silent (or stunned, or both).

"Then, at the second infringement, we are going to fine the pilot. He is going to have to pay a financial penalty." "And the third?" I almost didn't dare ask. "We'll go to enforcement action." Go yank the license in other words.

Her solution? Get rid of the bad pilots. Just fight the symptoms. Identify the bad apples and remove them from the system. And how was she going to do that? By planting a police state in the middle of VFR territory. A police state that would monitor, watch, trace, record, track, file and store. And then punish.

What was I to say? You see, history is not on the side of police states. Not in the long run, at least. Before police states eventually crumble under their own bureaucratic weight and moral bankruptcy, people will have found a million ways to subvert and outsmart them. They will switch off transponders. They will fly using someone else's name. They will falsify records. They will stop filing flight plans. They will take off from undisclosed grass strips, hiding the aircraft under a camouflage net. They will do everything to rent a general aviation aircraft with stealth technology (as soon as that becomes available). You name it. Humanity's creativity under the threat of penalty is boundless. Making people afraid of the consequences of their actions does not necessarily prevent those actions. But it sure makes people smarter at hiding the evidence of such actions.

The airspace infringement problem should not be trivialised, of course. But if all we do is fixate on the infringement part of the problem, and not the airspace part (how its boundaries are created, changed and communicated), all we will do is fight the symptoms, getting rid of the bad pilots. And, as usual, if we leave all other conditions in place, new "bad" pilots will keep coming up to take the place of the ones we removed. Or, in a language we apparently, innocently, expect everybody else to be able to make sense of in 2010: ALL ATCO VALID PERM IF PROG ON SAF TOBE MADE 7000N0000E 7000S0000W DONOT BLME PILOT. 