

Aviation Safety Regulation Review

A submission.

Core argument: The never-ending cycle of regulatory ‘development’ is a waste of public money and the whole arrangement of effectively two regulators is dysfunctional.

The obvious solution is to simply adopt a set of stable credible regulations from an entity such as the FAA and spend the funds on appropriate, compatible electronic infrastructure. This will allow the adoption of the WAAS based FAA’s NEXTGEN environment, improve the safety and availability of Australian airports and complement the equipment currently installed in almost every aircraft produced in the last few years. It will also save the traveling community and the airlines tens if not hundreds of millions of dollars incurred with canceled flights, inefficient airspace use and allow significant expansion of some airport utilization by enabling asymmetric curfews and other technologically dependant initiatives.

The regulatory environment cannot be separated from the electronic infrastructure. To the extent that it is relevant, it is a consequence of it. At the risk of an outrageously offensive suggestion there is already a well researched, coherent and complete script for all of this and it can be found at www.faa.gov/nextgen

No useful outcome will be achieved without a fundamental recasting of the configuration of the aviation bureaucracy.

Executive summary

Neither the public interest nor the aviation industry is well served by the current dysfunctional situation. Previous attempts of ‘reform’ have, not surprisingly, met with limited success, in part because of an isolated culture dating back 80+ years.

The only realistic solution is to start again with the establishment of a new agency, with a radically different and appropriately qualified staff to effect the adoption of a realistic internationally compliant infrastructure and the elimination of unique regulations and orphan technical infrastructure undertakings, which have plagued Australian aviation in the recent past. Such an organization should be based outside Canberra or Melbourne in order to leave behind the existing excessively self-serving bureaucratic culture. (eg Sydney or Brisbane)

The installation and operation of future infrastructure should be implemented by the private sector.

In order to ensure a competent and objective operation of such a new agency both its board and senior (contract?) staff should possess a pilot’s license, a degree from a credible university in a relevant field such as aeronautical, electrical engineering, telecommunications or physics, professional work experience outside Australia and have a track record in managing large successful technical corporations or projects.

A post election initiative?

But first some observations on an attempt to change the flight review process. While of itself almost trivial in the scheme of things, it epitomizes the mode of operation of the aviation bureaucracy.

The timing of it was scheduled to coincide with what was obviously going to be a government in transition, since both the election and the result were known with some certainty for all of 2013. It is also worth pointing out that it was an attempt to introduce yet again a series of expensive impractical measures, which had been abandoned years before as unworkable, without implementation. The essence of the proposal was that various rating and endorsements would all be tested at flight review time. The first some of us were aware of this was when (presumably) every pilot received an aberrant letter (some might describe it as a rant) from the CEO of CASA attacking those who found fault in this approach. This missive provided few facts, though it did cite one example, namely those who flight at night. Given that I do that and have a quaintly described "float alighting gear endorsement" (and a FAA Seaplane license) it prompted some obvious questions like are BFRs to be carried out at night? On the water? Simple questions. The response from a CASA spin-doctor was typical of an episode from "Yes Minister".

The response to the time wasting process of ASIC renewal was taken as an opportunity to blame another section of the aviation bureaucracy.

Having been trapped in Canberra during an attempted escape for an afternoon and only actually got to a meeting with an about to be minister early in 2013 by concluding that Canberra and Sydney airports would not be operational the next day and arriving the night before, I also raised the issue of WAAS (the basis of the FAA's NEXTGEN plan.).

What I got back was a claim that the adoption of such technology would not rectify the situation. Given that I had spent about an hour a few years ago with the FAA individual that had been dispatched to give Airservices Australia a detailed briefing on NEXTGEN and noted that the NTSB, on the basis of actual tests, concluded that WAAS provided a three dimensional accuracy down to 2 meters it is fair to describe the claim as misleading and deceptive conduct or platitudinous fiction (aka bullshit).

Two rounds of Dick Smith have exhausted subtle solutions to this mess.

A broad analysis

Australia has effectively two regulators: CASA and Airservices Australia. While the former appears to be a typical Canberra bureaucracy (apparently known as Fort Fumble) it occasionally shows signs of accountability, albeit by closing down small regional airlines (a classic case of "I am from the government, here to help you."). Its other activity is inventing unique rules without identifying their need or benefit. A classic case of an attempt at regulatory perfection. Of course, since there is no ability to eliminate stupidity or poor judgment by regulation and all human activity involves some risk, the only absolute solution is just to stop all those planes from flying. There

is obviously a point where more rules achieve nothing of value other than to reduce flying activity, while increasing the cost.

