

Government/Industry
Aeronautical Charting Forum (ACF) 97-02
October 27-30, 1997

1. Opening Remarks

The forum was held at the headquarters of the Air Line Pilot Association (ALPA) in Washington, DC. Mr. Paul Best, FAA/AFS-420, chaired the Instrument Procedures portion of the Charting Forum on October 27-28, 1997. Separate minutes of that meeting are being generated and will be sent to those participants.

Mr. Dick Powell, FAA/ATA-100, Co-Chair of the ACF, opened the Charting Forum on October 29, 1997 at ALPA with a thanks to Mr. Kevin Comstock and Mr. Tom Young, ALPA, for hosting the forum. Mr. Powell asked participants to fill out the Attendee List and include their e-mail address, as well as filling out the Issue Priority List as each issue is discussed. Minutes of ACF 97-01, with correction to 96-02-081 to read \$250,000, and to ICAO AIS/MAP Regional meeting to note that the Annex 1 will be reviewed for amendment, were approved. ACF 97-02 attendees are at Attachment 1.

2. Transfer of NOS/AC&C to the FAA

Mr. Terry Laydon, Director AC&C, briefed that AC&C had been working since June with DOT and TASC to coordinate an organizational move to DOT/TASC. The budget issue is still being worked and the final OMB approval will not be forthcoming until January 1998.

Mr. Dick Powell, FAA/ATA-100, stated that this transfer would be transparent to users. All of the FY98 budget for NOS/AC&C has been approved and is under the FAA's control. This budget authority might remain under the FAA rather than being transferred to DOT/TASC. This will provide some measure of protection for charting funds against political manipulation.

Action: None, for information only.

3. ICAO AIS/MAP Divisional Meeting

Mr. Dick Powell, FAA/ATA-100, discussed the ICAO AIS/MAP Divisional meeting to be held in May 1998 and the call for issue papers that met with little response from the various user groups. For the U.S. to be an active participant and influence the writing of the Annexes, the issue papers must have the support of the members of the Charting Forum. The U.S. position will be developed with the input of the Charting Forum. As an example of the importance of a solid U.S. position, Mr. Powell cited the numerous ways that airspace is developed/charted in Europe and the fact that they did not have an agreed upon position beforehand.

Mr. David Lewtas, ICAO AIS/MAP, noted that the developing ICAO position on airspace classification symbology uses many elements of the U.S. position. Class A/B/C/D/E will be charted in magenta or aeronautical blue, shaded, and containing frequencies, etc. The SAE G-10 Electronic Chart symbology will be incorporated in the ICAO position on electronic aeronautical charts. Mr. Lewtas asked for U.S. help in developing GPS charting specifications. ICAO is developing digital terrain specifications and has contacted NIMA for assistance. ICAO is also developing a Standard ICAO Conceptual Information Model for aeronautical information; differing data definitions between States

have encouraged ICAO to work toward a single data model with a single translator. Transfer formats will be standard. Mr. Powell noted that MITRE is working under contract with Eurocontrol to standardize the Eurocontrol and FAA data models. RTCA 200/201 Documents, AIRAC and the ICAO Annexes are being used to develop the conceptual model. The Standard ICAO Conceptual Information Model will be used to develop standards for electronic publishing, exchange of AIS reference data, databases (global), and message protocols. Annex Amendments could be generated from the meeting.

Mr. Tom Young, ALPA, recommended a technical advisory committee to continually provide timely expertise to ICAO, rather than waiting to address issues once every 15-30 years.

Maj Tim Duerson, NIMA, talked about the expense of surveying obstacles to the foot/meter accuracy and NIMA's effort to loosen the accuracy criteria so that more data can be collected with limited resources, even though that data may be accurate to only 50 feet/15 meters.

Ms. Leslie McCormick, FAA/ATO-20, offered the support of the International Office in formatting the issue papers.

Action: None, for information only.

