

# AIR TRAFFIC PROCEDURES ADVISORY COMMITTEE

## (ATPAC)

**SUBJECT:** Minutes of the 121st Meeting

**SUMMARY.** The 121st meeting of ATPAC was held at the Federal Aviation Administration Headquarters, Washington, DC, from October 3-4, 2005. All member organizations were represented excluding AOPA, ADF, ATCA, ATA, APA, EAA, HAI, NATCA, NAATS, RAA, SWAPA, and USA. The meeting was called to order at 1:10 p.m. on Monday, October 3, 2005. ATPAC 120 minutes were discussed and approved. The Executive Director's report was presented which addressed 18 continuing AOCs. This resulted in 17 deferred AOCs and 1 AOC withdrawn. No new areas of concern (AOC) were submitted for consideration. Visitor(s) included: Steve Lang, ATO-R, Howard Swancy, Office of the Deputy Administrator, Don Porter, RNAV Office, Brian Townsend, Dave Butterfield, Pete Elmore, assisting Mr. Porter, LaGretta Bowser, ATO-S, Ben Castellano, Airports, and Steve Lang, Flight Standards.

### **AGENDA.**

- Call to Order
- Approval of Minutes of the 120<sup>th</sup> ATPAC Meeting
- Safety Items
- Executive Director's Report
- New Areas of Concern
- Items of Interest
- Adjournment

**CALL TO ORDER.** The Chairman called the meeting to order at 1:10 p.m. on Monday, October 3, 2005, at the Federal Aviation Administration Headquarters, Washington, DC. All member organizations were represented excluding AOPA, ADF, ATCA, ATA, APA, EAA, HAI, NATCA, NAATS, RAA, SWAPA, and USA. The following personnel were in attendance:

Wilson Riggan, APA, Chairman  
Steve Creamer, Executive Director, FAA  
Nancy Kalinowski, FAA  
David Young, FAA  
Jesse Gaines, FAA  
Harry Hodges, FAA  
Bob Striegel, ALPA  
Cynthia Deyoe, PWC  
Chuck Reavis, ASRS  
David Rivers, NBAA  
James Taylor, USAF  
Randy Ottinger, ASC  
Ed Scott, ASC  
Bob Lamond, NBAA  
Glenn Morse, COA  
Mike Lister, USN

### **REVIEW/APPROVAL OF MINUTES OF THE 120<sup>th</sup> MEETING.**

The minutes were discussed and approved by the committee for inclusion into the official ATPAC record.

### **INTRODUCTION OF NEW AREAS OF CONCERN (AOC).**

No new AOCs were introduced.



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## ATPAC UPDATE

### AREA OF CONCERN 93-6

10/5/98  
SAFETY ITEM: NO

#### **SUBJECT: Runway Incursions by Taxiing Aircraft**

**DISCUSSION:** In response to the upward trend in runway incursions, a RE&D Subcommittee was tasked with developing recommendations to address this upward incursion trend.

At ATPAC 91, we were briefed on the RE&D recommendation that the FAA “expeditiously amend FAR 91.129(i) to require a specific ATC clearance to cross any runway.” The FAA has indicated that this rule change will be a long, slow process. Furthermore, despite the urgency of the recommendation, the FAA has not taken any action on this item.

**SUGGESTED ATPAC ACTION:** Until such time that the FAA changes 91.129(i) and, as an interim measure, ATPAC should recommend that the taxiing aircraft to hold short for positive clearance to taxi across all runways.

**93**—AOC deferred pending additional discussion.

**94**—Executive Director provided an overview of the AOC. The recommendation to update the FAR is being reviewed. Question raised regarding the status of the Runway JSAT. Joint commercial and general aviation JSAT is being established. The JSAT is planned for February. Joint commercial and general aviation JSAT is being established. A MITRE model at Midway (Chicago) is currently being developed. Completion is targeted for end of summer/beginning of fall. Suggestion to have MITRE provide a briefing to the committee at the next meeting regarding parameters for the model.

**95**—Status update was provided by Sue O’Brien, Runway Safety Program Manager, ATO-102. AOC deferred pending testing in Long Beach. Update will be provided in July.

**96**—Executive Director provided status update of Long Beach testing. Further updates will be provided at the next meeting. Discussion centered around why ATPAC has not made a formal recommendation regarding this AOC. Other members stated that a recommendation may not bring about a solution. Suggestion made to wait for the results of the Long Beach testing. One member stated that there is a significant difference between the test and the FAR change. Copy of test plan will be provided at the next meeting. Once the committee hears further test results and reviews the test plan a decision will be made whether to pursue the concern further.

**97**—Runway Safety Program Manager, Sue O’Brien, ATP-20, and Staff Specialist, Del Meadows, briefed the committee. A copy of MITRE Report (test plan), Taxi Hold-Short Procedure, was distributed to the committee, as requested. Lighting issues discussed. There was a comparison of U.K. lighting procedures versus procedures in the States. An update of the Long Beach testing will be provided in January.

**98**—The Long Beach Test has been delayed due to issues with pilots, unions, and the airport manager. No action has been taken since the October 1999 meeting. A briefing will be provided to the committee at the April 2000 meeting.

**99**—Update provided by Del Meadows, ATP-20. A question was raised that if the FAR was changed, why not change the 7210.3 to be incorporated into a facility’s operation manual. The result of changing the FAR or writing procedure will only make a small difference. JSAT will analyze data and come up with strategies and will determine which ideas will be implemented with a JSIT.

**100**—Denny Lawson, ATS-20, provided a program status update. Since the last meeting, a workshop with all 9 regions and a symposium in which the users were invited had been held.

**101**—Steve Shaffer, ATS-20, informed the committee of the current initiatives being addressed by the Runway Safety Program Office. The issue has been introduced at the JSIT. AOC will be deferred pending updates in January.

**102**—ATS-20 provided a briefing paper to the committee. Points discussed were:

- Amending FAR 91.125(I).
- Enhanced operational tower controller training.
- Memory enhancement techniques training for tower controllers.
- Pilot/Controller communication phraseology review.
- Air traffic teamwork enhancement (ATTE) training.
- NOTAM system improvement.

**103**—Steve Shaffer, ATS-20, provided a status briefing to the committee. Air Traffic is responsible for Enhanced Tower Control Training and OJT for Controllers. Flight Standards is responsible for Education and Awareness of Airport and Vehicle Operators. AC Runway 121 & 125 is currently on the Federal Register for comment. Foreign Pilot Training in compliance with ICAO Standards is scheduled to be completed in the 2002 timeframe.

— A meeting was held w/ATP and AFS regarding the FAR that was the original concern of this AOC. Runway Safety JSAT forwarded the issue to the JSIT and it remains on the top 10 list.

— **RECOMMENDATION #1: ATPAC remains concerned that the runway incursion rate continues to increase. ATPAC urges the FAA to expedite the process to change FAR 91.129i to require a specific ATC clearance to cross any runway as recommended by the runway incursion RE&D committee and the NTSB.**

Vote taken and recommendation adopted.

— **104**—The Executive Director reported that the Office of Runway Safety has committed funds in FY02 for modeling of the procedure to require a specific ATC clearance to cross any runway. The evaluation will specifically target the issues of airport capacity, safety, controller workload, efficiency, and frequency congestion. ATP is in the process of developing a test plan that will address every conceivable scenario. A decision based on the results of the evaluation should be available by December 2001. Status update will be reported in October.

**105**—ARI briefing given by Mike Lenz. Expect testing to begin in first quarter of calendar year 2002, possibly at NASA Ames, funding secured by ARI. Will look at controllers for the facilities being simulated, to participate. Have chosen a few airports to look at with a lot of crossing taxiways and runways, but not necessarily the busiest. Decision made collaboratively between ATP, ARI, and NATCA. Test plan has not been completed due to other priorities.

— Launching some initiatives related to 91.129i. Methodology to do simulations, review studies, look at ATC procedures associated with TIPH. Approximately 10 airports brought up that would likely lend themselves to this type of operations. MITRE developed and published a test plan a few years. Goal is to develop and conduct work to have a report for Runway Safety Summit in August 2002.

**106**—ARI briefing by Mike Lenz. Working on risk assessment and analysis looking at “taxi to,” taxi into position and hold (TIPH), and multiple landing clearances to identify hazards and manage the risks associated with selected procedures. Analyzing data for last 3 years. Not a lot of information available on multiple landing clearances. Will be using TAAM model in analysis. Model will run traffic as you program it, but will not tell you how many errors.

Will accept any input from industry. It was suggested that it would be interesting to look at international standards for the procedures, but it was brought up that the total number of flights is less in Europe and there are language differences as well. It was also suggested to get industry more directly involved in the analysis.

— **107**—ARI briefing provided by Mike Lenz. Talked about the risk assessment and analysis work dealing with 91.129, TIPH and multiple landing clearances. The final report is due May 31, 2002.

**108**—Due to a scheduling conflict, no briefing was available at this meeting. Update will be provided at meeting 109.

**109**—Status update provided by Mike Lenz of the Runway Safety Office. Background information regarding NTSB and Runway Incursion JSAT recommendations were discussed. Copy of briefing provided to members.

ADSYSTECH provided the committee with a briefing regarding the status of TIPH operation Risk Assessment.

Update will be provided at the next meeting.

**110**—The Executive Director read the status update provided by the Office of Runway Safety. The test at NASA Ames has been discontinued. An analysis will be performed beginning with benchmark OEP airports. The TIPH risk analysis is expected to be completed in FY 2003.