The obvious question, given that Australia is flat, with far better flying weather than North America and far lower traffic densities, is why not simply adopt the FAA's rules and spend the money on infrastructure instead?

The statement of 'achievement', in the CASA "yearbook" that Oceania is the only region without a RPT fatality in 2013 is hardly due to CASA alone, given the diversity of the region, but it does raise the question of a measure of successful regulatory improvement? Successful reincarnation perhaps?

It is however Airservices Australia which is the real problem. The latter is that most hideous invention: namely a government owned, monopoly corporation operated as a self-serving business. Its regulatory - publications unit produces a regular set of trivial updates to the AIP, various (hardly ever changed) charts, (hardly ever changed) procedures and near static airport details (ERSA). All distributed to a conscripted set of subscribers for a few hundred dollar pa. per pop.

A consideration of the technical infrastructure, business issues and airspace

It is however the infrastructure policy which is the most aberrant and dysfunctional. Navigation aids are the best example. We had a unique DMEA (Distance Measuring Equipment) environment incompatible with the international version which is coupled with VORs and VORTACs. Then there was an attempt at a unique MLS (Microwave Landing System – installed at the "Heart of the Nation" and then de-commissioned, of course). Perhaps the most aberrant attempt at uniqueness was to invoke the perils of ozone hole's appearance above South Australia! Despite arguably inducing errors about 10% of the magnitude of the then employed Selective Availability it was cited as a justification of a unique approach to GPS. Anyone who understood the appropriate treatment of root mean square errors would have described the whole exercise as un-scientific fraud.

Then we had GRASS, which was to be a home-grown version of the long abandoned Differential GPS. This really dumb idea warrants a little more detail. It was only going to add about projected \$3,000 to every GPS receiver. In order to add to the credibility of this proposal it was stated that two students were involved in its development. Its Airservices' proponent claimed to be a Fellow of the Guild of Air Navigators and was apparently indignant when inquiries were made about his ownership of a leather helmet, astrolabe and bubble sextant.

The FAA's analysis of the problem prompted an elegant solution, namely WAAS (Wide Area Augmentation System). Simply put a network of ground stations at fixed and known locations (not a daunting task) collect and relay GPS derived position variations and the correction data is broadcast on the same frequency and with the same spreading codes as the GPS signals. The most practical (though not necessary) option is via a geo-stationary satellite. This has the added advantage of adding yet another satellite to the position fixing cluster. WAAS equipped GPS receivers can be purchased in Yot Shops for less than \$200, since all that is required in the receiver is additional software. The cost of developing, certifying and operating unique hardware

to be added to every already tested and certified GPS receiver and complementary unique network as with the GRASS proposal was obviously outrageous. A 'review' concluded the obvious, namely it was commercially unrealistic. Claims of technical viability were of course dubious, but then putting a man on the moon is clearly possible. The cost of implementation by Airservices however is a different issue.

Was the response to adopt a viable technology such as WAAS, which is the basis of the FAA's NEXTGEN reconfiguration of airspace control and is designed to allow aircraft to fly to their destinations without vectoring them to redundant waypoints and navigation aids and allow safer approaches in poor weather, without any airport based infrastructure? Of course not! Rule 1 apparently is under no circumstances do it the same way as anyone else. The next (current?) thought bubble was to attempt augmentation based on barometric pressure. This has a long list of problems. The most obvious is that it does nothing to increase lateral position accuracy. The idea of a say 400 ton aircraft dropping out of the cloud at say 100 feet AGL, 50 meters to one side of a runway is the most obvious, but then there is the transient nature of barometric pressure and its variability with respect to local ground and structural topography induced turbulence.

When all else fails there is always the option of mixing a few incompatible set of European and American standards. An approach used by our own telco to ensure a high cost of market entry. It does not matter if this is inconsistent and dysfunctional (Australia had 7 different mobile phone transmission technologies at one point, in the one location and no service where it was needed.) the real requirement is that it is unique, because that ensures the continued existence of the bureaucracy. What of course the bureaucracy, unlike South Korea failed – refused to do was define a coherent technical network architecture. The collateral cost can be measured in tens, if not more, of billions of dollars, ultimately borne by guess who? Aviation has similar issues, it's just that the amount of money involved is less. Both are a classic case of Big (incompetent) Government, Big (monopoly) Business and Big Labor.