4. **GPS Program Status**

Mr. John Augustine, FAA/AND-320, briefed the state of the FAA's GPS program. The basic system, without WAAS or LAAS, does not satisfy basic civil aviation requirements for integrity, availability or accuracy. As is, it cannot be used for sole means navigation nor precision approaches. The Wide Area Augmentation System (WAAS) will provide the necessary error corrections and increased integrity to meet civil requirements. Phase I WAAS is scheduled to be on-line July 15, 1999. Phase III WAAS, which will provide precision approach capability, is scheduled to be on-line July, 2001. Money is in the FAA budget to do Category I approach surveys for those airports that want to have a precision GPS approach. The proposed Local Area Augmentation System (LAAS), with an IOC of 2005, is supposed to provide the accuracy required for Category II and Category III approaches; multiple runway coverage; tailored approaches; and, aircraft surface navigation. Mr. Doug Helton, AOPA, noted that the transfer to WAAS was very aggressive and provides no incentive for the aircraft owner to purchase the WAAS capability. Mr. Helton recommended that approach development for new approaches be focused on airports that currently do not have precision capability. This would encourage aircraft owners to purchase the avionics required to use them. By 2002, WAAS operators will have primary means approach capability at all IFR runways in the NAS. By 2007, WAAS operators will have Category I approach capability at all IFR runways in the NAS. Beginning in FY99, procedure development will occur on a basis of 500 non-precision and 500 precision approaches per year. It appears that the helicopter approaches will be increased from 20 per year to 100+ per year. As of September 11, 1997 there are 927 GPS stand alone procedures published, with another 515 in the pipeline. Mr. Ron Bolton, AC&C, noted that without elimination of current non-precision approaches, the number of TPP books will increase by 2-3 per year. Mr. Paul Smith, NBAA, noted that the technology is here today to put the whole U.S. on a CD-ROM.

Action: None, for information only.

5. **FMS/GPS/RNAV/Free Flight Chart**

Mr. Dave Dudish, AC&C, briefed the establishment of the IACC Task Group 33 to develop a chart that could be used for FMS/GPS/RNAV and Free Flight. Mr. Howard Stewart, AC&C, passed out the prototype chart for review and comment and noted that the computer-generated chart was not true color and that the scale was not final. The prototype specifications are at Attachment 2. Mr. Hal Becker, AOPA Consultant, asked why Class C airspace was not being depicted. Mr. Bill Mosley, FAA/ATO-120, answered that it is an IFR chart, and that airspace classification is a non-issue for IFR flight. Mr. Doug Helton, AOPA, asked for a 5-character alpha-numeric versus a 5-letter name, for pilot/controller communication clarity. A second prototype will be developed and sent out with a survey to get ACF member and other user comments.

Action: None, for information only.

6. Prohibited Area P-56 Charting

Cdr Eric Secretan, AC&C, briefed on the outcome of the Working Group deliberations on how to best prevent incursions into P-56. The decision was to publish "PROHIBITED AREA (P-56) AVOIDANCE PROCEDURES AND WASHINGTON NATIONAL AIRPORT NOISE ABATEMENT PROCEDURES", consisting of two pages - one graphic and one accompanying textual procedures. A prototype of the graphic was presented. Cdr Secretan noted that the SID, STAR, IAP and IFR and VFR charts had been modified to better depict P-56. The Working Group will need to approve the prototype.

Action: Cdr Eric Secretan, AC&C, will report on the status at the next meeting.

7. IACC Task Group 31 IAP Chart Issues (93-01-030, 96-02-078, ICAO identifiers on GPS approaches, magnetic versus true orientation, contours, Volpe reformat, division of TPPs)

Ms. Dalia Marin, AC&C, noted that the IACC had approved the Volpe format (original) and two variations. The three formats will be sent to the Volpe NTSC for human factors evaluation and recommendation.

Mr. Terry DePlois, FAA/AVN-420, reported that criteria had been developed and was being coordinated that would describe how to remove approaches, and the notification steps required. Mr. Ruana recommended that the aviation community be told about the consequences of not removing approaches and how the total number of approaches would grow and how the books would be structured. Mr. Doug Helton, AOPA, noted that maybe the books would be better divided by equipment required (GPS) than by region, and that AOPA Magazine had published articles about this. Jeppesen has looked at splitting their books by equipment and decided not to because it would require duplicate plates in both volumes. Jeppesen will be adding their RNAV approaches back into their main volumes.