**111**—Mike Lenz briefed the committee. Talked about how the risk assessment for TIPH was being conducted and what results had been seen to date. A recommendation on TIPH will be forthcoming.

**112**—91.129i verbiage read to the committee. Question regarding why a risk assessment will not be done on 91.129 issue. A number of workgroups have been addressing the issue of 91.129i. One solution would increase frequency usage. Comment made, this addresses taxiing, but not the runway that you land on. There is a problem with the wording. The evaluation of the paragraph needs to be reviewed. The interpretation is unclear. AIM paragraph needs to be revised.

**113**—Briefed by Mike Lenz, ARI. Discussed risk assessment and analysis process for TIPH, 91.129, and multiple landing clearances. Talked about Runway Status Light concept.

Analysis for 91.129 is on-going. This includes a questionnaire for facilities.

[PowerPoint presentation is available on the website].

**114**—Runway Safety has comments from ATPAC and NTSB and are still conducting their analysis. They will have more information at the April Meeting.

**115**—LaGretta Bowser, ATO-R, briefed the committee. Currently a survey of all ATCTs is being conducted regarding 91.129. Additional input/feedback is being requested from any interested user group. The analysis done so far does not support change. AT and AF will make the final decision. A copy of the report was requested.

**116**—The ATO-R representative was unable to attend the meeting. A briefing will be provided at the next meeting.

**117**—Briefing from LaGretta Bower, ATO-R. All air traffic facilities surveyed. Varied responses from no impact to extensive impact. Analysis shows the only a few incursions are due to 91.129.

Consensus reached that amending 91.129 would not change much. The Committee decided to withdraw Recommendation #1. Update will be provided in January.

**118**—The following was provided by LaGretta Bowser, ATO-S, for briefing to the committee:

A draft final report is complete. A copy will be forwarded to the committee no later than 3/31/05. An update will be available at the next meeting in April.

**119**—The ATO-S representative was unable to attend the meeting, but provided the following information.

Air traffic has requested ATO-S to expand the criteria used in the analysis for 91.129i. Work is continuing and a copy of the final report will be forwarded and the response to the NTSB will be forwarded when complete.

**120**—LaGretta Bowser (ATO-S) briefed the committee. Workgroup has completed analysis on events from 1998 through April 2005. Of 1366 runway events examined, 28 events found of which only a small subset was 91.129. The NTSB did

not completely agree with the findings because of the criteria used.

ATO-S is continuing to work the recommendation and will brief the Vice President's for AF (Davis) and AT (Johnson) prior to the October meeting. The options will be full rulemaking (2-5 years) or nothing at all.

**121**--LaGretta Bowser (ATO-S) briefed the committee. Air Traffic has been briefed on the findings concerning 91.129. Options are for rulemaking or to do nothing at all. No response on the direction of this issue has been received. The NTSB has not changed their position on this issue.

**CURRENT STATUS:** DEFERRED

## ATPAC UPDATE

### AREA OF CONCERN 102-2

1/24/2001  
SAFETY: No

#### **SUBJECT: Instrument Approach Clearances to Other than IAF**

**DISCUSSION:** ALPA is still receiving reports that ATC is clearing aircraft direct to intermediate or final approach fixes, then expecting aircraft to execute a straight-in instrument approach procedure (“IAP”). In fact, with the proliferation of RNAV/GPS IAPs this practice appears to be on the increase.

The instrument approach procedure design criteria do not account for descent gradient or course change factors that occur when aircraft begin an instrument approach procedure on an ad hoc basis. The only exception to beginning an IAP at an IAF is where vectors to the “final approach course” (in accordance with 7110.65, 5-9-1) place the aircraft in the proper position to do a straight-in approach.

When an aircraft is not vectored in accordance with 5-9-1, the aircraft must be cleared over an IAF (or simply “cleared approach” to leave the pilot free at remote locations to do the procedure as required by AIM directives, etc.). Controllers need to be reminded that arrival over an IAF that is not approved on the face of the procedure for “NoPT” requires the pilot to do a course reversal.

The requirements set for in 7110.65, 4-8-1, are intended to apply to all IAP clearances, except for those conducted specifically under the provisions of 5-9-1. In recent discussions with ATP-100 staff, ALPA has learned that some quarters within Air Traffic Services consider Chapter 4 of 7110.65 to apply only to non-radar operations, rather than being the chapter that is the foundation for all IFR operations. Either this needs to be cleared up, or the language of 4-8-1 needs to be restated in Chapter 5.

Further, the language in 4-8-1 that refers to the intermediate fix is confusing, ambiguous, leads to endless speculation, and serves no valid operational purpose.

As protected airspace areas are reduced in RNAV and emerging RNP IAPs, bypassing a designated IAF increases the risk of an aircraft leaving protected airspace and colliding with an obstacle, in addition to the risks of violating turning and descent gradient requirements.

Also, ALPA understands that some controllers believe that the intent of 5-9-1 is satisfied by a clearance direct to an intermediate or final approach fix, followed by a “radar monitor.” This is incorrect as it negates the requirement to intercept final at not more than a 20-30 degree angle, and at the appropriate minimum distance from the approach gate.

**SUGGESTED ATPAC ACTION:** A training bulletin be issued to all controllers reviewing the intended requirements of 7110-65, 4-8-1. This would include a reminder that this paragraph applies to all IAP clearances except for vectors provided in accordance with 5-9-1. Further, a reminder that the “intent” of 5-9-1 is not satisfied by simply clearing an aircraft directly to an intermediate or final approach fix, then merely observing the aircraft on radar. Finally, a reminder that a clearance for an IAP over an IAF that is not approved for “NoPT” on the face of the chart will require the pilot to execute the prescribed course reversal, thus ATC separation services should be provided with that expectation in mind.

In 4-8-1 the present language “Standard Instrument Approach Procedures shall commence at an Initial Approach Fix or an Intermediate Approach Fix if there is not an Initial Approach Fix...” should be amended to delete reference to the phrase “Intermediate Approach Fix.” The only time an approach should begin at an intermediate approach fix is where vectors in accordance with 5-9-1 have been onto the approach course outside of the intermediate fix on a “radar required” IAP that has no IAF’s.

(See related agenda item “Vectors to the IAP Course Prior to a Published Segment”). Finally, 4-8-1 should have language



that makes it absolutely clear that the provisions of this paragraph apply in both a radar and non-radar environment, excepting only radar vectors provided in accordance with 5-9-1.

**102**—Wally Roberts, ALPA, presented the AOC including a November 2000 letter from ALPA to the FAA, which expressed the concern. Executive Director reported that the FAA has drafted a response to the letter and that it is currently in coordination. The committee opted to wait for the FAA's response.

**103**—Deferred for discussion at next meeting.

**104**—Wally Roberts provided an update to the committee. Concerns were raised regarding the confusion of mixing procedural notes and system requirement (equipment) notes. Additional wording was suggested to distinguish equipment vs. procedure note. ATP and AFS need to jointly work the issue.

**RECOMMENDATION #1: Form a FAA workgroup comprised of AFS, AVN, AAT, NATCA, and ALPA to work the issue and provide solutions to the problem.**

Flight Standards will take the lead to make this happen.

The Flight Standards representative provided a brief overview of the issue. This is not a site-specific issue and controllers are doing the best with what they have. AVN and AFS will work together with the controllers to determine criteria for TERPS and the impact. A specific fix should not be targeted. Flight Standards takes the responsibility and commitment to work and explore the issue.

**105**—Meeting with Wally and AFS to discuss issues has not yet occurred. After the meeting occurs, there will be a decision as to whether or not a workgroup should be formed. Request to review list of attendees and ensure that the proper attendees are there to obtain the desired results/outcome. Will try to have meeting in conjunction with the charting forum.

**106**—Did not get discussed at the past charting forum. AFS will try to get the parties together before the April meeting.

**107**—The Flight Standards representative was unable to attend meeting 107. The AOC will be updated at the July meeting.

**108**—FAA has had some internal discussions, but has had some difficulty getting all parties on the phone. Don Porter and Bruce Tarbert, ATP-104, briefed the committee on this AOC. DCP and CBI training are being edited to address GPS equipment and T approach issues. CBI training is targeted for release in September. Product will be presented for review in January and possible implementation in June/July 2003 timeframe.

**109**—Bruce Tarbert, ATP-104, briefed the committee. DCP's have been finalized and signed. Training is expected to be out in April 2003, which will include TAA's. Consideration was given to distances from IAF and intercept angle. AVN looking to see if additional guidance regarding speed is required.

**110**—A Draft DCP was submitted to committee for review. A question was raised regarding the "IF(IAF)" notation on the diagram. A briefing will be provided at the next meeting to clarify the concerns.

**111**—Some work has been done within Flight Standards, but there has not been a meeting of all the appropriate parties.

**112**—AFS-420 workgroup has been formed to write-up a plan and proposed guidance. Development of a controller and pilot training initiative will be addressed. Workgroup's progress will be reported at the next meeting.

**113**—AFS representative was unable to attend the meeting and provide an update. Question was raised whether the charting forum was working this issue.

**114**—AFS representative was unable to attend the meeting and provide an update.

**115**—AFS representative was unable to attend the meeting and provide an update.

**116**—AFS representative was unable to attend the meeting and provide an update.

**117**—New AFS representative at this meeting. Draft DCP for the AOC has been written. An update will be provided in January.

**118**—AFS was unable to attend the meeting, but indicated to the committee that a reenergized effort will be made on this AOC. The committee wanted to emphasize that there had been considerable work done on this AOC by AFS and that there should not be a need to start over again.