Performance Based Navigation sounds good. (Nothing like adopting other people's slogans.) What however is the point if the country lacks the required infrastructure to provide reliable accurate poor weather approaches at the destination?

There are two obvious problems with WAAS from the Airservices' perspective. Firstly it does not create any internal 'employment'. Secondly there is no income model. The tens if not hundreds of millions of dollars it would save the traveling community and the aviation industry in general are not part of the Airservices' P&L. That would be fine if Airservices were a privately owned corporation operating in a competitive environment and if there were an appropriate authority to look after the overall public interest and economic cost and benefit. The core problem is no such entity exists.

A solution

Funding a never-ending exercise in regulatory perfection is a waste of taxpayer funds and is past the point of being relevant. There is no evidence that this uniqueness has resulted in any public benefit and the cost is obvious.

There might be a case for more stringent than the US commercial flight crew hours, given the US labor market environment. There is also a case for liberalizing the constraints placed on employing skilled third parties such as LAMEs in the construction of experimental aircraft, as a way of resurrecting the now terminal GA aircraft industry, but these are measures at the periphery.

There is however is no technical or business case for adopting anything other than an electronic infrastructure completely compatible with the US environment, given that that is exactly what is being installed in all aircraft produced by credible aircraft manufacturers. The technical environment and the part of the regulatory environment of any real relevance are tightly coupled.

An obviously contributing factor in why this repeated exercise in public funded technological masturbation has arisen and been perpetuated is the character of the boards of Airservices Australia and CASA. It is easy to get away with fantasy such as the relevance of the ozone hole or GRASS when the board consists of technically illiterate lower less literate life forms like lawyers or trade union leaders.

What is required are people who not only understand the issues involved in flying aircraft, but also understand the impacts of what is an inevitable technological convergence. The days when aviation was a world of its own are over. Hence the suggestion of mandating a broader set of qualifications and of course employing the technological market to be responsible for the implementation and operation of the future technology.

None of this will be achieved with the current corporate configuration or culture, for the obvious reason that it is simply not in the interests of those who occupy the unaccountable space.

BOTTOM LINE: (at the risk of plagiarism) Aviation is not inherently dangerous, just unforgiving. It is time that taxpayers stopped forgiving.

The only realistic solution is to start again with the establishment of a new agency, with a radically different and appropriately qualified staff to effect the adoption of a realistic internationally compliant infrastructure and the elimination of unique regulations and orphan technical infrastructure undertakings, which have plagued Australian aviation in the recent past. Such an organization should be based outside Canberra or Melbourne in order to leave behind the existing excessively self-serving bureaucratic culture. (eg Sydney or Brisbane)

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Airspace

(An example: Aircraft Carrier ownership deprivation syndrome. ☺)

Nowra naval 'air' station has 65,000 cubic nautical miles of restricted airspace. This extends to ground level over populated areas. The last aircraft carrier was scrapped over 4 decades ago and the base supports no fixed wing combat aircraft. The excuse for this arrangement apparently is 'bombardment' at the target range. This is an impressive consideration for itinerant aircraft at say 1,500 feet. One might wish to consider the fate of less agile house bound residents below.

Southern California has no such consideration for the home base of the US 7th fleet, which has just a few aircraft carrier battle groups and a more than a few hundred combat aircraft. There is a small strip of restricted airspace during weekdays in Southern California. It is above a beach adjacent to marine base Camp Pendleton and can resemble a remake of "Apocalypse Now" with real hardware.

A cultural analysis

Like much of Australia and activities peripheral to the income generating industries of mining and agriculture, aviation has evolved from isolation to a regulatory dysfunctional farce. (The result of a lack of accountability, competition and an ability to invoke "technical issues" or even "the market" (where no such market exists) whenever critical examination appeared.)

The lack of an aircraft building industry, the culture of Canberra and even the structural dysfunction of having effectively two regulators are doubtless contributors.

It is however a symptom of a far broader problem.