Action: Ms. Dalia Marin, AC&C, will send the IACC approved Volpe format with the two variations to the Volpe NTSC for evaluation. Ms. Marin will report on the status at the next meeting.

8. Ugly Baby Project (96-02-084)

Mr. Bill Mosley, FAA, asked for a IAP prototype to be done with a worst case TAA scenario (numerous sectors). This is a separate issue from, and not part of, the IACC TG 31 evaluation. The concern is that complex TAAs, and their depiction on the IAP, would conflict with depiction of terrain contours,

terminal routes, the currently approved basic Volpe format, multiple minima boxes, distance from MAP depiction, etc. Adding all of these to the current IAP chart will affect the utility and readability of the chart. What are the priorities for depiction from the user community? Mr. Powell asked Mr. Terry Laydon, AC&C and Mr. Jim Terpstra, Jeppesen to develop respective prototypes that combine the TAA, terrain contours, multiple minima blocks, etc. with the basic Volpe format, hence "Ugly Baby". AC&C will take the lead and put together a committee that includes AOPA, ALPA, Jeppesen, NIMA, FAA/AFS, FAA/AVN, etc. Mr. Mosley will provide words to be used in the evaluation request to Volpe. The FAA Order on TAAs is about to be signed and should be used to develop the TAA prototype that will be sent to Volpe for evaluation. Mr. Don Pate will provide the 8260.TAA. Jeppesen addressed several constraints and limiting factors that they have faced in trying to develop TAA depictions. Reno, Missoula, Salt Lake City would be ideal candidates for prototype development. An Ugly Baby Ad Hoc Committee will meet to work this. Committee members are at Attachment 2.

Action: Mr. Don Pate, FAA/AFS-450, will provide the 8260.TAA to Mr. Terry Laydon, AC&C. Mr. Bill Mosley, FAA/ATO-120, will provide the words to be used in the request for evaluation to Mr. Terry Laydon, AC&C. Mr. Terry Laydon, AC&C, will establish the ad hoc committee and report on the status at the next meeting.

9. IAP Reformat (92-01-006, 92-01-012, 92-01-013, 92-01-014, 94-01-039, 95-01-065)

Ms. Pat Fair, FAA/ATA-110, reported that the CCP had been approved by the FAA and that 20,000 surveys would be sent out to the user community for their comment on the basic Volpe format. Maj Tim Duerson, NIMA, noted that the user evaluation would be of the original Volpe format and not of the new TAA convention and asked if the production should be held for this evaluation. Mr. Moore noted that the new TAA depiction has not yet been evaluated and approved by the FAA, nor has it been evaluated in conjunction with the original Volpe format. On the other hand, assuming user approval of the Volpe format, it could be written into IACC specifications and production could begin. Holding a known major improvement (Volpe) hostage to developing, incremental improvements would result in significant, unacceptable delays for the user. The Volpe format has been in use by the airline community for nearly a year and pilots have demonstrated that they can discern needed information more easily and accurately. This improved format needs to be produced without further delay.

Action: Ms. Pat Fair, FAA/ATA-130, will send out the survey and report on the status at the next meeting.

10. VFR Charting Recommendations (94-01-041, 94-01-042, 94-01-043, 95-01-058, 95-02-070, 95-02-071)

Mr. Dave Thompson, FAA/ATA-130, briefed that the IACC Specification has been approved and funded. This spec will be submitted to the ICAO AIS/MAP Charting Work Group. Funds have been allocated to make the changes to the charts, beginning with the March 26, 1998 cycle. The changes will take approximately two years to fully implement across the Sectional series. A flyer will be sent out in January 1998 notifying users. Mr. Powell recommended that ALPA, AOPA, etc. consider putting an article in their magazines. Mr. Ruana asked for early revision of the Dallas Sectional.

Action: Closed

11. **SMGCS Charts and Standard Taxi Routes (93-01-024, 93-01-029)**

Ms. Pat Fair, ATA-130, requested that this be closed.

Action: Closed.