Committee wanted to reiterate its recommendations to AFS.

**119**—AFS brought up the issue before the Technical Review Board. A review of the ATO-W DCP for vectoring has been completed and was concurred with.

The committee requested for AFS to look at RNAV aircraft on the conventional side.

**120**—DCPs are scheduled for publication in February 2006. Question: Would it have application to conventional procedures? ATO-T would have to provide feedback.

**RECOMMENDATION #2**: Determine/implement this type approach if it can be used by conventional aircraft.

**121**—Clarify of Recommendation #2 was discussed and approved. It now reads:

**RECOMMENDATION #2 (Revised)**: Determine/implement this type approach if it can be used by RNAV aircraft on a conventional approach.

ATO-T is still researching this issue with the RNAV office.

**CURRENT STATUS**: DEFERRED

**ATPAC UPDATE**

**AREA OF CONCERN 105-3**

**10/12/2001**  
**SAFETY: No**

**SUBJECT: Cleanup of FAR's and AIM**

**DISCUSSION:** There is a possibility that several typos or actual errors exist in the government issued FAR's and/or AIM. It is requested that the appropriate FAA offices review the attached list, and if errors should be found, correct those errors at the earliest opportunity with the government printing office. In those cases where error is not found, an explanation should be forwarded to ATPAC for review

**SUGGESTED ATPAC ACTION:** Forward the attached to appropriate FAA office(s) for review and explanation.

**105**—There is a process mentioned in AIM for making changes.

**RECOMMENDATION #1: In accordance with suggestion ATPAC Action.**

**106**—No progress has been made on this AOC. Update at April meeting.

**107**—Due to resource constraints, Air Traffic does not have the personnel to conduct a thorough review and clean up of the AIM.

**108**—ATP will work on the specific AIM changes that were noted in the AOC when it was originally submitted.

**109**—DCP's are being prepared for AIM/AIP changes. Memorandums to appropriate offices regarding FAR changes are being processed.

**110**—DCP and FAR changes are in process.

**111**—DCP and FAR changes are in process.

**112**—DCP and FAR changes are in process.

**113**—DCP and FAR changes are in process.

**114**—DCP and FAR changes are in process.

**115**—DCP and FAR changes are in process. Draft changes regarding flight levels in Class G airspace was provided to the committee.

**116**—Changes continue to be processed.

**117**—DCP and FAR changes are in process.

**118**—DCP and FAR changes are in process.

**119**—Changes to AIM paragraph 3-3-1 concerning IFR altitudes in Class G airspace have been published. Additional DCP and FAR changes are in process.

**120**—DCP and FAR changes are in process.

121—DCP and FAR changes are in process.

**CURRENT STATUS:** DEFERRED

## ATPAC UPDATE

### AREA OF CONCERN 108-1

7/15/02

SAFETY: No

#### **SUBJECT: ALPA Safety Concerns Regarding a Recent ICAO Phraseology Change to PANS-ATM**

**DISCUSSION:** A recent editorial change to ICAO PANS ATM Chapter 12, 2.3.4.7 was made that changed taxi instructions from “Taxi to holding point (designation) [Runway designation]” to “Taxi to holding position (designation) [Runway designation].” It was recognized by ICAO that “holding point” is a point in the sky, while “holding position” is a point on the ground. In order to keep phraseology consistent, it was decided to change “holding point” to “holding position.”

This editorial change has unintended consequences. Specifically, FAA policy to use “Taxi in position and hold” will set a human factors trap for US pilots operating at foreign airports since “Taxi to holding position (ICAO)” sounds an awful lot like “Taxi in position and hold.” This is a runway incursion waiting to happen.

Additionally, foreign pilots may misunderstand FAA ATC instructions that involve the phrase “Taxi in position and hold.” Misunderstanding may cause additional transmissions and workload for ATC, as well as potential confusion in the cockpit.

**SUGGESTED ATPAC ACTION:** ATPAC requests the FAA take the following actions:

1. File a difference with ICAO, as the UK has done.
2. Through MAPCOG (Multi-Agency Procedures Coordination Group) address our concerns with ICAO.
3. Revise US policy to require use of “Line up” rather than “Taxi in position and hold.” ALPA continues to believe that continued US insistence upon using phraseology different from that of ICAO is unsafe. Standardized phraseology is a key component of safe operations and it is time for the US to join the rest of the world. If we do not, we should expect this type of problem to surface again.

**108**—AOC presented. Requested briefing from the international division at the October meeting.

**109**—There remains confusion when pilots of different countries go to other countries where different phraseology is used. Needs to be brought up with ICAO.

**110**—A letter is being written to ICAO suggesting that phraseology be changed to previous phraseology or adopt U.S. phraseology. A copy of the letter will be provided to the committee once completed.

**111**—Karen Pontius, ATP-120, briefed the committee. The FAA is not changing to the ICAO phraseology. ICAO is considering going back to the previous phraseology, but no definite plans at this time. Currently, a memo is in process that will address the issue.

**112**—Copy of briefing update provided to the committee. A letter was written to ICAO requesting that they change their phraseology for harmonization; however, phraseology will not be changed. Appears to be a “stand-off” between U.S. and Canada regarding who should change.

Prior to drafting a recommendation, committee members should review Jeppeson pages, FARs, and other manuals to see what guidance already exists.

**113**—The committee was briefed that another letter is “supposedly” coming from ICAO urging that we institute the phraseology. No further information available at this time.

**114**—Runway safety office is looking at a lot of the phraseology that is different. An effort is underway to harmonize phraseology. The FAA is looking at all differences that exist and where we can harmonize with ICAO. Safety office is looking at conducting human factors study to determine the impact of changing phraseology. This effort will begin sometime in 2004. The safety office will provide a further update in April. The April update should include the

phraseology that the Safety Office is looking at.

**115**—Analysis still being done on TIPH. Some new things implemented, ex. “Position and Hold.” ARI will do human factors study on “Position and Hold” vs. “Line Up and Wait,” which should be available by the next meeting.

**116**—The ATO-R representative was unable to attend the meeting. An update will be provided at the next meeting.

**117**—Briefing from LaGretta Bowser, ATO-R. Analysis will be done in FY05. This will include TIPH vs. Line up and wait. Currently, the continuing resolution is holding up the contracting. It was suggested that a study be done of who has filed differences with the phraseology.

**118**—The following was provided by LaGretta Bowser, ATO-S, for briefing to the committee:

The statement of work is being finalized and the project completion date is anticipated to be September 2005.

There was some discussion by the committee about seeing the statement of work. The committee requests an update at the next meeting in April.

**119**—The ATO-S representative was unable to attend the meeting, but provided the following information.

A meeting with the Professor who will lead the Phraseology review will be held on April 28<sup>th</sup>. The Statement of Work (SOW) will be completed after that.

**120**—LaGretta Bowser (ATO-S) briefed the committee. Statement of Work (SOW) is completed. A linguist has been hired to do the study on “line up and wait” vs. “position and hold.” This will be completed by December. ICAO is also concerned about this issue. On July 11<sup>th</sup> they changed back to “taxi to holding point.” Some foreign controllers are using “position and wait” for US airlines. NTSB also has some concerns about this issue, especially harmonization.

**121**—LaGretta Bowser (ATO-S) briefed the committee. Information currently being gathered on “taxi to” versus “line up and wait.” The linguist hired to do the study had a personal issue, which delayed the start of the work.

**CURRENT STATUS:** DEFERRED

## ATPAC UPDATE

### AREA OF CONCERN 112-1

7/28/03  
SAFETY: No

**SUBJECT:** Clarification of “Direct” Clearance

**DISCUSSION:**

It has been pointed out that a clearance to fly “direct” to a city, for example, ELP, where the airport and the VOR share the same spoken name, yet are not co-located, leads to confusion as to whether or not the clearance was to the airport or to the VOR. The AIM and the 7110.65 do not specifically identify which location is intended. In light of the implementation and expansion of RNAV procedures nationwide, it might be time to specifically identify the desired destinations in both of these documents. When queried about this potential disparity many controllers presented opposite answers while pilots also responded on both sides of the issue. The pilots who believe they’ve been cleared to the airport are inserting runway extensions (to the runway of choice) into FMC databases and allowing LNAV/GPS to fly them to that point. The controllers are relying on the approach controller to redirect the a/c onto the arrival as needed for spacing. With the intent of RNAV/LNAV of reducing communication transmissions and consistency of track it is time to clarify this issue.

**SUGGESTED ATPAC ACTION:** That ATPAC discuss this issue and add a note and/or an example in both the 7110.65 and the AIM indicating that the controller will specify when the clearance limit is not to the airport of intended landing.

7110.65 Para. 4-2-5a1  
AIM Para. 4-4-4 (new “d”???)

Note: In cases where the airport and VOR share the same name, it is intended that the airport is the clearance limit unless otherwise stated.

**112**—Committee advised to await FAA’s response prior to drafting a recommendation.

**113**—Discussion was held about different handbook changes that could be made concerning this issue. One member brought up that NAVAID names not on the airport should be changed to distinguish from the airport identifier. Changes to VORs would be easy with a maximum of 1033 needing to be changed.

ATP will find out if ATA-100 is currently working on this issue.

**RECOMMENDATION #1:** The FAA change the names of NAVAIDS, which are the same as the name of the airport, and not located on airport property.

**114**—Anything in the future will have different names and anything that is in existence has been grandfathered in. ATP has requested that ATA-100 look at section 3 of 7400.2E. An update is expected in April. The group would also like to see a copy of the memo from ATP to ATA.

