A tablet for everything?

This month's Pilot Talk nicely meshes in with Kreisha Ballantyne's article on Electronic Flight Bag usage in this edition and her journey of discovery of how as recreational pilot's we can incorporate these emerging technologies into the compliant planning and execution of a successful flight. Kreisha has written a very entertaining and informative article in her usual inimitable style. But as the proverb says "buyer beware" as should all pilots in the use of EFB's and associated electronic devices in navigation planning and execution.

RA-Aus Operations recently attended a CASA AvSafety seminar on this subject of use of Electronic Flight Bags and associated navigation software and more than a few pertinent points and related incidents were provided to the attending group. Attendance at these CASA run seminars is free and by prior registration members can take the opportunity to enhance their understanding on a range of aviation related subjects pertinent to RA-Aus members.

Firstly it must be noted that the CAR233 1(h) authorisation of certain commercially available "navigation programs" and associated software only relates to the use of the documents as current and legal reproductions of CASA and Air services maps and information. The legislation came about as a result of the Electronic Transactions Act 1999 allowing the use of digital media to display documents. In other words a very helpful document reader! Any associated navigation planning or GPS functionality and guidance software can only be used to enhance situational awareness and cannot replace normal VFR "dead reckoning" practices in relation to flight planning and management. (AIP ENR 1.1).

It should be noted that in terms of accuracy, any positional information displayed via readily available EFB's and associated software is not to a recognised CASA technical standard (TSO). Devices can derive positional fixing information in a number of ways and these methods may not be consistent with recognised airspace boundary limits or the appropriate Aerodrome or Navigation reference points. Typically this is being done in the background by network 3G or 4G assimilation and means that where the little aeroplane is displayed on the device may not in fact be an accurate indication of where you are. This has provided insight into to many recent airspace violations where the convenience of the tablet application has taken precedence over navigation via known geographical references.

A further point for members to be aware of regards the use of EFB's and any requirement for a "back up" source of information. The tablet application is the back up! Power source requirements and redundancy for these units is not required for private operations but pilots venturing out in the wild blue with nothing more than a tablet and a power socket would not be considered to be seriously taking appropriate risk mitigation which should be part of normal airmanship and flight planning.

Operations were recently asked to provide feedback on the use of an EFB for navigation planning and execution in relation to an upcoming Pilot Certificate BFR. While EFB use is not precluded, the RA-Aus syllabus calls for the pilot to be able to demonstrate the required competency in flight planning and dead reckoning using traditional methods, a point that all RA-AUs Examiners should remain aware of when assessing any pilot for continued minimum piloting standards required by RA-Aus.

Finally, like all electronic equipment, and humans, these applications, associated hardware and network interactions are not infallible. In the same way your Instructor taught you to reference an attitude for a given airspeed and use the ASI as the secondary reference, the same philosophy should apply to the mighty tablet. Screen freezing, screen blackout from heat, power loss, light reflections, interrupting software updates and even general cockpit based distraction by any device are all inhibitors to safe command of the aircraft. Finding a safe and appropriate place for the device to reside in flight is also another challenge pilots must address.

A well-known US airline actually produced massive cost savings by introducing company EFB's into their operations with the obvious weight and space savings realised in their use. But like any tablet, pilots are advised not to become dependent upon them as the "App addiction " unfolds and continue to use established and proven navigation practices as their primary source in flight planning, execution and management.

We live in an ever changing and brave new world of EFB's and applications, and these are adding a very useful dimension to assist pilots in the array of information and tasks required in flight navigation. RA-Aus is committed to constant review of changes such as the more widespread use of EFB, however changes to technology must never be permitted to compromise flight safety or replace adequate flight planning.

The Operations Team.

References.

CAR 233 (1) h

CAAP 233 (1)(2)

AIP ENR 1.1 31 19.2.1b

CASA "Out-n-Back" series.