12. **Depicting Communication Frequencies on IAP Charts (92-01-006)**

See paragraph 9.

13. **Use of Color on IAPs (92-01-011)**

Originally placed under IACC TG 31 (see paragraph 7) to be worked. Will be readdressed at next ACF meeting to determine user requirements.

Action: Mr. John Moore, AC&C, will raise requirement issue at next ACF meeting.

14. **Warning and Caution Notes on IAPs (92-01-012)**

Print Size and Readability of IAPs (92-01-013)

Use of Icons on IAPs (92-01-014)

See paragraph 9.

15. **Obstacle and Terrain Contour Depiction on IAPs (92-01-015)**

Originally placed under IACC TG 31 (see paragraph 7) to be worked. Will be readdressed at next ACF meeting to determine user requirements.

Action: Mr. John Moore, AC&C, will raise requirement issue at next ACF meeting.

16. **Terrain Database/Release of Digital Terrain Elevation Data (DTED) (93-01-028)**

Mr. Dick Powell reported that the MOU had been signed by all agencies. Mr. Terry Laydon, AC&C, reported that the DTED data provided by NIMA will be thinned and produced on CD-ROM. The product will be called Airport Safety Modeling Data, and be listed and sold as a NIMA product. It will contain two models for 450 airports worldwide, one at 6 arc seconds (within 6 NM of the airport) and another at 15 arc seconds (within 50 NM of the airport). The product is expected on the street in June 1998. Mr. Laydon recommended that the implementation be on a regional basis, based on highest airport density by region, beginning with the U.S. The ACF did not disagree. This data will be used by ground proximity systems and airline engineering departments, as well as charting agencies (NIMA, AC&C, Jeppesen). Mr. Jim Terpstra, Jeppesen, asked if RTCA-200A would be taken into account to verify and validate the underlying DTED used in the ASMD. The FAA will certify its use in air carrier operations if it meets 200-A criteria. Mr. Charles Branch, AC&C, reported that the ASMD will, in fact, exceed 200-A criteria. Mr. Tom Young, ALPA, expressed his profound appreciation for all the efforts to get this into the public arena and noted that the accident prevented by this will never be known, but it will surely be the case.

Action: Mr. Terry Laydon, AC&C, will report on the status at the next meeting.

17. **GPS Overlay and GPS Charting (93-01-030)**

See paragraph 7.

18. **Changes to the Terminal Procedures (94-01-039)**

See paragraph 9.

19. **Parachute Jumping Areas on VFR Charts (94-01-040)**

Parachute Jumping Area frequencies are not being put on the chart because the frequencies are not dedicated. The plan is to put any frequencies provided in the Airport/Facility Directory. Mr. Hal Becker, AOPA Consultant, asked that this topic remain open. AOPA will coordinate with Mr. Dave Thompson, FAA/ATA-100, and Mr. Ed Scott, Air Sports Council, to get these frequencies published on the visual charts.

Action: Mr. Hal Becker, AOPA Consultant, will report on their efforts at the next ACF meeting.

20. **Class C Airspace on VFR Charts (94-01-041)**

Communication Frequencies on VFR Charts (94-01-042)

Class B Airspace on VFR Charts (94-01-043)

See paragraph 10.

21. **Charting Permanent Laser Sites (94-02-053)**

Mr. Tom Young, ALPA, reported that permanent laser sites had been shut down, but that the temporary sites were still a problem. Based on that, the recommendation was that the issue should be closed. The ACF agreed.

Action: Closed

22. **Visibility of ATC Frequencies on Sectional Charts (95-01-058)**

See paragraph 10.

23. **Equipment Required on Intermediate Segments (95-01-065)**

See paragraph 9.

24. **Unnamed Fixes on Enroute Charts (95-01-066)**

FAA/AVN-100 has signed the 8260-2s and the fixes are ready to be charted as soon as the FAA provides them to AC&C. The 260 unnamed fixes on enroute charts will not be phased in over several cycles, but will be lumped together into a single cycle. AOPA would like to have them published in a single cycle. The action is now within the IACC to agree upon the spec change required to chart them. Once that occurs, they will be published in the NFDD and all parties will be notified.