The socio-political-economic-legal-bureaucratic (self perceived) elite is typically technically illiterate. Almost all technological based business is foreign owned with an overseas decision making process. Academia lacks any real integration with business. It like almost all isolated pressure groups regards the taxpayer and foreigners as the source of income. If the culture as a whole is isolated, then Canberra is on another planet. Thanks to a very generous taxpayer it has none of the infrastructure problems of Australia's cities or industries. It is just home to the countries most affluent. Given that the parliament largely consists of lawyers who used to work for lawyers and lawyers who used to work for trade unions and a bureaucracy devoid of even that level of relevant real world experience, it is no wonder almost every industry dominated by government is a shambles. Telecommunication is top of a long list.

Changing the culture of any organization is very difficult. Changing the culture of an entrenched bureaucracy inhabited by those who regard their position as permanent and that of their nominal political masters as transient is mission impossible.

None of this is going to get fixed without starting again. The positive aspect of this is that the cost of fixing it is small by comparison with telecommunications. The big ticket items such as aircraft do not have a technology based on decisions from

Canberra and the really expensive part of the infrastructure is relatively simple, namely runways, land, buildings, roads, public transport access etc.

Attached

Attached are some missives which illustrate the epitome of the issues, though it is worth citing the history of aviation technical infrastructure in this country and dealing with the issues in some detail, since it appears without drastic and effective action the taxpayers will be compelled to fund this never ending soap opera through yet another cycle of technological masturbation.

It is noteworthy in that the CASA response, from one of its spin-doctors (Why does an organization funded by the taxpayers have the luxury of laundering its own self serving political agenda?) avoids answering any questions of substance or detail raised in the original missive.

There is an obvious solution to the perpetual regulatory churn and regulatory 'development', namely simply adopt a set of stable aviation regulations from a country that has the economies of scale to produce a set of coherent regulations, which effectively require only trivial revision every year. Clearly the best choice is the US, which operates the planet's largest aviation system and produces the most aircraft. Excuses such as the Australia courts would not understand them (not enough Latin?) are not worthy of comment, except to state that it is the pilots who are the objective not the bureaucrats, let alone the legal industry. The reality is there is almost nothing unique about the physical Australian aviation environment. The place is flat, with very good weather by comparison with the US and has far lower traffic densities.

The argument that any regulations can be "improved" ignores the reality that every regulation has cost consequences, typically for everyone involved, except the bureaucrats of course. Increased regulation typically required more bureaucrats and give the way the "public service" works increased income for those at the top of these ever expanding organizations. The CASA yearbook proudly claims that Oceania was the only world region with zero RPT fatalities. While not accepting this has much to do with regulation at all, given the diverse nature of the region, it is worth asking what is the measurable objective of further regulation? Successful reincarnation?

There is however an objective measure of the local effect of the regulators, on the Australian aviation industry namely in the 'Heart of the Nation'. The ACT population is the most affluent in the country. It has no flight school and its only airline, Brindabella, has been wound up. All of this despite the proximity to the brilliant support of CASA and Airservices Australia. Of course given this, we will be seeing a 50% reduction in the size of the Canberra based bureaucracy. ☺

Attachment 1

ASIC renewal. A 17-stage process to typically supply and fill in exactly the same forms as two years ago, with typically exactly the same information.

What is being achieved in the case of pilots, by going through this process every two years, and a medical and a BFR? Woops I forgot. Got a portable ELT? Yes there is a renewal process for that too. (Well you would not want to retrieve the wrong person from a plane crash would you?)

Will it stop anyone flying into a security controlled airport? NO.

Will it stop any terrorist flying into any airport at all? NO.

Will it stop any terrorist from flying from most airports, where as a matter of reality even keeping the local fauna out is mission impossible, to ANYWHERE else? NO.

Has it even stopped criminals obtaining jobs at sensitive locations as international baggage handlers? Apparently not.

Is this process of any use even in the case of baggage handlers? Maybe, but why does it have to be such a complete waste of time?

It is just another arrogant example of the fact that the bureaucracy places no value on anyone else's time and equates wasting other peoples' time with achieving something. Milton freedman said it. When its not your (time or) money you just don't give a dam.

It is of course worth pointing out that if the FBI had taken any notice of the repeated reports from the aviation community that there were those of Middle Eastern decent learning to fly, but had no interest in learning how to land aircraft, 9/11 could have been prevented. As for user pays? Well I don't think it was the pilots that created this situation.

Attachment 2

A discourse with CASA. Probably too subtle to have any effect.