**115**—ATA is just beginning work on the issue. No update available at this meeting.

**116**—ATA is working the issue and will provide a briefing to the committee at the October meeting.

**117**—Update provided by ATO-R representative. List of airports was produced and memo sent to field. Issues will be dealt with on a case by case basis.

Data provided to committee. A data rerun of 0-5 miles was done and showed over 1000 airports. Are we fixing the problem by changing the names? Is there another way?

Research needs to be done on the pilot/procedural side and the manuals before it can be decided if this is a big issue.

**118**—Searches indicate that there are hundreds of airport/NAVAID names that are the same. Discussion about whether this is a problem. At a long distance it may not, but closer in it may be a problem. It was noted that if pilots are not sure they have been cleared to the airport or the NAVAID, then they should ask the controller.

Question asked: what is the actual breakdown based on distances?. FAA provided the following:

|                      |       |
|----------------------|-------|
| Total                | ~1400 |
| Less than 1 mile     | 972   |
| 1-2 miles            | 72    |
| 2-3 miles            | 51    |
| 3-4 miles            | 77    |
| 4-5 miles            | 72    |
| Greater than 5 miles | 155   |

**119**—Based on information from meeting 118 should this issue be continued? Several members said yes. After discussion it was decided that the committee would amend Recommendation #1 as follows:

-  
-  
-  
-

**RECOMMENDATION #2:**

**The FAA change the names of NAVAIDS, which are the same as the name of the airport, and are greater than 2 NM from the airport reference point.**

**120**—ATO-R is working the issue. No update is available at this meeting.

**121**—Analysis shows approximately 350 NAVAIDS with the recommended requirement. Several are part of airways, etc., which leads to rulemaking and has to be done by service areas. This could be a burden. Also, local authorities are likely to raise issues.

**CURRENT STATUS: DEFERRED**



## ATPAC UPDATE

### AREA OF CONCERN 114-2

1/27/04

SAFETY: No

#### **SUBJECT: Pilot/Controller Glossary Addition: COMPLY WITH PUBLISHED RESTRICTIONS**

**DISCUSSION:** FAAO 7110.65 paragraph 5-6-2f currently contains the term “**COMPLY WITH RESTRICTIONS**”. This phrase may be issued by controllers in lieu of reissuing individual altitude restrictions published on a SID/DP/STAR, when the controller is vectoring an aircraft back onto one of these procedures. While the term appears to be self explanatory, it is no more so than many of the other terms defined in the Glossary. Further, during the course of implementing RNAV arrivals and departures at Las Vegas, this phrase has been used and misunderstood by some pilots executing the procedures to the extent pilot deviations occurred.

**SUGGESTED ATPAC ACTION:** That ATPAC review this item and recommend the Pilot/Controller Glossary be amended to include the following definition of “**COMPLY WITH RESTRICTIONS**”

*COMPLY WITH RESTRICTIONS – An ATC instruction is issued by a controller that requires an aircraft being vectored back onto an approach or departure procedure to comply with all of the altitude and crossing restrictions depicted on the procedure. Controllers may use this term in lieu of repeating each remaining restriction that appear on the procedure when issuing a clearance to climb via/descent via, or resume the procedure.*

**114-** Update will be provided before the April meeting. The group discussed changing the phraseology to “comply with published restrictions”, but could not reach consensus. FAA will take to phraseology work group that meets next week.

**RECOMMENDATION #1: Pilot/Controller Glossary is amended to include the following definition of “COMPLY WITH RESTRICTIONS” and cross reference it in the altitude section of the 7110.69. COMPLY WITH RESTRICTIONS – An ATC instruction is issued by a controller that requires an aircraft being vectored back onto an approach or departure procedure to comply with all of the altitude and crossing restrictions depicted on the procedure. Controllers may use this term in lieu of repeating each remaining restriction that appear on the procedure when issuing a clearance to climb via/descent via, or resume the procedure.**

**115—**PARC is working the recommendation. Update will be provided in July.

**116—**Update provided by the RNP office. The definition recommended by ATPAC refers to “climb via” phraseology and is dependent upon the proposed phraseology. The development of “climb via” phraseology continues to be addressed by PARC. A human factors test plan is under development in conjunction with the William J. Hughes Technical Center. A review of the test plan will be conducted by the working group members the week of July 26<sup>th</sup> in Atlantic City.

ATPAC upon advise by the RNP office alters the **Recommendation #1** definition to the following:

**“COMPLY WITH RESTRICTIONS – An ATC instruction is issued by a controller that requires an aircraft being vectored back onto an arrival or departure procedure to comply with all altitude and or speed restrictions depicted on the procedure. Controllers may use this term in lieu of repeating each remaining restriction that appears on the procedure when issuing a clearance to climb via/descent via, or resume the procedure.”**

**117—**Briefing from Bruce Tarbert, RNAV and Don Porter, CSSI. “Climb Via” is a new phraseology procedure being developed by the PCCP workgroup. Comply with Restrictions will be done away with when this is developed. Simulations will be done in the December/January timeframe. It was suggested that the workgroup bring in international to work on the issue together. This would decrease exceptions.

**118—**The following information was provided by the RNP Office:

**BACKGROUND:** As a result of ATPAC’s AOC 114-2, and the Committee’s recommendation, the RNP Program Office (ATO-R/RNP) tasked the Pilot/Controller Procedures and Phraseology (P/CPP) working group to discuss this issue at its October meeting. The P/CPP was established to address RNAV and RNP implementation issues. The P/CPP is made up of air traffic, aviation, and union subject matter experts. The P/CPP reviews, assesses and proposes changes to ATC procedures and phraseology and is tasked by the RNP Program Office with incorporating those changes into FAA Order 7110.65, the AIM and AIP.

**RECOMMENDATION:** ATO-R/RNP concurs with ATPAC’s recommendation to include the phrase Comply with Published Restrictions and its definition in the PCG. ATO-R/RNP also concurs with ATPAC’s proposed definition with a slight modification as follows: – *An ATC instruction that is issued by a controller that requires an aircraft being vectored back onto an approach, **arrival** or departure procedure to comply with all of the crossing restrictions depicted on the remainder of the procedure. Controllers may use this term in lieu of repeating each remaining restriction that appears on the procedure.*

After discussion, ATPAC agreed with the RNP Office recommendation. The DCP will be processed.

**119**—DCP for “Comply with Published Restrictions” is being processed.

**120**—DCP is in process.

**121**—DCP is in process.

**CURRENT STATUS:** DEFERRED

## ATPAC UPDATE

### AREA OF CONCERN 116-1

7/14/04  
SAFETY: No

**SUBJECT:** Revision to FAAO 7110.65 and the AIM

#### **DISCUSSION:**

**REFERENCES:** FAAO 7110.65, paragraph 4-2-5b: NOTE; AIM, Sections 4-4-9g and 5-2-6-e-7.

The possibility of a misunderstanding between pilots and controllers during the issuance of an ATC clearance has been identified during discussions on the application of “Climb Via” in the RNP/RNAV Phraseology Work Group meetings and should be corrected.

Specifically, in accordance with the references stated above, the use of the term “maintain” when used in conjunction with the initial ATC clearance issued prior to departure *could* be understood to be an amended clearance and have the possible affect of canceling altitude restrictions contained on the DPs issued in the same initial clearance. In considering this issue it is important to remember the following:

- The definition of “maintain” as contained in the P/C Glossary has not changed.
- The application and sequence of the term “maintain,” and the omission of previously issued altitude restrictions (including those on published DPs) is the key to understanding the procedure.

Each of the above references refers to a “**restating**” of the previously issued altitude to “maintain,” and the omission of any restrictions contained in a DP that would have applied. When the term “maintain” is used in the initial ATC clearance, *it is not a restatement*, but instead is one of the items included in the basic departure clearance data as contained in FAAO 7110.65, paragraphs 4-3-2 and 4-3-3, and paragraph 4-4-3 of the AIM.

While ALPA believes the possibility of a misunderstanding of the currently accepted procedure is small, ALPA realizes the task of ATPAC is to eliminate any such possibility to the extent possible. Therefore, ALPA recommends the following changes to both the AIM and FAAO 7110.65:

#### **SUGGESTED ATPAC ACTION:**

1. Revise FAAO 7110.65, Paragraph 4-2-5-b: NOTE: to read as follows: (New material is in bold and italics.)

***The term “Maintain,” when used in issuing an altitude assignment as an item in the initial ATC clearance delivered to an aircraft prior to departure, does not constitute an amended clearance that cancels altitude restrictions issued by ATC or contained on any DP issued as an integral part of the same clearance. The depicted or assigned altitudes apply. However, in subsequent transmissions, restating a previously issued altitude to maintain is an amended clearance. If altitude to “maintain” is changed or restated, whether prior to departure of while airborne, and previously issued altitude restrictions are omitted, altitude restrictions are cancelled, including DP/FMSP/STAR altitude restrictions if any.***

2. Revise AIM Paragraph 4-4-9g to read as follows: (New material is in bold and italics.)

The guiding principle is that the last ATC clearance has precedence over the previous ATC clearance. When the route or altitude in a previously issued clearance is amended, the controller will restate applicable altitude restrictions. ***The term “Maintain,” when used in issuing an altitude assignment as an item in the initial ATC clearance delivered to an aircraft prior to departure, does not constitute an amended clearance that cancels altitude restrictions issued by ATC or contained on any DP issued as an integral part of the same clearance. The depicted or assigned altitudes apply.***

*However, in subsequent transmissions, restating a previously issued altitude to maintain is an amended clearance.* If an altitude to “maintain” is changed or restated, whether prior to departure or while airborne, and previously issued altitude restrictions are omitted, altitude restrictions are cancelled, including DP/FMSP/STAR altitude restrictions if any.