Mr. Jim Terpstra, Jeppesen, stated that RNAV waypoints will have to start being depicted on non-RNAV (enroute) charts. Mr. Doug Helton, AOPA, stated that the IACC spec does not allow RNAV waypoints to be depicted and must be

changed to allow their depiction. In those cases where an RNAV waypoint has been created as a transition for a GPS procedure and it falls on an airway it will be charted. The 8260-2 that creates this waypoint will state that it must be charted on both IAP and enroute charts. Mr. Terry DePlois will provide the waypoints of concern to Mr. Charles Branch.

Action: Mr. Terry DePlois, FAA/AVN-160, will provide the waypoints as noted above to Mr. Charles Branch, AC&C. Ms. Pat Fair, FAA/ATA-130, will report on the status at the next ACF meeting.

25. Redundant Verbiage on SIDs/STARs (95-02-068)

Mr. Glen Martin, FAA/ATO-110, reported that he knew of no action that had been taken on this issue.

Action: Mr. Glen Martin, FAA/ATO-110, will coordinate required changes to the Form 7100. Mr. Bill Mosley, FAA/ATO-120, will take appropriate action to amend the SID and STAR Orders.

**26. Boundary of VFR Terminal Chart on Sectional Charts (95-02-070)
Airspace Change Dates on Sectional Charts (95-02-071)**

See paragraph 10.

27. Adding GPS Waypoints to Charts (96-02-078)

Mr. Terry DePlois, FAA/AVN-160, reported that the FAA had handed this off to IACC TG 31 and that this would fall under their report at the next meeting. (See paragraph 7.) The issue is establishing linkage between GPS waypoints depicted on GPS SIAPs and those same GPS waypoints, where they are feeder fixes on an airway, depicted on the Enroute charts. The ACF previously agreed unanimously that a waypoint used to transition from the enroute to the terminal structure should not only have a common name but also should be depicted on both enroute and terminal charts.

Action: Ms. Pat Fair, FAA/ATA-110, will introduce an IACC Requirement Document to chart waypoints on enroute charts, and report the status at the next meeting.

28. Glide Slope Barb Length on Profile (96-02-079)

Mr. Terry DePlois, FAA/AVN-160, reported that after coordination with Mr. Best, FAA/AES-400, only one location was causing the problem. The procedure was modified so that this problem was solved. The length of the glide slope barb has no relation to the service volume.

Action: Closed

29. RNAV Approach Plates (96-02-084)

Mr. Bill Mosley, FAA/ATO-120, stated that the goal was to have one approach chart per runway end. The prototype plate includes the TAA (T-concept), and the various types of RNAV approaches on a single plate to a runway end. This results in multiple minima and will be included in the Ugly Baby Project.

See paragraph 8.

30. No Military Landing Rights Available (97-01-088)

Mr. David Thompson, FAA/ATA-130, reported that this could be included in the A/FD, but asked if this information was really required by NIMA. Maj Duerson stated that it was and asked that this remark be published in the A/FD airport remarks section.

Action: Mr. David Thompson, FAA/ATA-130, will provide Mr. Charles Branch with a list of civil airports that have 'no military landing rights'. Mr. Thompson will report on the status at the next ACF meeting.

31. Marking/Symbology for the Non-Towered Airports with Non-Standard Traffic Patterns (97-01-089)

Mr. Dave Thompson, FAA/ATA-130, reported that an IACC Requirement Document has been submitted to add a notation to the airport data block that indicates which runway is non-standard.

Action: Mr. David Thompson, FAA/ATA-130, will report on the status at the next ACF meeting.

32. Depiction of GPS Database Points on IAPs (97-01-91)

The ATA/Charts, Database and Avionics Harmonization Committee recommended Computer Navigation Fixes (CNF)s be depicted on NOS charts so that pilots will be able to crosscheck the CNF against their airborne database. FAA/AFS-450 has all the CNFs and is in the process of verifying their accuracy. These were provided to FAA/ATA-100 in ARINC 424 format (non-unique, non-5-letter). This was unacceptable to ATA-100 and a coordinated naming convention was agreed upon. The CNF would be depicted using a small 'x', with the name in brackets adjacent to the 'x'.