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

Your Letter of 22 November 2013

Dear Ms Hutton,

At the certain risk of wasting more of my time, I thought I would respond to your missive for the public record. Clearly my previous missive was far too subtle.

Executive Summary

Aviation regulation in Australia is a dysfunctional farce.

While doubtless there will be cries that Australia has a great safety record, the reality is it is no better on any objective basis than say the US which has real mountains, regularly appalling weather and high traffic densities.

There is NO basis for asserting Australia is in need of unique regulation, nor that it has in anyway been in the public interest, nor delivered any measurable effect. The place is flat, with low traffic densities and good flying weather. What is the basis for such uniqueness? A unique genetic base of the pilot population? The marine equivalent has survived in Australia for decades simply by adopting the International Rules (for The Prevention of Collisions at Sea).

If the expensive avalanche of arbitrary paper decrees is a waste of public money then it is the infrastructure policy or complete lack of it, which has cost the big bucks. Of course none of this is unique to aviation. Almost every technologically based activity which in any way is effected by Canberra has had the productivity benefits of technological innovation squandered by a oversized dysfunctional bureaucracy whose apparent sole objective appears to be self 'employment'.

As for the inferred advice that the FAA's WAAS based NEXTGEN does not offer any improvement it the operational viability of airports such as Canberra or Sydney, The claim is so lacking in veracity that two explanations are obvious.

This issue is dealt with in some detail below however you are invited to offer a third explanation. I am not prepared to accept that your role as a spin doctor imparts the status of innocent bystander, even with the cover preamble "I am advised...."

The specifics.

Firstly your apology for the tardiness of your response is accepted. Some of us appreciate the increased level of stress induced in Canberra as the result of a change of government. After all there is always the potential of an incoming minister making a courageous decision, to resort to the terminology of Sir Humphrey.

What is not accepted is the character and veracity of your response. Since it ignored the issues raised in my previous missive or simply responded with platitudinous fiction. Perhaps specific examples will assist this process.

The trivial

Perhaps the epitome of this farce at a lowest level is the 14 Nov 13 update to GEN 2.2 –24

We got a definition added namely of a “Unmanned Free Balloon: a non-power-driven unmanned lighter than-air aircraft in free flight.” Well I guess that was another contribution “Critical to Aviation Safety”. I assume that there are people in this country who never would have worked that out without this tautological revelation, but do any of them fly planes?

Not again this has been tried before

The first and most obvious question of the proposed reforms, which were apparently identical to the abandoned reforms of some years ago related to the singular cited example of a BFR with a night rating. Are these to be conducted at night? Did I get an answer? NO.

Was there even a hint at the evidence based justification of this obviously complex, expensive and logistically unworkable “reform”? NO.

Of course this identifies just one example of the practical issues, which sunk this thought bubble based proposal last time. If all endorsements and rating are to be tested at BFRs then many pilots are going to be doing multiple test flights in different aircraft under different conditions. Night, float planes (No night ops in R409 are prohibited) are just the tip of the iceberg. While a little crop dusting in an amphibian around Rose Bay might do wonders for the attitude of the locals to aircraft, does the guy who flies a 380 during the week get to keep his crop dusting endorsement by doing his flight test in his regular aircraft? Then of course there is the issue of finding a reviewer who has all these ratings – endorsements too. In many cases interstate travel and organizing rare aircraft would be required and the cost prohibitive.

Australia is unique but internationally compliant?

Then you claimed that Australian regulations etc complied with International standards. That is not true of course. Australia for example has a unique PIFR rating which is both complex and messy which is not accepted in the US.

Why was this invented? In part in response to the low level of private pilots with CIR ratings. Why is there such a low level of CIR in Australia? Simply because unlike the US the reGENCY requirements are more onerous and the available minimums are so restrictive, except at a few major airports with ILS, to be completely useless.

Why are the minimums so restrictive? That's a result of a lack of infrastructure and the CASA mentality of taking some else's rules and making them “tough”. After all every decision is a tough decision when you have no idea what you are doing. The bureaucratic solution is of course to make the rules so restrictive that someone else can always be blamed. GA is almost dead in this country and we are well on our way to the perfect bureaucratic nirvana where the bureaucracy can engage in its core activity of designing forms, filling them in and avoiding the irritation of any real world activity.

Why?

