

AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 09-02 - October 28-29, 2009
RECOMMENDATION DOCUMENT
FAA Control # 09-02-221

Subject: Navigation of Class B Airspace Using US Government-Produced VFR & IFR Charts.

Background/Discussion:

Class B airspace is depicted in detail on the US Government's VFR terminal area chart (VFR TAC chart). However, the depiction of Class B airspace on this chart is often unsuitable for navigation at night or in IMC conditions. This is especially true where the configuration of the Class B airspace has been significantly altered in support satellite airports that lie beneath the lateral limits of the Class B airspace.

Aircraft operating to and from these satellite airports are often vectored by ATC at altitudes beneath the floor of the Class B airspace where the pilot is bound by 14 CFR 91.117 (c):

“No person may operate an aircraft in the airspace underlying a Class B airspace area designated for an airport or in a VFR corridor designated through such a Class B airspace area, at an indicated airspeed of more than 200 knots (230 mph).”

When operating in VMC conditions, the VFR TAC chart provides the necessary visual landmarks for identifications of the lateral limits of the Class B airspace. However, at night or when operating in IMC conditions, these visual landmarks are many times not available. Without lateral limits defined by a navigation reference, e.g. an RNAV waypoint, a VOR radial and/or DME combination, the pilot is unable to determine their position relative to the floor of Class B airspace when operating at night or in IMC conditions.

Fig 1 depicts the northwestern section of the Atlanta, GA VFR TAC chart. Aircraft arriving/departing west of the Fulton County, GA (FTY) airport are normally vectored below the floor of the Class B airspace. However, ATL TRACON frequently request aircraft departing FTY westbound to accelerate to 250 knots **as soon practical** in order to achieve in-trail separation requirements over the WETWO departure gate (note: a speed assignment of 250 knots is **never** assigned to the departing traffic). The structure of the ATL Class B to the west makes it nearly impossible for the pilot to determine when they are within the lateral limits of the Class B allowing acceleration to 250 knots. Further complicating the situation are hold-down/step-up altitude assignments issued by ATL TRACON that are often near the floor of the Class B. These altitude assignments add to the difficulty in determining whether the aircraft is within Class B airspace.

A similar situation exists with the complex depiction of the New York Class B airspace (see Fig 2). Complicating this situation is the fact that IFR arrivals into the NY area are required to advise ATC of any speed reduction below 250 KIAS. Speed reductions initiated by pilots based on their perceived position with respect to the floor of the Class B airspace cause significant air traffic management problems for NY TRACON and often result in admonishments from ATC.

Recommendations:

Provide and chart navigation references that identify the significant points associated with the lateral limits of Class B airspace for use by aircraft operating at night or in IMC conditions. Significant points to be identified include breaks or discontinuities in the general shape, configuration, or floor of the Class B airspace. Fig 3 illustrates this concept using the Phoenix VFR TAC chart. These points may be identified by using conventional navigation sources, i.e. VOR radials/DME distances as depicted on Fig 3 or through the use of RNAV waypoints.

It is appreciated that charting these references on the VFR TAC chart may result in a significant increase in chart clutter. Since the speed restriction contained in 91.117 (c) affects primarily turbine-powered airplanes, the majority of which are operated exclusively under IFR, expanding the coverage of US Government IFR area charts to include all airports with Class B airspace is an alternate option. This charting request would then be applied to these IFR area charts as opposed to the VFR TAC chart. This option prevents the additional chart clutter being imposed on the VFR TAC chart while providing the needed information on a chart type already used by IFR pilots.

It is also recommended that commercial chart providers implement similar changes once the source data is available from FAA.

Comments: This recommendation affects US Government VFR TAC charts, IFR area charts, and commercially produced charts depicting Class B airspace.