Cdr Eric Secretan, AC&C, reported that this issue has been submitted as an IACC Requirement Document.

Action: Cdr Eric Secretan, AC&C, will report on the status at the next meeting.

33. Charted Fixes with No Apparent Purpose on SIAPs (97-01-093)

Transferred back to the Instrument Procedures Group.

Action: Closed.

34. Charting ATCAAs (97-02-094)

Lorraine Vomacka, FAA/ATO-130, briefed on two recommendations from the RTCA Special Use Airspace Technical Working Group that affect Sectional and IFR Enroute High Altitude charts. First, print VHF frequencies for Special Use Airspace on the tab pages of Sectional charts. Second, depict Air Traffic Control Assigned Airspace (ATCAA) on the IFR Enroute High Altitude charts. In order to flight plan in a free flight environment, pilots will have to know where ATCAAs are. AOPA supports this effort. Maj Tim Duerson questioned the necessity since SUA activation is by NOTAM and by communication with controllers and FSS.

Action: Mr. Dave Thompson, FAA/ATA-130, will look into the issues and report to the ACF at the next meeting.

35. Depiction of Class B Airspace on LAX Visual Charts (97-02-095)

The Class B airspace revision is currently depicted on the VFR Flyway side of the Los Angeles TAC. Randy Kenagy, AOPA, requests that this revision be moved from the VFR Flyway side to the navigational side of the TAC and that airspace revision also be depicted on the current edition of the LAX Sectional. To make room for the depiction on the navigational side of the TAC, AOPA recommends that the Shoreline Route, Hollywood Park Route, and the Los Angeles Special Flight Rules Area be moved from the navigational side of the TAC to the VFR Flyway side and that, possibly, an additional panel be added to provide for sufficient charting space. The Los Angeles Sectional chart should include as many radial/DME points as possible, especially those around the perimeter of the Class B airspace.

Ms. Donna Gallant, AC&C, briefed the cartographic constraints and limitations of complying with the AOPA request. The graphic may have to be reduced slightly, an extra panel will have to be added, and the TAC will have to be reformatted. This will be costly.

The ACF supported the AOPA recommendation, the required extra panel and movement of the 3 routes, and felt that it should be implemented as soon as possible.

Action: Mr. Dave Thompson, FAA/ATA-100, will send a tasking letter to AC&C and report on the status at the next meeting.

36. ARTCC Frequencies Charted for Lost Comm (97-02-096)

The FAA Fort Worth ARTC Center requested that ARTCC frequencies be published on the IFR Enroute High Altitude charts, in the form of a tabulation listing.

Mr. Jim Terpstra asked that the latitude and longitude coordinates for the RCO serving that ARTCC be published. Mr. Tom Young, ALPA, noted that air carriers generally use Jeppesen charts and that this really does not affect them. Maj Tim Duerson, NIMA, will query the services and report through the IACC process.

Action: Maj Tim Duerson, NIMA, will determine if DoD has a requirement for these frequencies and, if so, will submit an IACC Requirement Document. Mr. Charles Branch, AC&C, will determine the feasibility of publishing the lat/long in the A/FD and report at the next meeting. Maj Duerson will report on the status at the next meeting.

37. AOPA Requirement for a GPS Database (97-02-097)

AOPA is requesting an FAA policy change that will require the FAA to provide users with a database of aeronautical information. AOPA requests that this database be provided in an electronic format via the Internet. AOPA reported that in their pilot survey, 80% of their respondents are delaying their purchase and use of GPS because of the expense of purchasing a commercial database. A major cost factor is the card itself, as each costs \$100-\$150, and producers would need to maintain almost 3 cards per user. AOPA would like to participate in the definition of the format and structure of this database.

Mr. Dick Powell, FAA/ATA-100, stated that ATA, AVN and AFS have started to work this issue and that funding has been identified to begin development (AIR and AGC will be brought in later). Mr. Powell intends to make this an FAA product that would be distributed and sold by AC&C. Mr. Tom Young, speaking as a private pilot, voiced his concern that the validation process for the database be completely thorough to ensure data integrity. Mr. Powell indicated that many complex issues (including flight checking and

certification of points) are involved in providing a government database, and are being addressed internally by the FAA. Mr. Powell indicated that the FAA will bring AC&C into the development process after the FAA has a coordinated concept position.

