

**Ms Carolyn Hutton,
Corporate Relations Branch,
CASA
GPO box 2005,
Canberra ACT 2601**

Your Letter of 23 January 2014

Pt 3

Dear Ms Hutton,

To be frank it is really obvious to me that you, the rest of CASA and probably most of Canberra belong on a different planet to myself, most pilots and indeed most Australians (known as taxpayers) for that matter. While interplanetary travel may be the ultimate solution to this problem, we can live in hope that the new government has the determination to address this issue in the near term.

Firstly, a summary of the infrastructure situation.

Mention of synthetic vision, improved approach accuracy and reduced minima is relevant. The planet's largest aviation authority, the FAA, has sensibly chosen WAAS as the basis of all of this. It made that decision on the basis that it was relatively easy and convenient to implement. This is because WAAS utilizes the same signaling technology, the same spreading codes etc as normal C-code GPS and thus only software is required to receive the improved as confirmed by the NTSB to better than 2 meters.

The global avionics industry has already implemented this technology in almost all GPS based avionics simply because of its low cost and effectiveness. It is the basis of features such as currently available 'synthetic vision', which obviously requires accurate positional information.

It does not matter how many séances in exotic locations (at taxpayers expense) attended by public servants, attempting to adopt unique ways of approaching this issue, the result will have the same outcome as the MLS, GRASS (a ludicrous variation of the long abandoned (marine) Differential GPS) and other unique 'initiatives'. Such an exercise is nothing more than technological masturbation.

Secondly, the regulatory question why does Australia need a unique set of aviation regulation at all? New Zealand does not. A bureaucratic debate about international compliance is not the

issue, even if it is clear that in some significant aspects on the basis of its own documentation Australia does not comply.

Thirdly, I note yet again I have not received simple answers to the simplest of questions.

“Unmanned balloons”.

I was shocked and horrified to learn that the definition of an unmanned balloon as an unmanned balloon was necessary addition “in the context of the oversight of unmanned aircraft operations”. Those totally unfamiliar with the English language might have confused such objects with flying pigs, without such a tautological revelation. The collateral replacement of 11 (?) pages of every copy of the AIP possessed by every conscripted pilot in the country doubtless has contributed to the destruction of many trees. (Got to be Green.)

As for the rest of your missive, it reads like an episode of “Yes Minister” where someone lost the script and of course avoids dealing with the core issues.

Core Issues

1. “Enhancement” of flight reviews.

The thought bubble, which was tried on a few years before was testing of (all?) endorsements and ratings. While lacking any detail of this obviously impractical measure your CEO’s missive did cite night ratings. The obvious question, while like others which remain unanswered, was are such reviews to be conducted at night? If not what is the point?

No one is suggesting that such measure would not lower the possible number of accidents. After all if the number of say GA aircraft flying were reduced to zero we would have no GA accidents at all. However the proposal is obviously impractical and no cost benefit has been defined. Just another case of the quest for ever-changing regulatory perfection regardless of cost or practicality.

2. International compliance

Having been a member of two International Standards Organization committees and founding chairman of two Australian ones, I know a little about “international compliance”.

However it was not the question. THE question is why does Australia need unique regulations and why it cannot simply do what New Zealand did years ago? (They at least have a few real mountains.) What is unique about the Australian aviation environment that requires unique regulation?

A question which is easier to answer is would we need this unique bureaucracy without it?

3. NEXTGEN

Yes I am aware that Australia is taking advantage of SOME of the same technology. Like it or not, some of it is incorporated in just about every aircraft produced. However as clearly stated in the FAA's public domain NEXGEN document it's a whole package.

4 WAAS

I note yet again you have refused to deal with the specific issue of WAAS and the FAA's implementation and adoption of it. Nor have you addressed the specifics of the wacky history of this issue including GRASS, MLS, ADME etc etc. Nor have you addressed the objective valid comparison of Half Moon Bay and Wollongong. Clearly the capability of the technology is the core issue. A G1000 with WAAS gives vertical guidance all the way to zero feet AGL. Without WAAS at an equivalent airfield with a (CASA – Airservices designed approach) with no WAAS vertical guidance disappears at 3,500' (WOL). You could spend a ~\$100 and get a copy of the G1000 simulator.

Canberra

Of course WAAS would make no difference in the context of CASA's "standards" to Canberra or indeed anywhere else on the planet where CASA - AirServices would chose to apply its standards, which it deems relevant regardless of the electronic infrastructure environment. Even if as stated in a sane world, regulation should be a product of the electronic infrastructure environment.

However, I note having spent hours overlooking the Canberra runway visible all the way to the end you should note that the stated objective of NEXTGEN is "Lowering Runway Visual Range (RVR) minima from 2,400 feet to 1,800 feet (or lower....)" (Guess what? I think its more than 1,800 feet to the end of the runway from the terminal.) The ceiling is a tad more contentious, so it's worth resorting to some of Airservices Australia's current CBR documentation.

Don't see anything looking like 100' feet to me. (Another NEXGEN objective.)

Of course as originally noted in my previous missive its really about all the airports other than Canberra, as I have no doubt that Canberra has in the past (MLS) and will in the future be treated as a special case.

Another exact quote from the FAA's NEXTGEN document is relevant (P52)

"LPV approach procedures, which are available to aircraft equipped with GPS / Wide Area Augmentation System (WAAS) are more cost-effective to implement in comparison with the installation of additional ground based navigation aids (NAVAIDs) and the development of approach procedures for those NAVAIDs."