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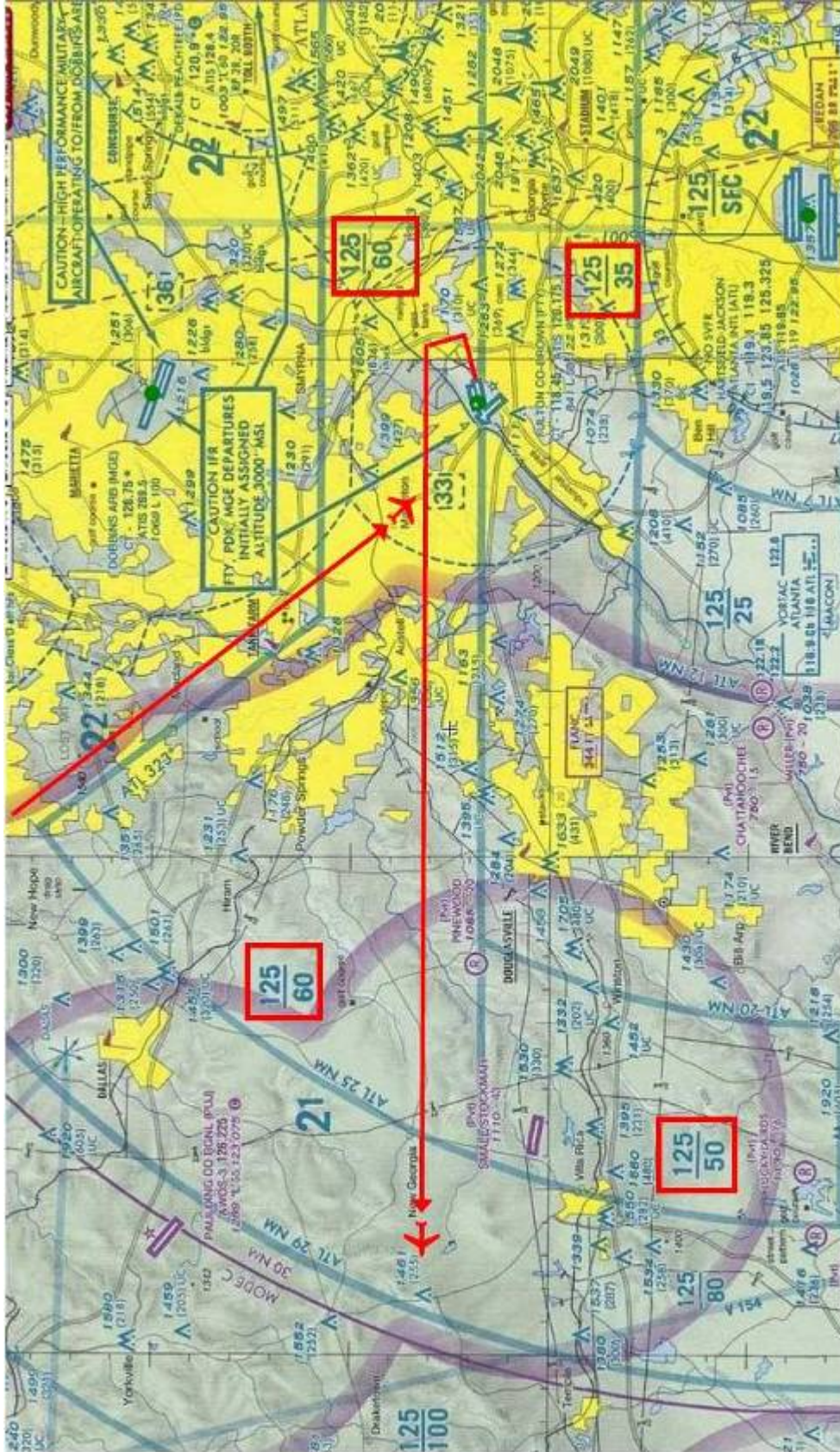


Fig 1 – Atlanta VFR TAC: Typical routing for traffic arriving/departing west-NW bound. Step climb altitude assignments usually at or below Class B floor until passing the ATL 25 DME ring.