Action: Mr. Dick Powell, FAA/ATA-100, will report on the status of this at the next meeting.

38. FDC NOTAM versus L/D NOTAMS for SIDs and STARS (97-02-098)

ALPA requests that the NOTAM Order 7930.2F be changed to state that SID and STAR changes will be issued as FDC NOTAMS (vs L/D). The SID Order 7100.8B states that SID and STAR changes will be issued as FDC NOTAMS and the NOTAM Order needs to be changed to agree. Additionally, the requirement to publish climb gradients based on obstacles is in the SID and STAR Orders, but those based on ATC separation requirements are not required. Mr. Bill Mosley, FAA/ATO-120, reported that the FAA was agreeable to changing the NOTAM Order. The ACF decided to transfer the topic to the Instrument Procedures Group of the ACF.

Action: Transferred to IP. Mr. Don Pate, FAA/AVN-420, and Mr. Bill Mosley, FAA/ATO-120, will coordinate with Mr. Howard Swancy, FAA/AFS-420, the IP Recording Secretary. Closed.

39. Closing Comments

The next meeting will be May 5-7, 1998 at AC&C offices in Silver Spring, MD. The Instrument Procedures Group will begin their one day meeting at 0900 on May 5. The Charting Group will begin their two day meeting at 0900 on May 6.

Attachments

Aeronautical Charting Forum 97-02 Attendees

Kevin Comstock	ALPA	703-689-4176	Fax: 4370	73714.74@compuserve.com
Tom Young	ALPA	360-687-5904	Fax: 5093	youngtns@teleport.com
Melissa Bailey	AOPA	301-695-2212	Fax: 2214	melissa.bailey@aopa.org
Doug Helton	AOPA	301-695-2215	Fax: 2214	doug.helton@aopa.org
Randy Kenagy	AOPA	301-695-2149	Fax: 2214	randy.kenagy@aopa.org
Hal Becker	AOPA Consultant	703-560-3588	Fax: 5159	hbecker144@aol.com
Glen Martin	ATPAC	202-267-9384	Fax: 5304	
George Lutz	EAA	703-256-7873		
Paul Best	FAA/AFS-420	202-267-8452	Fax: 5086	paul.best@faa.dot.gov
Jack Corman	FAA/AFS-440	405-954-0012	Fax: 4809	jack.corman@faa.dot.gov
Terry DePlois	FAA/AVN-160	405-954-0188	Fax: 1301	terry.deplois@faa.dot.gov
Pat Fair	FAA/ATA-130	202-267-9290	Fax: 5809	pat.fair@faa.dot.gov
Bill Mosley	FAA/ATO-120	202-267-7824	Fax: 5110	bill.mosley@faa.dot.gov
Don Pate	FAA/AFS-450	405-954-4164	Fax: 2528	don.pate@faa.dot.gov
Dick Powell	FAA/ATA-100	202-267-9308	Fax: 5322	dick.powell@faa.dot.gov
Carol Santelia	FAA/ATA-110	202-267-9276	Fax: 5322	carol.santelia@faa.dot.gov
Howard Swancy	FAA/AFS-420	202-267-8724	Fax: 5086	howard.swancy@faa.dot.gov
Dave Thompson	FAA/ATA-130	202-267-9303	Fax: 5322	david.k.thompson@faa.dot.gov
Floyd Etherton	GTE	703-818-5482	Fax: 4723	floyd.etherton@gsc.gte.com
David Lewtas	ICAO	514-954-8163	Fax: 6759	dlewtas@icao.org
Rudy Ruana	Jeppesen	202-331-7727	F:296-0278	rruana@jeppesen.com
Jim Terpstra	Jeppesen	303-784-4401	Fax: 4111	jimterps@jeppesen.com
Paul Smith	NBAA	202-783-9255	F:331-8364	psmith@nbaa.org
Tim Duerson	NIMA	703-264-3003	Fax: 3133	duersont@nima.mil
Pat Banks	NOS/AC&C/PPMS	301-713-2630	Fax: 4587	patricia.banks@noaa.gov
Ronald Bolton	NOS/AC&C/ACD	301-713-2836	Fax: 1248	ron.bolton@noaa.gov
Betty Bradley	NOA/AC&C/ACD/IAPB	301-713-2964	Fax: 4410	betty.bradley@noaa.gov
Charles Branch	NOS/AC&C/ACD/AIB	301-713-2817	Fax: 4489	charles.branch@noaa.gov
Linda Cushing	NOS/AC&C/PPMS	301-713-2622	Fax: 4587	linda.cushing@noaa.gov
Art Dodds	NOS/AC&C/ACD/IAP	301-713-2958	Fax: 4410	arthur.dodds@noaa.gov
David Dudish	NOS/AC&C/R&T/T&M	301-713-2631	Fax: 1960	david.m.dudish@noaa.gov
Donna Gallant	NOS/AC&C/ACD/VCB	301-713-2944	Fax: 4410	donna.l.gallant@noaa.gov
Terry Laydon	NOS/AC&C/Director	301-713-2619	Fax: 4587	terry.m.laydon@noaa.gov
Dalia Marin	NOS/AC&C/ACD/ENB	301-713-2925	Fax: 4410	dalia.marin@noaa.gov
John Moore	NOS/AC&C/R&T/T&M	301-713-2631	Fax: 1960	john.moore@noaa.gov
Eric Secretan	NOS/AC&C/R&T/PE&D	301-713-2631	Fax: 1960	eric.secretan@noaa.gov
Howard Stewart	NOS/AC&C/ACD/ENB	301-713-2928	Fax: 4410	howard.stewart@noaa.gov
Bill Parshall	USAASA	703-806-4417	Fax: 4409	parshallw@belvoir.army.mil
Ann Behrns	USAFFSA/XOIA	301-981-6721	Fax: 7996	behrnsa@andrews.af.mil