3. Revise AIM Paragraph 5-2-6-e-7 as follows: (New material is in bold and italics)

***If, after the initial ATC clearance has been delivered and acknowledged,*** an altitude to “maintain” is restated, whether prior to departure or while airborne, previously issued altitude restrictions are cancelled, including any DP altitude restrictions that applied.”

Appropriate cross-references should be annotated for each of these changes.

**SUGGESTED ATPAC ACTION:** That ATPAC review this item and recommend changes to FAAO 7110.65 and the AIM.

**116**—Committee expressed differing views on how clearance should be issued. Question – Does maintain cancel restrictions? This may be systemic and more than just an AIM change.

Committee requested to get RNAV and international offices views on the subject. Discussion will be held at October meeting.

**117**—Briefing from Bruce Tarbert, RNAV and Don Porter, CSSI. “Climb Via” is a new phraseology procedure being developed by the PCCP workgroup. Comply with Restrictions will be done away with when this is developed. Simulations will be done in the December/January timeframe. It was suggested that the workgroup bring in international to work on the issue together. This would decrease exceptions.

**118**—The following information was provided by the RNP Office:

**BACKGROUND:** As a result of ATPAC’s AOC 116-1, and the Committee’s recommendation, the RNP Program Office (ATO-R/RNP) tasked the Pilot/Controller Procedures and Phraseology (P/CPP) working group to discuss this issue at its October meeting. The P/CPP was established to address RNAV and RNP implementation issues, and is made up of air traffic, aviation, and union subject matter experts. The P/CPP reviews, assesses and proposes changes to ATC procedures and phraseology and is tasked by the RNP Program Office with incorporating those changes into FAA Order 7110.65, the AIM and AIP.

**DISCUSSION:** After lengthy discussion the P/CPP came to the following conclusions: if used as prescribed, the phrase “maintain” is clear and unambiguous; that this is an ATC training issue; and to create another “situational” (on the ground vs. in the air) definition for the use of “maintain” would create further confusion.

**RECOMMENDATION:** ATO-R/RNP concurs with the P/CPP and makes the following recommendations:

1. In the near term, develop a Mandatory Briefing Item (MBI) for ATC facilities that discusses this issue and gives the necessary guidance to correct the problem.
2. Include this issue, complete with a description of the problem and the correct applications and uses for the maintain phraseology, in the next RNAV and RNP Computer Based Instruction (CBI) that is currently under development and due to be completed in March. Distribution to facilities is planned in the June/July timeframe.
3. Make any necessary changes to the appropriate sections of the FAAO 7110.65, the AIM and the AIP to add clarity and emphasis where needed.

Discussion by the committee brought out these points:

- Confusion is on the pilot’s part not the controller.
- TB would not address this issue.
- Need to go to the POI’s, training schools, etc. to help

Update requested in April to see the definitions.

**119**—Update provided by Bruce Tarbert and Don Porter of the RNP office.

Issue “Maintain” initial clearance. Because it has different meanings in different circumstances a training issue has arisen. An ATB article has been drafted and a CBI that addresses the issues is under review. Handbook changes will be look at if necessary.

In initial clearance it is not possible to clear above SID altitudes without canceling prior SID altitudes. Altitude is a legal part of the clearance and has to be included. System Operations is looking at this issue.

**120**—The RNAV office was unable to provide an update for the Anchorage meeting. Updated status will be provided in October.

**121**—Update provided by Don Porter of the RNAV Office. There are several issues with “maintain” in SIDs and STARS. It is a problem for both pilots and controllers. A better definition may need to be looked at by Don’s group. One solution is to insert waypoint to define altitude. (Ex. “Descend via Baxter1, after Laady maintain 080.”) Meaning should be the same in the air as on the ground. Training issues are forthcoming.

**CURRENT STATUS:** DEFERRED

## ATPAC UPDATE

### AREA OF CONCERN 116-3

7/14/04  
SAFETY: No

**SUBJECT:** ILS Glide Slope Critical Area Advisory

**REFERENCE:** AIM 1-1-9k2(b)(2)

**DISCUSSION:** The above referenced paragraph in the AIM does not accurately reflect what terminology pilots should use when advising ATC they will conduct a coupled/autoland approach when the weather is above 800-2. The example used in the paragraph ***“Glide slope signal not protected”*** is an advisory that would be issued by the control tower in response to pilot notification of a coupled approach.

Another issue contained in this paragraph that ATPAC needs to discuss is that the ILS critical areas are only protected when the aircraft is inside the middle marker (MM). Considering the fact that MM's are located approximately 3500ft from the runway threshold, which is entirely too short a distance to be useful for such approaches, and they are being removed at the majority of locations, it appears necessary to replace the term MM in this paragraph with “Final Approach Fix (FAF).” This would be in line with the Glide Slope Critical Area comments contained in AIM paragraph 1-1-9k(2).

The use of coupled/autoland approaches has become more common with the fleet of highly automated aircraft operating in the inventory, and the ILS critical area requirements need to be updated to reflect this fact.

**SUGGESTED ATPAC ACTION:** That ATPAC discuss this issue and recommend the following:

1. That the pilot advisory example contained in the above referenced AIM paragraph be replaced with the following sample advisory: ***“(Name of tower)(Callsign) coupled/autoland approach.”***
2. That the term MM contained in the above referenced AIM paragraph be replaced with the term **FAF** or **OM**, whichever is the most appropriate.

**116**—MSP has a glideslope critical area issue with a certain taxiway. Many aircraft use the coupled approach most of the time. Comment that when issuing ILS procedures it should be known that the aircraft is coupled without having to broadcast it on the frequency. This will be a capacity issue because aircraft must be certified to “autoland.” If not certified, they can't fly CATIII. AFS needs to be involved in this issue.

#### **RECOMMENDATION #1:**

1. That the pilot advisory example contained in the above referenced AIM paragraph be replaced with the following sample advisory: ***“(Name of tower)(Callsign) coupled/autoland approach.”***
2. That the term MM contained in the above referenced AIM paragraph be replaced with the term **FAF** or **OM**, whichever is the most appropriate.

**117**—Office of Primary Interest (OPI) has been contacted. Committee will be provided status when available.

**118**—There was concern that the OPI would understand the issues being addressed and would make the proper handbook changes. The OPI will be contacted and a discussion will be held at the next meeting.

**119**—800&2 and below is protected, not above. If there is no compelling evidence then policy should not be changed. Possibly change 7210.3 to designate a runway for autoland approaches to CAT II/III runways. Alternate is maintenance

recertification.

**RECOMMENDATION #2:**

**That the FAA ATO develop guidance to achieve the following:**

**FAA Order 7210.3, Facility Operation and Administration, should be changed to have terminal facilities with CAT II or CAT III approaches include procedures to accommodate “coupled” or “autoland” operations per FAA Order 7110.65, 3-7-5b to include protecting the critical area. This should include controller awareness of the need to accommodate these operators and may include designating a preferred runway and arrival procedures for these operations.**

**120**—Several ideas were provided on this AOC:

- Consider designating autoland/coupled approach runways as per Recommendation #2.
- Provide more education to controllers.
- Obtain development help from Anchorage office (Motzko).
- Certification could relax the 90 day requirement for autoland/coupled approaches.
- Determine which airports could dedicate a runway for these approaches.

AT and AF will work on the dedicated runway issue.

**RECOMMENDATION #3: Synchronize the AIM to the 7110.65/PCG definition of ILS Critical Area.**

**121**—Instruction issued to controllers to issue and protect the approaches when able. ATO-T said there is no need for having airports dedicate runways for this purpose. Airports need to be aware of the need and accommodate as much as possible.

**CURRENT STATUS: DEFERRED**

## ATPAC UPDATE

### AREA OF CONCERN 116-5

7/14/04  
SAFETY: No

#### SUBJECT: Revision to STAR Order 7100.9D

DISCUSSION: STAR Order 7100.9D states; “*STARS Shall: Terminate at an initial approach fix for a standard instrument approach procedure or at a point in space defined by a fix or waypoint. An RNAV STAR shall terminate at a point from which radar vectors may be initiated.*” Also: “*For RNAV STARS that terminate at a point in space, annotate on the chart that radar vectors will be provided; e.g. expect radar vectors to final, and annotate the chart with the lost communication procedure if lost communications procedures differ from 14 CFR 91.185.*”

A review of any number of STARs reveals two common themes regarding the terminating fix. The procedure either ends at the terminus fix or ends at the terminus fix followed by a specified heading.

In the first example, it may be somewhat confusing as to what heading should be flown in the event ATC does not issue a heading upon crossing the terminus fix or if the aircraft has lost communications with ATC. Ask any number of pilots and you will get multiple interpretations. Anything from fly the inbound radial, enter the gold if depicted, or fly the default heading after crossing the fix.

The latter procedure is probably the most common and probably what ATC desires. However, would that be the case if the airplane had been vectored off the procedure and crossed the terminus fix from an angle that varied from the published lateral track? In this scenario it could be quite possible the default heading would direct the aircraft towards other arriving or departing aircraft.

Procedures that end with a specified heading prevent unpredictable flight tracks in the event of lost comm., blocked frequencies, and busy controllers. At a minimum, ALPA believes STARs should end with a specific heading.