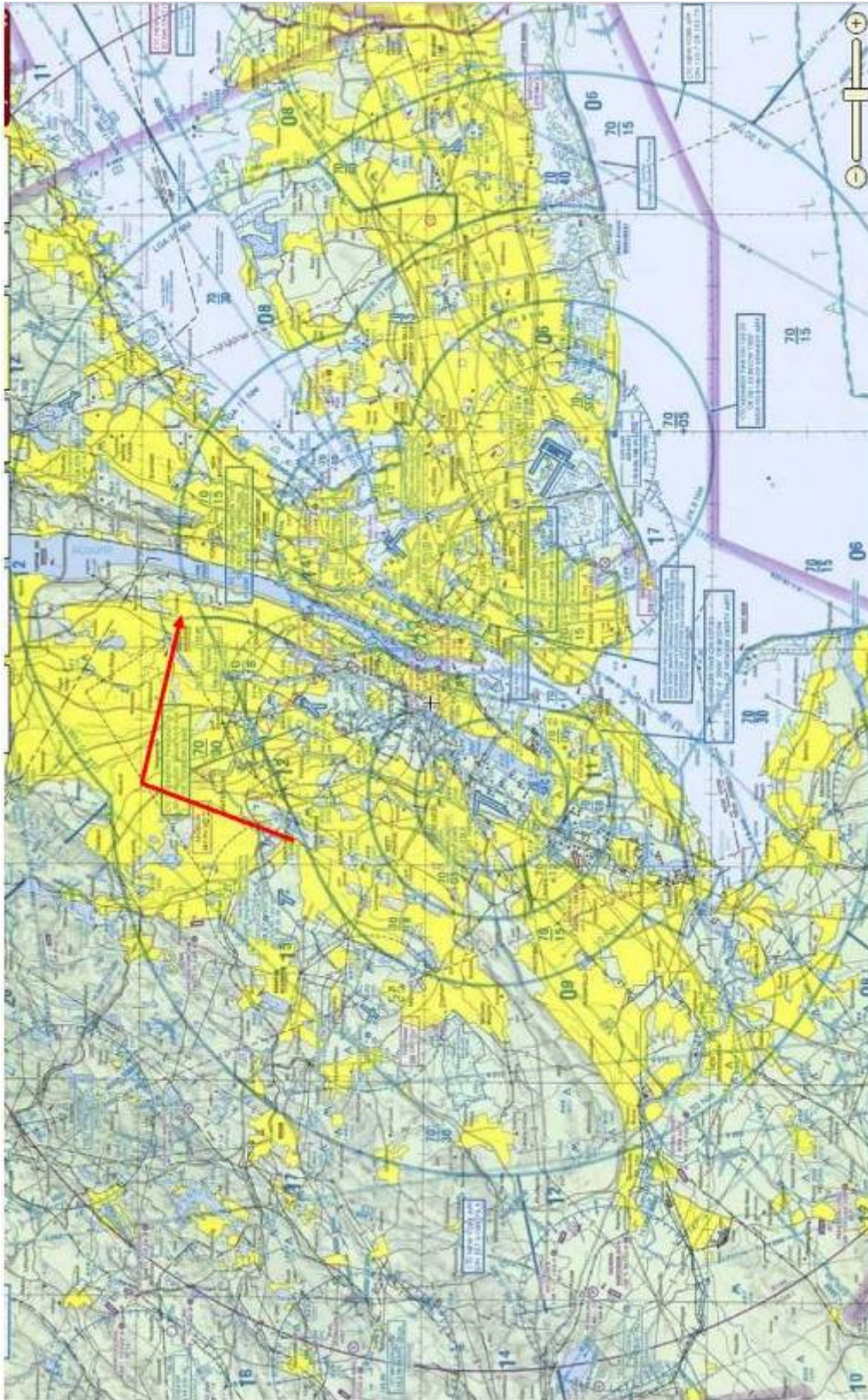


Fig 2 – NY TAC: Straight line Class B boundary

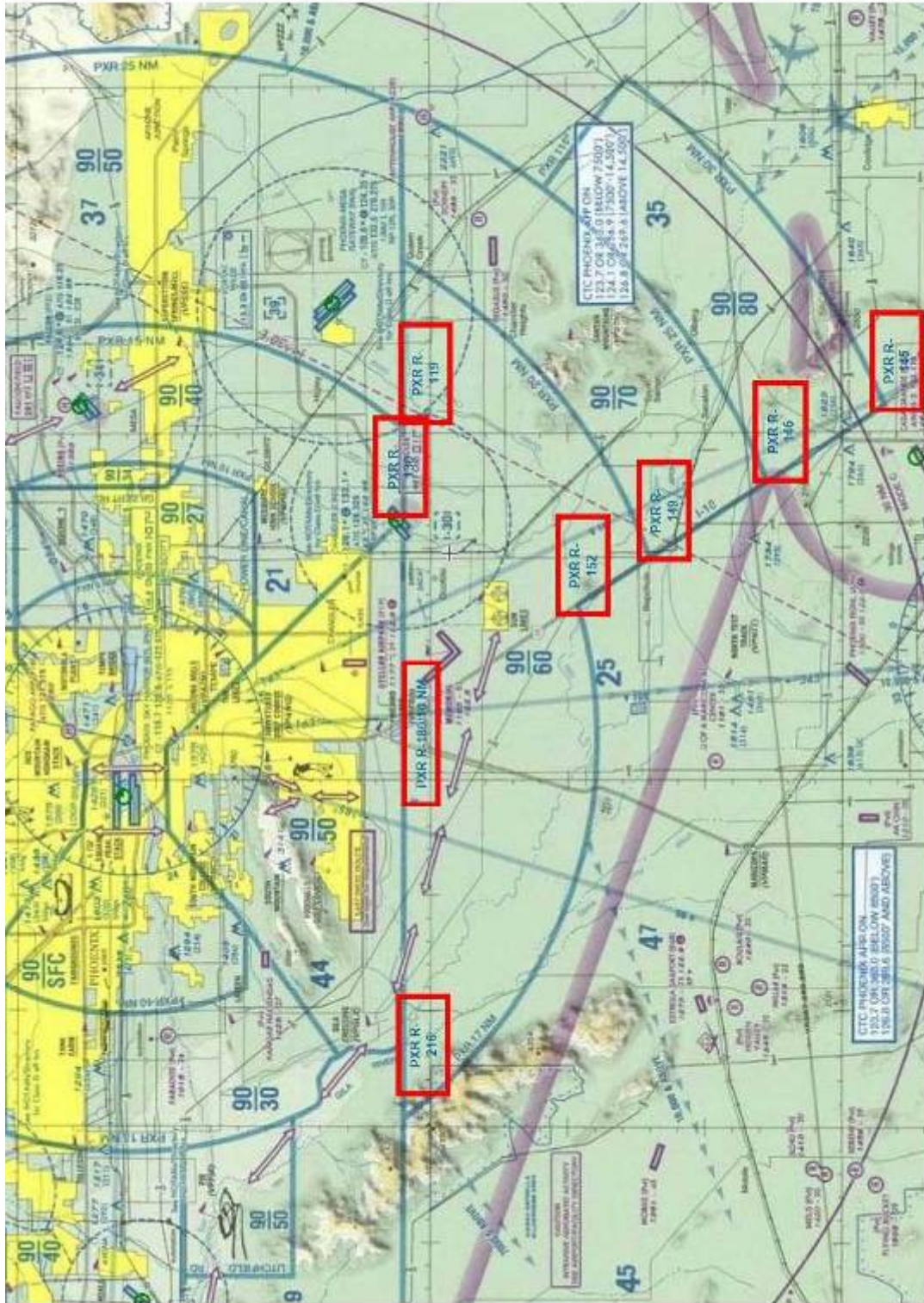


Fig 3 – Phoenix VFR TAC: Red squares indicate PHX radials associated with the Class B arc intersections. For the straight-line segment, radials identify the start and end points, with a radial/distance point at the mid point.

MEETING 09-02: Rich B briefed the issue. Class B is design to funnel large commercial airport out of the major metro areas. Class Bs have become so convoluted and all are different. Phoenix TAC example. Significant break points. Chart clutter and don't carry in IFR aircraft.

John Significant Point, expand IFR Area Charts,
Rich B Take class B info transfer it to Area Charts.

Ted T. – Jepp added points to their IFR charts lateral and vertical points on their low charts. Jepp publishes a larger Class B chart.

John M. – Somebody needs to define those significant points. What if it's not identifiable by a radial and distance. Air Traffic should be involved. Every Class B area does not have an Area chart.

Pete – What would these points be named.

Rich – Pilots can make a pilot defined waypoint if given a DME and radial. Proposed solution must solve or mitigate the problem.

Hal B – AOPA would not oppose it. Not really an issue for them. Could Sig Pts be worked out with Air Traffic and find some way to get info to pilot.

Brad – 54000 fix names available. Fix names are not an issue.

Ted T – Database comment using a dynamic display.