WAAS is the basis of current implementations of innovations such as synthetic vision and as stated above in para 2 there is no sensible commercial motivation to adopt some different wacky unique basis.

“Further assistance”

Yes you missive has been of further assistance. While never in doubt, it is more obvious than ever what has to be done here.

Yours Sincerely,

Chris Reilly [REDACTED]

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Australian Government

Civil Aviation Safety Authority

OFFICE OF THE DIRECTOR OF AVIATION SAFETY

File Ref: G113/1521

23 January 2014

Mr Chris Reilly

Dear Mr Reilly

I refer to your further letter of 17 December 2013. You have raised several questions, a number of which I believe responsive answers have already been provided. I will respond here, however, to those of your further questions to which a reply from the Civil Aviation Safety Authority (CASA) is pertinent.

Unmanned balloons

The inclusion of a definition for unmanned free balloon is necessary in the Aeronautical Information Publication in the context of the oversight of unmanned aircraft operations. I am advised that this definition is the International Civil Aviation Organization (ICAO) definition and is also used by other countries.

Part 61 of the Civil Aviation Safety Regulations (CASR)

CASR Part 61 specifies a requirement that pilots must undertake periodic flight reviews in order to assess their competencies. The obligation is consistent with those governing other vocational, professional and technical activities with safety-critical implications. It also satisfies the ICAO requirement for States to implement a system that ensures pilots maintain proficiency. The Australian flight review is consistent with those used by other countries. Part 61 does not have separate class ratings for land and sea, so a separate flight review for water operations is not required. Under Part 61, pilots need to be satisfied they are proficient conducting a particular operation and that ties the competency-based system to entry control (initial tests) and ongoing operations (flight review/proficiency checks). CASA is updating the Flight Review Civil Aviation Advisory Publication to be an Advisory Circular on flight reviews.

Australian compliance

Australia has a unique Private Instrument Flight Rules rating which is not accepted by the United States. However, I am advised that its basis is not unique and has similarities to the United Kingdom's Civil Aviation Authority Restricted Instrument Rating. Your comment that "minimums are so restrictive" and made "tough" is not correct. The Minimum Descent Altitudes for RNAV (GNSS) approaches as defined in CASR Part 173 are the same as those in ICAO PANS OPS.

In answer to your question about Australia's unique set of rules and regulations for what is, by world standards, a comparatively small aviation industry, I point out that the CASA program of regulation reform seeks to improve, strengthen and reinforce aviation safety within Australia. Part of this process includes an update to the regulations to align with international best practice and the ICAO safety standards and recommended practices.

CASA also carefully considers, and commonly adopts safety recommendations appearing in ATSB investigation reports, some of which involve changes to aviation standards.

NEXTGEN

NEXTGEN is the Federal Aviation Administration (FAA) air traffic management system upgrade. It is not a navigation system, although it will be highly dependent on ADS-B and Performance Based Navigation. Australia is implementing and taking advantage of the same technology and procedures.

Wide Area Augmentation System (WAAS)

Your comments about WAAS appear to relate more to utilisation of resources than to the identification of a particular limitation at the airports you mention. On the occasions where weather conditions caused delays at Sydney and Canberra, it is apparent that WAAS would not have made a difference. Both Sydney and Canberra have CAT I ILS procedures. The WAAS procedure with the lowest possible minimums is the 'localizer performance with vertical guidance' or LPV procedure. According to FAA standards, an LPV can have minimums equivalent to, but not lower than, a standard CAT I procedure. Therefore, if the weather at Sydney or Canberra precluded successful CAT I operations it would also have precluded successful WAAS/LPV operations.

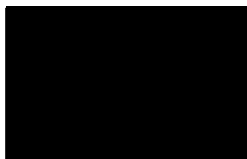
Notwithstanding this, Australia already has standards for low visibility landings with minima as low as precision approach category (CAT) IIIB – that is zero feet cloud ceiling and 75 m runway visual range (RVR). The standards are ICAO-compliant and consistent with FAA and European practice. The onus is on aerodrome operators to implement the relevant ground facilities to support such low visibility landing operations.

Your comments on EFVS (Enhanced Flight Vision System) and SVS (Synthetic Vision System) are noted. EFVS is a technology which incorporates information from aircraft-based sensors (e.g. near-infrared cameras, millimetre wave radar) to provide vision in limited visibility environments. In order to gain operational credits under FAA 14 CFR § 91.175, EFVS requires a Head Up Display (HUD) as well as a number of other system requirements. In relation to SVS under current FAA rules, no operational credit is provided, only situational awareness.

I am advised that EFVS and WAAS are not related. In other words, EFVS does not need WAAS to function and WAAS does not depend upon EFVS. Indeed, EFVS can reduce minima for WAAS-enabled operations, but equally it can reduce minima for conventional ILS, VOR or NDB operations. CASA currently participates in the ICAO Operations Panel HESC (HUD, EVS, SVS, CVS) Sub-group, which in turn provides guidance for the development of operational regulations on Low Visibility Operations to enable the use of technologies such as EFVS. You may find FAA Advisory Circular 20-167 a useful reference on current FAA rules.

I trust this further information is of assistance.

Yours sincerely



Carolyn Hutton
Manager
Corporate Relations Branch