Another point of contention is the lack of guidance in the event of lost communications. Most STARs are consistent with their verbiage – “*Expect vectors to final approach course.*” Again, it is somewhat open to interpretation as to how the pilot chooses to proceed to the final approach course and at what point or time the pilot should commence this.

Statistically, lost comm. could be considered a rare occurrence with today’s equipment. This is all the more reason for simplifying procedures for flight crews.

SEA has done an excellent job of terminating their conventional STARs with specific headings **and** depicting Lost Comm procedure information boxes on the chart. There is no question as to the steps the pilot should follow. The terrain at SEA probably dictated the need for specific headings and instructions. Wouldn’t it be practical for this to be the standard for the STAR order?

Ideally, LAS has developed “automatic” lost comm. procedures on their RNAV STARs that terminate at an IAF. Three out of four arrivals actually **clear** the lost comm aircraft for the ILS. The pilot does not have to consider ETA or holding instructions. Simply fly the arrival, execute the approach, and land.

The fourth arrival does not terminate at an IAF, but it guides the airplane to within five miles of the airport on a base leg, giving the pilot two options – maintain VFR and land (since the airport will probably be in sight), or follow the lost comm. procedure if IMC.

As more and more RNAV STARs are designed and implemented, ALPA believes there will be a need for procedures to terminate at an IAF. Since this is not the case for most existing procedures, ALPA believes ATPAC should concentrate on addressing a simple approach to fixing the current problem with STAR terminus.



**SUGGESTED ATPAC ACTION:** That ATPAC review this issue and recommend the FAA revise the STAR Order to reflect more precise guidance regarding the terminus fix and lost communications. In doing this, the following safety benefits should be considered:

- Ø Consistent charting
- Ø Clear and consistent guidance to pilots at the terminus fix of the procedures
- Ø Unambiguous lost communication direction
- Ø Enhanced predictability for ATC in the event of blocked or lost communication after the terminus fix.

Specific recommendations are:

- Ø Published headings should follow the terminus fix.
- Ø Each facility should consider the most efficient heading to use at the terminus, based on traffic flow and runway usage.
- Ø All STARs should contain standard formatted Lost Communication Procedure information boxes.

**116**—The ATO-R, RNP Program Office had the following comments on the committee’s suggestions:

Published headings should follow the terminus fix.

Design guidance provided to procedure specialist incorporates the use of a heading following the terminus fix. Consideration will be given in future revisions FAAO 7100.9D, Appendix 2-b-3 to require the use of a VM path terminator after the last waypoint for those procedures terminating at a point in space. The use of a VM path terminator would provide heading guidance from the coded database. Charting conventions currently support the depiction of the heading for VM legs.

Each facility should consider the most efficient heading to use at the terminus, based on traffic flow and runway usage.

This guidance is included in FAAO 7100.9D, Appendix 5, as part of the design process. The inclusion the Lead Operator as part of the RNAV Implementation Working Group provides feedback on the procedure design and route flyability.

All STARs should contain standard formatted Lost Communication Procedure information boxes.

This recommendation if adopted, should be referred to the Aeronautical Charting Forum (ACF). As a collaborative working group including both FAA and industry experts, the ACF can make recommendations to charting specifications to ensure uniformity.

After discussing the AOC and considering the comments by the RNP Program Office, the committee made the following recommendation:

**RECOMMENDATION #1:**

**Published headings should follow the terminus fix à The FAA draft a DCP for this part of the recommendation.**

**Each facility should consider the most efficient heading to use at the terminus, based on traffic flow and runway usage à The FAA review this part of the recommendation and take appropriate action.**

**All STARs should contain standard formatted Lost Communication Procedure information boxes à The FAA draft a DCP for this part of the recommendation and also advise the Aeronautical Charting Forum (ACF) of the committee’s actions.**

**117**—After discussion it was decided that this issue would be better addressed by the ACF. Chairman will write a letter to

that effect. The ATPAC member on the ACF will provide a briefing at the next meeting.

**118**—Letter to ACF is being drafted. Update will be provided in April.

**119**—Letter written from Chairman to the Aviation Charting Forum. No reply was received. Expect update in Anchorage. Next ACF meeting is May 11-12, 2005.

**120**—No response received from ACF. Committee member also on ACF does not recall this issue being discussed at their May meeting. Update will be provided in October.

**121**—Update provided to group by Bill Hammett, AFS-420. He indicated that this action was not brought before the ACF.

Discussion by the group led to the conclusion that the action that ATPAC wanted was misunderstood. ACF should address the issue and that some ATPAC members would like to attend the meeting to discuss the issues. The request will be retransmitted to the ACF.

**CURRENT STATUS:** DEFERRED

## ATPAC UPDATE

### AREA OF CONCERN 117-1

10/5/04  
SAFETY: No

**SUBJECT:** Definition of the term “Airborne”

**DISCUSSION:** Pilot reports to ALPA have made us aware that some ATC Towers are applying an unusual definition of “airborne.” The definition being used is that an aircraft is “airborne” when the aircraft rotates and the nose wheel comes off the ground. The significance of the definition relates to an aircraft landing or departing behind another aircraft that is departing from the same runway. FAA Order 7110.65, paragraphs 3-9-6 and 3-10-3, Same Runway Separation, permit controllers to apply minimum distances between succeeding arriving or departing aircraft if the controller can determine distances by reference to suitable landmarks and the other aircraft is airborne.

The “rotation” concept is used to enhance capacity, according to one tower support specialist. This is based on the idea that, at least in the case of Category III aircraft, the aircraft is beyond the maximum abort speed and the takeoff will occur. Another stated reason was that an arrival aircraft will not touch down immediately after crossing the landing threshold and the other aircraft will be “in the air,” i.e., all parts of the aircraft separated from terra firma, before the arrival touches down.

**SUGGESTED ATPAC ACTION:** Discuss the need for including a definition of airborne in the Pilot/Controller Glossary and make an appropriate recommendation.

**117**—Pilot feel they are being pushed too much and it is a safety issue. Comment made that pilot learn they can’t cross the threshold with another aircraft on the runway. Suggested possible solutions were MBI, procedures telcon for discussion. Update will be provided when available.

**118**—What exactly defines airborne? Nose wheel off, all wheels off? Should this be standardized and publicized? One member indicated that a number of court cases said it should be “all wheel off.” It was noted that if it is “all wheels,” then capacity would be affected. Noted that pilots would be concerned with the legality of “should they have made the landing.”

Discussion posed solution of an ATB, a PCG changes, etc.

**Recommendation #1:** A definition of “Airborne” should be put in the Pilot Controller Glossary.

**119**—AFS has not finalized the definition. Draft DCP will be provided when available.

**120**—ATO-T’s consensus is that the definition should be when “all wheels are off the ground.” Memo sent to AFS-200 on whether they agree with ATO-T.

**121**—ATO-T feels that all wheels off the ground is airborne. An MBI is under draft.

Should we be validating this first? How does AFS define airborne? Can we assume that current practices have acceptable risk? Recommendation that this issue be tabled until an SMS analysis and evaluation/study can be accomplished.

**CURRENT STATUS:** DEFERRED

**ATPAC UPDATE**

**AREA OF CONCERN 118-1**

**1/12/05**  
**SAFETY: No**

**SUBJECT:** AIM Paragraph 4-2-4a(5) and FAA Order 7110.65 Guidance on Use of the Term *Heavy*

**DISCUSSION:** ALPA has received questions from our members on the use of the term “heavy.” Center controllers do not always use it in communications with heavy aircraft.

The guidance for controllers in the 7110.65 on the use of “heavy” and the guidance in the AIM are not in agreement. The AIM, paragraph 4-2-4a(5) says: Air carriers and commuter air carriers having FAA authorized call signs should identify themselves by stating the complete call sign (using group form for the numbers) and the word “heavy” if appropriate. The 7110.65 paragraph 2-4-14b EN ROUTE says: The use of the word heavy may be omitted except... (and lists four situations). Attached are the complete paragraphs for the AIM and 7110.65.

The en route controllers have the flexibility to omit it in radio transmissions to aircraft and the AIM does not explain this to the pilots. The AIM should be revised.

**SUGGESTED ATPAC ACTION:** Discuss the AOC and make an appropriate recommendation(s).

**118**—Did the FAA mean to leave the disparity between what the controllers do and what the pilots do?

**119**—No known history. Not a problem in DRVSM, but it may be a benefit to leave it in. Some say pilot standardization should be used.

**RECOMMENDATION #1:** Change AIM/AIP to show that “Heavy” be used in terminal airspace, but not en route (Similar concept in the 7110.65).

**120**—ATO-T is working this DCP issue and will provide further information at the next meeting.

**121**—ATO-T is continuing to work the issue.

**CURRENT STATUS:** DEFERRED

## ATPAC UPDATE

### AREA OF CONCERN 118-2

1/12/05  
SAFETY: No

**SUBJECT:** AIM Chapter 7, Section 3, Wake Turbulence

**DISCUSSION:** AIM guidance has not been updated relative to Wake Avoidance Procedures (Paragraph 7-3-6) for many years, even though much study has been done on the subject. Of particular interest to pilots are the wake behavior and mitigation strategies when pilots are conducting parallel visual and Simultaneous Offset Instrument Approaches (SOIA) to closely spaced runways.

The AIM tells pilots that wake turbulence, when landing behind another aircraft on the same runway, or closely spaced parallel runway, is best accomplished by flying above the glide path of the leading aircraft, picking an aiming point for touchdown beyond where the leading aircraft is anticipated to land (updated by the actual landing point) and landing “long,” beyond that touchdown point. There is also a requirement for air carrier pilots to land in the touchdown zone (first 3,000 feet of the runway beginning at the threshold) after flying above the leading aircraft’s flight path and landing long. Air carrier pilots are also required to adhere to stabilized approach criteria.