Ugly Baby Project

Kevin Comstock
Tom Young

ALPA
ALPA

703-689-4176
360-687-5904

Fax: 4370
Fax: 5093

73714.74@compuserve.com
youngtns@teleport.com

Randy Kenagy	AOPA	301-695-2149	Fax: 2214	randy.kenagy@aopa.org
Terry DePlois	FAA/AVN-160	405-954-0188	Fax: 1301	
	terry.deplois@faa.dot.gov			
Pat Fair	FAA/ATA-130	202-267-9290	Fax: 5809	pat.fair@faa.dot.gov
Jim Terpstra	Jeppesen	303-784-4401	Fax: 4111	jimterps@jeppesen.com
Ted Thompson	Jeppesen	303-784-4456	Fax: 4114	tthompson@jeppesen.com
Tim Duerson	NIMA	703-264-3003	Fax: 3133	duerson@nima.mil
Russ Wall	NIMA	314-263-4806	Fax: 4247	wallr@nima.mil
Pat Banks	NOS/AC&C/PPMS	301-713-2630	Fax: 4587	patricia.banks@noaa.gov
Ronald Bolton	NOS/AC&C/ACD	301-713-2836	Fax: 1248	ron.bolton@noaa.gov
Betty Bradley	NOA/AC&C/ACD/IAPB	301-713-2964	Fax: 4410	betty.bradley@noaa.gov
Art Dodds	NOS/AC&C/ACD/IAP	301-713-2958	Fax: 4410	arthur.dodds@noaa.gov
Dalia Marin	NOS/AC&C/ACD/ENB	301-713-2925	Fax: 4410	dalia.marin@noaa.gov
John Moore	NOS/AC&C/R&T/T&M	301-713-2631	Fax: 1960	john.moore@noaa.gov
Eric Secretan	NOS/AC&C/R&T/PE&D	301-713-2631	Fax: 1960	eric.secretan@noaa.gov
Ann Behrns	USAFFSA/XOIA	301-981-6721	Fax: 7996	behrnsa@andrews.af.mil

Attachment 2