None of this is the main issue however. The US-FAA rules and regulation do comply with the international requirements. (The FAA also differs in that its defined role includes promoting aviation.) The obvious question is what is wrong with them and why do we have to have a unique

set of rules and regulation for what is by world standards a small aviation industry? Its not as if we are a third world country, like Brazil that builds its own jet liners. What is the evidence that the horrendous cost of this paper generating bureaucracy with its unique product has saved a single life or a single dollar?

There just might be a justification for a few minor differences. The US requirement for three full stop landings every 90 days to keep night current, given the lack of airports in this country with runway lights, might create traffic havoc.

ASICKS – a different department

I note that ASIC renewal is one of the issues raised in my missive that you have simply passed the parcel. Milton Freedman said it all. When it's your money (or time – some of us do have a life) you care. When it's not you money (or time) you just don't give a dam. I thought my solution of having CASA employees visiting the clubhouses of bikies working as baggage handlers was clearly in the public interest. Taking along someone from the "Office of Transport Security at the Department of Infrastructure and Regional Development" would doubtless add to the fun. Clearly a case of promoting physical multi-cultural transfer.

Someone else has a real plan – oh NO!!

Lets however move forward (very Canberra) to the major issue, namely electronic aviation infrastructure, because this is the epitome of the dysfunctional character of the whole environment. I won't bother repeating the history of DMEA, the South Australian ozone hole, MLS, GRASS and the latest barometric aiding insanity.

You are asking me and presumably other taxpayers and their elected representatives to believe that the FAA's WAAS based NEXTGEN, the result of a very extensive process considering the technology, economics and operational viability of the North American air traffic, is deficient and that it would in no way add to the viability or airports such as Sydney, Canberra or indeed the hundred or so regional airports that can not justify the instillation of a ILS. (Equipment available at many small regional airports in the US, but of course being replaced by WAAS.) I could offer a single word response, but it just might be worth feigning some civility.

I refer you to page 52 of the FAA's NEXTGEN publication March 2011. "Improved Approaches and Low Visibility Operations'. From the start of 2012 "EFVS to 100 Feet" and "SVS for lower Than Standard approach minima operations from 2015". Having spent a few hours in the Canberra airport lounge as a result of this regulatory induced dysfunction, I find the claim that the ceiling was down to 100 feet or that the RVR was less than 1,800 feet less than credible.

It is however worth an objective comparison of the two GPS based approaches. Least someone attempt to put CAT 3/3 on the table as a way of addressing the Canberra issue and not bothering about the rest of the country. (After all Canberra was the only MLS installation. "Heart of the Nation").

A real world comparison

Wollongong and Half Moon Bay are equivalent costal airports with significant hills nearby of about the same height. (~2,500') While Wollongong once justified an RPT service from Melbourne, it hardly justifies the instillation of an ILS.

Attached is a screen grab of the final approach to Half Moon Bay at about 110', 60' above the runway (Elevation 66' AMSL). You will note that both GPS WAAS augmented height and lateral position are still provided with integrity. When does the GPS derived height information disappears with the Australian designed approach to WOL? 3,500' (Yes three Thousand Five Hundred Feet!) the respective MDAs are 309' HAF and 1309' WOL 910' from the north (RVR of 5.0 ie VFR visibility in the case of WOL!!)

Is the aircraft equipment any different? NO.

Is this a screen grab from some super sophisticated avionics installed in some airliner costing a few hundred million dollars? NO.

It's from a Garmin 1000 equipped Cessna 182. Just about every new aircraft worth buying has this kind of equipment installed. Even aircraft operating in Australia have it. (Not that there is a lot of benefit given the infrastructure policy.)

You may also note something else, namely this equipment has "synthetic vision" as referred to in the FAA document. Clearly this will facilitate a further lowering of minimums both horizontally and vertically, given the operationally proved accuracy of WAAS. There is an obvious trend here. The corporations that make avionics make it compatible with the infrastructure prevalent in large markets. No one makes avionics to cater for a "unique" Australian environment, because it is stupid, uneconomic and has the inevitability of being still born about it.