ATC IFR separation for wake turbulence relies on minimum in trail distances. For example: Four miles behind heavy, six miles small behind heavy. Pilots believe that wake protection is achieved by being further behind and above the leading wake generator.

However, when conducting visual approaches to closely spaced parallel runways, pilots are typically expected to fly behind a wake generator at distances that are much less than the minimum IFR ATC distances so as to accomplish visual acquisition, maintain visual separation behind the leading aircraft and close on the lead aircraft, so both aircraft in the pair land at the same time. Pilots are not offered AIM guidance in this situation as to the best mitigation strategy if they cannot stay high and land long for operational issues.

The AIM explanation of the effect of wind transport needs to be expanded. Using reported surface winds and INS winds aloft, pilots could determine if the wake generated by an aircraft landing on a closely spaced runway is being transported toward or away from their intended flight path. The effect of the wind on the wake transport is critical information for pilots.

**SUGGESTED ATPAC ACTION:** Discuss the AOC and make an appropriate recommendation(s).

**118**—AIM information on wake turbulence avoidance is outdated and needs to be updated. After 13 years of study, no procedural changes have been made. There has been a reduction in funding for studying wake turbulence.

Pilots have been told different ways to fly (ex. fly stabilized, fly high, etc.). It is not synchronized. AFS will have to determine the requirements.

**119**—Mike Webb, AFS provided some information on the subject. AFS will try to get answers to questions and present further information at the next meeting.

**120**—AFS is looking at wake turbulence where aircraft can fly in certain proximity to each other and where wake turbulence does not affect the non-generator. Always has been “high and long.” Nothing has changed to date. Will separation be changed? This has not been determined. Look at having Dave Lankford (AFS) provide information on the research that has been done.

**121**—Steve Lang, ATO-R provided a briefing.

Discussed what FAA is doing now including looking at the 2500' rule, leveraging from NASA work, A380 standards. Work with LIDAR (laser that measures wake turbulence off the wing). Also, looking at active sensors and indicators.

Comment made that there is nothing out there now that would change the high/long that is currently used.

Request for further information on any plans, simulation testing, etc. concerning wake turbulence.

**CURRENT STATUS:** DEFERRED

## ATPAC UPDATE

### AREA OF CONCERN 119-1

4/18/05

SAFETY: Yes

**SUBJECT: Runway Incursions-Tower Interpretation of Hold Short Lines & Anticipated Separation**

**REFERENCES:** FAAO 7110.65, Paragraph 3-9-5, Anticipating Separation; AIM Paragraph 2-3-5, Holding Position Markings; AIM Paragraph 4-3-20, Exiting the Runway After Landing; Pilot/Controller Glossary (P/CG)

**DISCUSSION:** The following debrief is submitted for information:

As we were cleared onto the runway XXR and then cleared for takeoff, **the previous flight to takeoff told tower that the 747, which had just landed before his takeoff, was "not clear of the runway."** We could see the 747 at a stop on Taxiway XX, perpendicular to the runway and the tail relatively near the edge. Tower then came on the radio and for almost one minute announced over and over that **"he was clear," "we have sensors that tell us he is clear"** and such. *(It should be noted the Tower is at least 1 mile from the taxiway in question and there are several terminal buildings between the two points.)* We then clarified with tower that he had cleared us for Takeoff. Tower confirmed that we were cleared. The 747 had not moved. What we saw was the **747 with the rear gear just over the hold-line (facing away from the runway) and at least 50 feet or more of the aircraft on the runway side of the hold line.** We don't think the tail was over the edge line for the runway. At cruise, we contacted the preceding departing aircraft and discussed what we saw. Our Jeppesen manuals call the hold line the edge of the "Runway Safety Zone." After landing, the Captain called the **departure airport tower who explained that they believe that going away from the runway an aircraft can be "over the line" but going towards the runway, nothing can be over the line.** This was normal ops for them. In the last week, I've asked many pilots who all agree we are trained to believe that the hold line is sacred. From our training we all believe that the 747 was "not clear of the runway." There is never any difference published in any FAA manual about direction of travel. With runway incursion a "hot issue," is tower right? Can the whole back end of a 747 overhang the hold line on the runway side and still be legal?

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The investigating airline flight safety office contacted the departure airport QA office who explained that the takeoff clearance was based on "anticipated separation". When questioned if "anticipated separation" was really applicable since the 747 was stopped, being controlled on another frequency and his potential movement was unknown to both the local controller and the departing aircraft, the QA office replied in the affirmative.

The airline flight safety office then questioned another busy tower QA section on this issue and received the same answer. It appears there is a different interpretation on the use of "anticipated separation" by the controllers and the customers (pilots).

FAAO 7110.65 states:

#### **"3-9-5. ANTICIPATING SEPARATION**

**Takeoff clearance needs not be withheld until prescribed separation exists if there is a reasonable assurance it will exist when the aircraft starts takeoff roll."**

One must question the "reasonable assurance" part of this definition when applied to the above examples and interpretations.

The AIM offers the following guidance on this subject and specifically addresses the issue of an aircraft clearing a runway (after landing or otherwise):

#### **"2-3-5. Holding Position Markings**

**a. Runway Holding Position Markings.** For runways these markings indicate where an aircraft is supposed to stop. They consist of four yellow lines two solid, and two dashed, spaced six or twelve inches apart and extending across the width of the taxiway or runway. The solid lines are always on the side where the aircraft is to hold. There are three locations where runway holding position markings are encountered.

**1. Runway Holding Position Markings on Taxiways.** These markings identify the locations on a taxiway where an aircraft is supposed to stop when it does not have clearance to proceed onto the runway. The runway holding position markings are shown in FIG 2-3-13 and FIG 2-3-16. When instructed by ATC "Hold short of (runway "xx")" the pilot should stop so no part of the aircraft extends beyond the holding position marking. When approaching the holding position marking, a pilot should not cross the marking without ATC clearance at a controlled airport or without making sure of adequate separation from other aircraft at uncontrolled airports. **An aircraft exiting a runway is not clear of the runway until all parts of the aircraft have crossed the applicable holding position marking.**”

The AIM offers the following instructions for pilots clearing the runway:

#### **“4-3-20. Exiting the Runway After Landing**

The following procedures should be followed after landing and reaching taxi speed.

**b. Taxi clear of the runway unless otherwise directed by ATC. In the absence of ATC instructions the pilot is expected to taxi clear of the landing runway by clearing the hold position marking associated with the landing runway even if that requires the aircraft to protrude into or cross another taxiway or ramp area.** This does not authorize an aircraft to cross a subsequent taxiway/runway/ramp after clearing the landing runway.”

We find serious concerns with several aspects of this proposed Safety Item.

1. There is a serious difference between the interpretation by two large International Airport QA sections and the users on the definition of “anticipated separation”.
2. There is a serious difference between the interpretation by two large International Airport QA sections concerning the definition of and the use of Runway Holding Position Markings on Taxiways.
3. The P/CG does not address the definition of Anticipated Separation.

**SUGGESTED ATPAC ACTION:** It is recommended that ATPAC adopt this item as a Safety Item; discuss this issue to determine an industry consensus and definition of Anticipated Separation for the P/CG; and determine the best vehicle to use to inform the controlling community of the “HQ Interpretation” of and proper use of Anticipated Separation.

**119**—There appears to be conflicting paragraphs in the AIM and 7110.65. Suggestion made to bring them into alignment. There are also training issues involved.

Other comments involve: technology (ASDE/AMASS). Is it a problem or issue here? Comment that some controllers believe runway is clear when AMASS is not alarming. AMASS not used for separation. Suggest contacting Runway Safety office for ideas on handling. There should be a better definition clear of runway.

Terminal procedures and AFS will work the issues.

**120**—Committee reviewed the issues involved. One issue: There is a disparity from what is written and what is being applied in the field. One question posed was: Can AMASS be used to determine if an aircraft is clear of the runway? Also, there needs to be additional education provided to controllers on the subject.

ATO-T will address the AMASS question and draft an Air Traffic Bulletin (ATB) on clearing the runway.



121—ATO-T is continuing to work this issue.

**CURRENT STATUS:** DEFERRED

## ATPAC UPDATE

### AREA OF CONCERN 119-2

4/195  
SAFETY: No

**SUBJECT: Phraseology Confusion (TIPH, TTHP, HS)**

**DISCUSSION:** The following debrief is submitted for information:

After gate push out and taxi, we got in line behind numerous other aircraft on Taxiway S for Runway 8 departure. The aircraft ahead of us (a Continental flight) was instructed to taxi around an Airbus that was ahead of it and to taxi into **position and hold Rwy 8**. We were then told to taxi around the Airbus to **holding position #1**. We interpreted this to mean we were to follow the Continental flight to hold short, and we were now #1 for take off. We followed the Continental up to the hold short line for Rwy 8. As the Continental flight departed, we were told to taxi down Rwy 8 and exit at Taxiway S3. As we complied and returned to end of the line onto Taxiway S, we were told that we had passed **“Holding Position #1,”** and that ATC needed 20 miles spacing between northbound departures. We departed without further incident about 8 minutes later. Both of us had our airport diagrams open but **“Holding Position #1” is not displayed on the 10-9 page – it is on the 10-9B page**. However, in order to prevent future occurrences and misunderstandings like mine, I strongly suggest that “Holding Position #1” and “Holding Position #2” be redesignated or renamed, **perhaps to “Holding Position AA” and “Holding Position BB” so that there will be no misunderstanding between a geographic location on the airport and instructions for aircraft movement**.