George – Class B C and D shape files exist and are publically available.

John – Hal to work with Rich to see how big the issue really is. Further definition of what significant points are.

Comment was made that it seems like a very specific problem for one or two areas.

MEETING 10-01: Mr. Richard Boll, NBAA, would like to see the Class B Detailed Depiction as shown on the current LA TAC Chart on all TAC charts. He asked how the process worked and wondered why all of the TAC's did not have this depiction.

Mr. George Sempeles, FAA/ATO-R, said that the requests come from the individual TRACON to have the Class B graphic depicted but it is not a requirement to chart.

Mr. Moore, FAA/AeroNav asked NBAA and AOPA to work together to define what their proposed requirements might be regarding the Class B Detailed Depiction. Mr. Boll and

Mr. Becker agreed to define their proposed requirements and coordinate with Mr. George Sempeles.

ACTION: Mr. George Sempeles will report back at the next ACF with Mr. Boll's and Mr. Becker's report.

MEETING 10-02: Mr. Richard Boll, NBAA, reviewed the issue. **See attachment # 9: 09-02-221 Navigation of Class B Airspace.** Mr. Boll reiterated that the pilot's ability to navigate a complex Class B airspace configuration without reference to visual landmarks when operating at night or in IMC would be greatly enhanced by the use of a detailed Class B graphic on the VFR Flyway chart, as depicted on the LA, San Diego, and Phoenix TACs.

