AOPA Survey Results

MEETING 25-02

Jim McClay, AOPA, briefed from a presentation. He explained that due to anticipated future changes to FAA charting products as discussed in the briefing that Nate Rahn provided, AOPA conducted a survey of its members regarding FAA chart usage by general aviation (GA) pilots. He said a similar survey was conducted back in 2012. Since that time, GA pilots' use of charts has evolved with the advent of electronic flight bags (EFBs) and other technology. Slides 3 and 4 highlight the details of the survey. Jim then introduced Amanda Comi, AOPA Senior Research Analyst, to brief on the results of the survey. Amanda said some common themes in the responses given regarding reasons for the continued need for paper charts include: 1) for pilot training, 2) for device failure backup, and 3) concerns about positioning system (GPS) jamming. She briefed that 91% of respondents reported that they use an EFB either solely or in addition to paper charts. 100% of pilots who regularly fly under instrument flight rules (IFR), and 80% of non-instrument-rated pilots said they use an EFB. Slide 11 shows the survey results of the FAA chart usage, noting Sectional Aeronautical Charts as the most frequently used. When asked if paper charts were unavailable, how that would impact their flying, most pilots responded that it would have very little to no impact on how often they would fly. Amanda then highlighted the results from the Alaska respondents. 22% of pilots fly without an EFB in Alaska compared to 9% overall, and 16% fly with only digital charts compared to 46% overall. She added that these pilots can't afford to spend more money without it having an impact on flying.

Jim said the AOPA position is that they acknowledge the need to move beyond paper charts; however, they advise a cautious approach. AOPA would like to see robust industry engagement as this goes forward. They believe that paper visual flight rule (VFR) charts should remain available until they can be accessed in a more advanced digital format. This would also allow VFR pilots more time to become comfortable with digital charts before making the transition. IFR pilots are already almost exclusively using an EFB with digital charts, so starting there would allow the FAA to begin the transition with those operators who are more willing to accommodate the change. The increasing complexity of IFR charts is also a concern that can be addressed through digital charting. Finally, Jim noted that the FAA must continue to provide standards and oversight to the third parties that are providing digital charts. The goal is not to stifle innovation, however, there needs to be guardrails to ensure that the information being conveyed is accurate and sufficient for what pilots need to see. He said there should also be some provision for providing basic paper charts to be available as a backup.

Rich Boll, NBAA, pointed out that the respondents in the survey, except those who may be using the latest version of Garmin charts, are still displaying paper charts on their EFB. That is not the future. The Aeronautical Information Services (AIS) proposal is moving away from the paper product and going to a data-driven, digitally derived chart that presents the information electronically on the EFB. He stressed that this is not something that can be done in a vacuum. Rich suggested getting the Performance-Based Operations Aviation Rulemaking Committee (PARC), Radio Technical Commission for Aeronautics (RTCA), and other groups together to develop the standards for presenting this information. Jim agreed with Rich and added that what the industry calls digital charts is not the vision, and that dynamic data-driven charts are the future.

Rune Duke, FAA/AFS-420, pointed to AC 91-78 and AC 120-76 on the use of EFBs. He also said there is an RTCA special committee in RTCA SC-227, *Standards of Navigation Performance*, studying the minimum operational performance standard (MOPS) for the depiction of navigational information on electronic

aeronautical chart displays. Bill Tuccio, Garmin, said he is a member of the RTCA SC-227 committee, and the group has just completed the final review and comment. He added that the new publication, expected in the first quarter of 2026, will include standards for certified data-driven charts. Bill stated his concern is for flight instructors still using paper charts to perform check rides and the need for new pilots to learn without the use of automation. He suggested that new guidance will need to be published to begin to change that mindset.

Vince Massimini, Tetra Tech, added that as a flight instructor, he uses the paper charts so new pilots can learn how to make manual calculations. Mike Stromberg, UPS-IPA, said this shift to digital is going to happen, so we will need to figure out how to teach new pilots without paper. Jim agreed and will take this feedback back because while it is important to teach students using EFBs, it's also important to teach the underlying principles of redundancy in the event of automation failure.

John Collins, Foreflight, noted concerns about the quality of a raster image on a digital display. He said that before getting rid of paper charts, it will be important to ensure there is a standard for presenting data on a digital chart.

Josh Fenwick, Garmin, expressed his desire to support the effort and agrees with the idea of working toward digital IFR charts first. He agrees with others that the VFR charts need improvement before they can go fully digital. He also pointed out that there are a lot of VFR data elements that are not easily sourced. The sooner the digital data is made available to the public, the sooner the public will start getting used to using the EFB solutions for VFR charts.

Rich stated there are issues today with various brands of FMS operating in various ways. This cannot be the case with aeronautical charting. Standards will need to be applied for any electronic device used to display aeronautical data, whether EFB or onboard display.

Nate Rahn, FAA/AJV-A210, emphasized that the FAA is not going to stop producing paper charts soon. He said that before paper charts can go away, there needs to be a solid product to replace them. Right now, AIS is trying to engage with industry so that the FAA can determine what the future looks like. Nate acknowledged that the FAA cannot stop making paper charts and transition to digital until digital technology is improved. In the meantime, the FAA can start moving in that direction by working to have more aeronautical data available, more data-driven processes, switching over to vector formats, and increasing our digital output.

Jim closed by reiterating the need to establish a workgroup with industry and making this subject a significant portion of future ACMs to ensure robust industry engagement going forward.