**SUGGESTED ATPAC ACTION:** Adopt the suggested action that holding positions not be numbered, but otherwise named to avoid confusion described above.

**119**—A labeling problem, not a charting problem. Provide to airports and ask for guidance/input. Concern with confusion, does it meet standards.

**120**—Ben Castellano from airports forwarded an update. The markings used are indeed incorrect. His office will coordinate with the service area and facility on getting the markings corrected. An update will be provided when available.

**121**—Ben Castellano from airports briefed the committee. The signing program began in 1990 due to an incident in Detroit. A common system for signing and marking was developed that cost several million dollars. The system discouraged local use items, which could confuse pilots, that couldn't be adapted nationally.

Concerning this AOC, the Airports provided this information. The markings at SJU were requested by local air traffic. They were for operational purposes and were agreed with by airports and the regional office. The two options available now are to leave the markings or attempt to have them changed.

The committee discussed some of the ways the markings could be changed such as color, wording, phraseology, etc.

**RECOMMENDATION #1:** ATPAC recommends that the holding position marking boxes at SJU be changed, so that they are less confusing and more understandable. Suggestions include changing the color (e.g. black on yellow) and the lettering (e.g. holding area alpha).

**CURRENT STATUS:** DEFERRED

## ATPAC UPDATE

### AREA OF CONCERN 119-3

4/20/05

SAFETY: No

#### **SUBJECT: Emergency Declaration by Pilots**

**DISCUSSION:** The AIM and FAAO 7110.65 both define an emergency as either a “Distress” or “Urgency” condition, and state that either condition should be initiated by a pilot broadcasting the word “MAYDAY” or “PAN-PAN” three times. This procedure does comply with the accepted ICAO emergency procedure.

However, within the United States, it is rare that either phrase is used by pilots declaring an emergency. Instead, the majority of pilots will, based on the nature and seriousness of an event, simply advise ATC that they have an “Emergency” followed by the details of the event. The second sentence of paragraph 6-1-2a of the AIM, which states in part “**pilots do not hesitate to declare an emergency...**” appears to encourage this term.

Even though the common use of the term “Emergency” is recognized and accepted by the entire aviation community within the United States, neither the AIM nor FAAO 7110.65 specifically addresses pilot use of that term. As a matter of fact, the importance of using “MAYDAY” and/or “PAN-PAN” when declaring an emergency was emphasized strongly by the FAA during the National Transportation Safety Board (NTSB) hearing on the crash of Avianca Flight 052 on Long Island, New York, in January 1990. The Avianca B-707 aircraft crashed due to fuel starvation. Even though the flight crew advised ATC of a critically low fuel situation and requested “priority,” little if any preferential treatment was given. *The FAA witnesses testified that terms such as “priority” and “minimum fuel” are too vague and, that unless pilots use the standard phraseology for declaring emergencies, preferential treatment would probably not be provided.* The FAA later revised the appropriate aeronautical publications to emphasize the existing position, and, the continued absence of the use of the word “Emergency” by pilots in the appropriate documents challenges the legitimacy of its use and could expose them to criticism or other more serious action.

**SUGGESTED ATPAC ACTION:** That ATPAC discuss this issue and consider recommending the following phrase be added to the definitions of “Distress” and “Urgency”: *“Within United States airspace, pilot use or transmission of the term “Emergency” will be accepted as a declaration of a “Distress” or “Urgency” condition.*

119—AIM 6-1-2 and 6-3-1 are background paragraphs to this AOC.

Comment made that the wrong problem was being worked. Pilots were afraid to use it.

#### **RECOMMENDATION #1.**

**Change FAAO 7110.65 to include “EMERGENCY” as a term that could be used in lieu of “MAYDAY” and “PAN-PAN”.**

**Change AIM 6-3-1 to add sentence referencing the United States in SUGGESTED ATPAC ACTION.**

120—ATO-T is working these DCPs and will provide a status in October.

121—Concern expressed about creating exceptions to ICAO standards. Review needed of emergency definition in PCG including urgency and distress situations. Does the committee recommendation have ramifications that we don’t know? Are we moving away from harmonization? A difference would have to be filed.

**CURRENT STATUS: WITHDRAWN**

**ATPAC UPDATE**

**AREA OF CONCERN 120-1**

**7/13/05**

**SAFETY: No**

**SUBJECT:** Wake Turbulence Rules

**DISCUSSION:** Paragraph 3-9-6 of the 7110.65 addresses Wake Turbulence Separation with opposite direction takeoffs and landings very poorly. There is no mention of an S+ aircraft. What separation does a controller use when an S+ aircraft is involved?

**SUGGESTED ATPAC ACTION:** Change the 7110.65 to include the S+ category I this specific paragraph.

**120**—ATO-T will look into this issue and provide further information in October.

**121**—ATO-T is continuing to look at this matter.

**CURRENT STATUS:** DEFERRED

**ATPAC UPDATE**

**AREA OF CONCERN 120-2**

**7/13/05**  
**SAFETY: No**

**SUBJECT:** Low Altitude Alerts

**DISCUSSION:** When an aircraft is executing a Visual Approach and the controller receives a Low Altitude Alert, there is no phraseology to tell the pilot a suggested action.

**SUGGESTED ATPAC ACTION:** Change the 7110.65 to reflect phraseology to issue to an aircraft when a low altitude alert is given on a visual approach.

**120**—Paragraph 5-14-2 includes the phraseology to be used. Some facilities in the field feel that this can't be used for visual approaches or VFR aircraft.

**RECOMMENDATION #1:** Write an ATB that will clarify the phraseology that should be used.

**121**—The ATB is being rewritten to include a reference to paragraph 2-1-6.

**CURRENT STATUS:** DEFERRED

## ATPAC UPDATE

### AREA OF CONCERN 120-3

7/13/05

SAFETY: No

**SUBJECT:** The Washington DC Air Defense Identification Zone (ADIZ)

**DISCUSSION:** Since the beginning of the ADIZ, procedures in the 7110.65 have been very unclear. They are not consistent with the instruction controllers are receiving from FAA management. If we continue to operate under the direction of the FAA without the proper guidance in the 7110.65, the controllers will have no recourse in the event of an incident or accident.

**SUGGESTED ATPAC ACTION:** Change the 7110.65 to reflect the way the ADIZ is being handled on a daily basis at PCT TRACON. Suggested language has already been submitted to the ATO-T Procedures Office at the FAA.

**120**—ATO-T believes this may have already been answered. Pilots have been given adequate information about the ADIZ. Several reasons it shouldn't be in the 7110.65 include limited area of use and use of beacon codes in the ADIZ. A change to 9-3-10 will not educate the pilots that they will not receive AT services if they are given a squawk, while assuming they are getting them.

After more discussion the committee decided it needed further information on what the real issues are. ATO-T, ALPA and NATCA will do further research and provide more information at the next meeting.

**121**—Was there a recent NPRM on Part 93 concerning domestic ADIZs? If it succeeds we should have clearer procedures on ADIZs.

ATO-T will look into the language.

**CURRENT STATUS:** DEFERRED

**LOCATIONS/DATES FOR FUTURE MEETINGS.** The Chairman announced the following ATPAC meeting schedule:

ATPAC 122: January 23-26, 2006, San Jose, CA  
ATPAC 123: April 24-27, 2006, Washington, DC  
ATPAC 124: July 10-13, 2006, Ottawa, Canada  
ATPAC 125: October 16-19, 2007, Orlando, Florida

**ADJOURNMENT:** The Chairman noted the total number of recommendations increased to 476. No new AOCs were introduced and discussed. The following items were introduced and/or deferred for consideration during ATPAC 121:

|           |   |
|-----------|---|
| AOC 93-6  | Runway Incursions by Taxiing Aircraft   |
| AOC 102-2 | Instrument Approach Clearances to Other than IAF  |
| AOC 105-3 | Cleanup of FAR's and AIM  |
| AOC 108-1 | ALPA Safety Concerns Regarding a Recent ICAO Phraseology Change to PANS-ATM             |
| AOC 112-1 | Clarification of "Direct" Clearance   |
| AOC 114-2 | Pilot/Controller Glossary Addition: Comply with Restrictions.                           |
| AOC 116-1 | Revision to FAAO 7110.65 and the AIM  |
| AOC 116-3 | ILS Glide Slope Critical Area Advisory  |
| AOC 116-5 | Revision to STAR Order 7100.9D  |
| AOC 117-1 | Definition of the Term "Airborne"   |
| AOC 118-1 | AIM Paragraph 4-2-4a5 and FAA Order 7110.65 Guidance on the Use of the Term "Heavy"     |
| AOC 118-2 | AIM Chapter 7, Section 3, Wake Turbulence   |
| AOC 118-3 | ARTCC Timed Climb Requirements  |
| AOC 119-1 | Runway Incursions – Tower Interpretation of Hold Short Lines and Anticipated Separation |
| AOC 119-2 | Phraseology Confusion (TIPH, TTHP, HS)  |
| AOC 120-1 | Wake Turbulence Rules   |
| AOC 120-2 | Low Altitude Alerts   |
| AOC 120-3 | The Washington DC Air Defense Identification Zone (ADIZ)                                |

THE PRECEDING IS CERTIFIED TO BE A TRUE AND ACCURATE SUMMARY OF THIS MEETING.

Stephen P. Creamer  
Executive Director, Air Traffic Procedures  
Advisory Committee