Mr. Tom Kramer, AOPA, agreed with Mr. Boll and said the GA community would find this very useful.

Mr. George Sempeles, FAA-AJR-32, said the three Class B graphics on VFR Flyway charts (LAX, San Diego, and Phoenix) were created by a special request through the individual TRACONs. Mr. Boll offered to contact each TRACON and request the Class B graphic be provided on all VFR Flyway charts.

Ms. Valerie Watson, FAA/AJV-3B, had concerns that the existing graphics are not covered by specification and that without some guidance on what to chart and how to chart it there would be no consistency between charts. She requested that the Visual Chart Team submit a charting specification change document supporting the charting of detailed Class B graphics so that she can staff it through IACC channels.

ACTION: Mr. Ron Haag, FAA/AJV-321, will work with Ms. Valerie Watson, FAA/AJV-3B to determine if VFR Flyway charts can be done in-house and determine what, if any, specification changes may be needed. If required Mr. Haag will submit the specification change.

ACTION: Mr. Ron Haag, AJV-321, after determining charting requirements will coordinate with Mr. Rich Boll, NBAA, and the individual TRACON's to develop the requested VFR Flyway Charts.

MEETING 11-01: Mr. Ron Haag, FAA/AJV-321, presented a briefing on the Class B depictions on the Flyway side of the VFR Terminal Charts that have been published at Phoenix, Los Angeles and San Diego. These detailed depictions were created due to the complex Class B airspace configurations in these areas. Mr. Haag gave a general overview of the production process, emphasizing that each Class B chart is approved by the respective TRACON prior to publication.

Mr. Haag highlighted the challenges associated with the generation of the new Class B airspace charts if the program is expanded to encompass all Class B airspace in CONUS. There was a discussion on the distribution of the Class B airspace charts free of charge online. Adoption of this proposal would include removal of the existing three Class B depictions currently available on paper (LAX, PHX and SAN). This is still being discussed with the Service Area representatives and pilot groups who understandably are concerned.

NBAA and AOPA representatives were in agreement on the proposal. Mr. Brad Rush, FAA/AJV-3B, suggested that the new Class B airspace chart depictions could satisfy the FAA CAST VFR chart recommendations (ref. RD 09-02-219).

John Moore, FAA/AVJ-3B, asked that Mr. Haag coordinate the proposals within Visual and report back to the ACF.

ACTION: Mr. Ron Haag, FAA/AJV-321, to coordinate within Visual on the proposed depiction, production and distribution of the new Class B airspace charts. Mr. Haag to report back on outcome at next ACF.

ACTION: Mr. Ron Haag to develop a bulletin announcing the new product for potential users of the charts, when they become available online.

ACTION: Mr. Ron Haag to coordinate with Mr. Fee, FAA/AVP-200, on the release of his presentation for consideration by the FAA CAST (Ref. RD 09-02-219).

ACTION: Mr. Ron Haag to continue discussions with Western Service Area representatives regarding making detailed Class B depictions available only online.

MEETING 11-02: Mr. John Moore, FAA/AJV-3B, reviewed the action items from ACF 11-01.

Mr. Ron Haag, FAA/AJV-321, [briefed the audience](#) that his office is moving forward with the production of 30 special Class B graphics. The decision was coordinated with FAA Mission Support Services and CAST. The new graphic Class B depictions will be available in a digital format, downloadable for free on the FAA's website. Mr. Haag emphasized that the Class B graphics will NOT be available in paper format. He further clarified that the graphics are being created for safety enhancement purposes only and are not intended to be used for navigation. They will be marked "Not for Navigation".

Mr. Haag added that the three Class B depictions that currently appear on VFR Terminal charts (LAX, SAN and PHX Terminal Charts) will remain, but the remaining 27 will only be available online. Mr. Haag proposed an alternate solution in which airspace and supporting information fits standard 8.5" by 11" paper.

Mr. Haag proposed that the Class B graphic depiction is to appear on the first page and that supporting information and reference data, appear in tabular form on the second page. He reported that CAST concurred with the format.

Mr. Moore asked that consideration be given to producing a digital file with all the information on a single 'page'. Rationale being that since it would be a digital file, it would be downloaded directly into an EFB-type device and not constrained in its depiction like a paper product (8.5" x 11") would be.

Mr. Haag stated availability of the new Class B graphics will be announced and released primarily through the FAA's web site. Mr. Haag added that the FAA would coordinate with AOPA and EAA, and that those organizations indicated that they would also provide availability announcement for their members.

STATUS: CLOSED