It just might be worth explaining the basis of the FAA's logic for this approach. At some stage in the distant past and pre abolition of Selective Availability the US Coast Guard invented VHF based Differential GPS. As many pointed out this was a more than a little stupid unless you wanted to bomb the east and west coast of the US with increased accuracy (Almost as wacky but not as dangerous as GRASS.). Given that uncorrected GPS does not reliably have sufficient accuracy to land an aircraft in zero visibility (A close to operational necessity in some parts of the planet and a useful capability everywhere), the FAA sought an alternative. The elegant solution was to broadcast the GPS correction data using the same transmission technology and spreading codes as the GPS signals. Elegant in that all that was required at the receiver end was software. While not required the implementation utilizes broadcast from a Geo-stationary satellite, which adds an additional source of position fix. Arguments against this approach based on national sovereignty are hardly credible given that Australia does not operate its own GPS network, but in fact has a choice of three. Satellite based broadcast is not required either, but it is obviously the sensible way of doing given the very low signal data rate and transmit power. What the Australian bureaucracy has done for decades is to avoid doing it the way other people do it. The only explanation of the motivation that fits the facts is bureaucratic employment preservation. Doubtless this situation has been facilitated by a parliament until recently under the control of a largely technically illiterate socio-political-legal-bureaucratic self perceived 'elite' willing to be deceived by responses such as yours.

However I suggest you acquire a copy of the FAA's NEXTGEN document. You just might even acquire a copy of the Garmin G1000 PC based simulator for about a \$100 from say Sportys Pilot Shop and do a few US vs Australia approach comparisons of your own. (Its probably not CASA approved. What would Garmin know about Garmin Avionics? Another regulatory opportunity.)

I trust you will now actually answer my questions and correct the false and misleading information you missive contains and infers with respect to the FAA's now implemented NEXTGEN approach.

Yours Sincerely,

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Australian Government
Civil Aviation Safety Authority

OFFICE OF THE DIRECTOR OF AVIATION SAFETY

File Ref: G113/1294

22 November 2013

Mr Chris Reilly

Dear Mr Reilly

Thank you for your letter of 18 October 2013 addressed to Mr John McCormick, Director of Aviation Safety at the Civil Aviation Safety Authority (CASA) about new regulations. Mr McCormick has asked me to respond on his behalf. I regret the delay in providing a reply.

CASA notes your comments on the history of regulation changes it has undertaken and your thoughts on adopting the US FARs. Australia is unable to simply adopt the US regulations, or regulations of any other country for that matter, as operations are different in each country. As an International Civil Aviation Organization (ICAO) Contracting State, CASA aligns its regulations as closely as possible with the ICAO Standards and Recommended Practices, adapting them to Australian operations.

CASA's regulations will continue to change over time, especially in line with new technology. While CASA endeavours to make any changes with as minimal impact on industry as possible, regrettably in some cases industry is impacted.

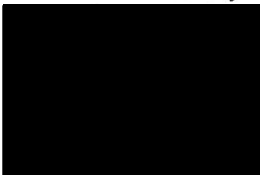
In regards to your ASICs comment, CASA issues ASICs in accordance with the Office of Transport Security at the Department of Infrastructure and Regional Development legislation. CASA does not determine the validity period of ASICs.

I am advised that low visibility landings, both Sydney and Canberra have CAT I ILS procedures, so technology like WAAS would not have been of use in the situation you mentioned. The WAAS procedure with the lowest possible minimums is the localizer performance with vertical guidance (LPV). According to FAA standards, a LPV can have minimums equivalent to, but not lower than, a standard CAT I procedure. Therefore, if the weather at Sydney and Canberra precluded successful CAT 1 operations it would also have precluded successful WAAS/LPV operations. Australia already has standards for low visibility landings with minima as low as precision approach Category IIIB – that is zero feet cloud ceiling and 75m runway visual range. These standards are ICAO compliant and consistent with FAA and European practice.

I am advised in regards to your BFR comment, the current legislation is in accordance with ICAO Annex 1 in its prescription of the requirements for the maintenance of competency. The new flight crew licensing regulations alter the requirements for competency assessments to include authorisations such as the Night VFR Rating and the low level rating. The flight review for the PIFR rating already exists and is satisfied if the person has a current CIR in the class of aircraft. CASA has introduced several amendments to CASR Part 61 that will reduce the impact of flight reviews and proficiency checks. The amendment also harmonises the flight reviews and proficiency checks to align the validity dates. It should also be noted that a single flight review exercise may satisfy the flight review requirements for more than one rating.

I trust this information is of assistance.

Yours sincerely



Carolyn Hutton
Manager
Corporate Relations Branch