

ARINC Standards Development Document

Revision: 2
Released: May 4, 2008

IA-ASDD

Revision History

Revision	Date	Change
1	03/25/2008	Initial Release
2		Minor editorial changes

ARINC Standards Development Document

May 4, 2008

1. Introduction

- 1.1. ARINC Incorporated organizes aviation industry activities that cooperatively establish voluntary technical Standards and develop shared technical solutions. ARINC Industry Activities (IA) coordinates and provides the secretariat for the AEEC, AMC, and FSEMC—the Activities.
- 1.2. The AEEC mission includes developing voluntary Standards for airborne electronics of common interest to the aviation community. The AMC mission includes developing voluntary maintenance-related Standards. The FSEMC mission includes developing voluntary Standards related to simulation and training.

2. Standards Development by the Activities

- 2.1. When AEEC or AMC or FSEMC develops or publishes a Standard, it shall follow the procedures in this Standards Development Document (SDD).
 - 2.1.1. This SDD describes policies and procedures that are designed to optimize the development and promulgation of voluntary technical Standards.
 - 2.1.2. This SDD includes Attachments that provide more detailed guidance on specific issues such as the inclusion of patented or copyrighted technology in ARINC Standards or the submission of copyrighted material at any meeting hosted by an Activity or for consideration in developing Standards.
 - 2.1.3. This SDD is maintained by ARINC IA in collaboration with the AEEC, AMC, and FSEMC Leadership and is subject to approval by ARINC Incorporated.

The Activity Leadership, as specified in the Terms of Reference for each Activity, (i.e., AEEC Executive Committee, AMC Steering Group, FSEMC Steering Committee), assisted by the ARINC IA-provided secretariat, shall be responsible for management and oversight of the development of voluntary technical Standards, including the initiation of Standard development and the adoption of Standards.

3. Initiation of Standards Development

- 3.1. The Activity Leadership may consider requests from the aviation community and, at its discretion, may initiate action to develop, revise or withdraw documents establishing Standards in accordance with the Terms of Reference for that Activity.

4. Development of Consensus

- 4.1. The objective of the Activity shall be to achieve a substantial consensus among all participants in a particular Standard development activity. However, the Activity shall not be obligated to achieve a unanimous consensus where, in the opinion of the Activity Leadership, such action is not practical.
- 4.2. Standards development meetings of any of the Activities shall be open to interested parties (i.e., Activity Participants) who may present oral or written proposals and

comments. Such proposals and comments may become part of the record of the meeting and may be made available, to the extent practical, to other interested parties. Attachment 2 to this SDD presents the Policy on Publications and Copyrights related to information and materials presented by Activity Participants.

5. Activity Standards Actions

- 5.1. Action to initiate, adopt, revise or withdraw any technical Standard document may be taken at a regularly scheduled meeting of the Activity Leadership. Action to adopt or revise an ARINC Standard at such meeting requires the affirmative vote of at least two-thirds of the voting members of the Activity Leadership present and voting yea or nay. Abstentions are ignored.
- 5.2. Action to initiate, adopt, revise or withdraw any technical Standard or other document by means of a mail or electronic ballot which may be used in those instances when the Activity Chairman, with advice from the IA secretariat, determines the issues have been aired through oral or written participation and that action before the next Activity Leadership meeting is appropriate. Action to adopt or revise an ARINC Standard by mail or electronic ballot requires the affirmative vote of two-thirds of the Activity Leadership members voting yea or nay. Abstentions are ignored.
- 5.3. The Activity Leadership actions regarding technical standardization must be taken in accordance with procedures available to any Activity Participant.

6. Opportunity for Final Consideration

- 6.1. Following Activity Leadership action to adopt or revise any technical Standard, Activity Participants shall be notified and given a period of at least 30 days to provide a written submission presenting technical commentary or requesting reconsideration of the specific Activity action.
- 6.2. In the event that a written submission (i.e., a comment) is received, it shall be referred to the Activity Chairman and Executive Secretary for consideration.
- 6.3. The Activity Chairman, in consultation with the IA secretariat, shall review each such comment and determine if it presents a substantive technical objection to the adopted technical Standard as approved by the Activity Leadership.
 - 6.3.1. In the event that the Activity Chairman determines that a comment presents a substantive technical objection, the document will not be published and the matter will be referred to the Activity Leadership for reconsideration or resolution.
- 6.4. In the event that the Activity Chairman determines that the comment does not present a substantive technical objection, the Chairman will notify the commenter that the document will be published as approved by the Activity Leadership. In such notification, the Chairman will also inform the commenter of the Appeal Procedure.

7. Appeal Procedure

If, pursuant to 6.4 above, an Activity Participant desires to file an appeal the following actions must be taken.

- 7.1. The interested party shall file a notice of such appeal in writing within ten business days of publication of notice that the Activity Chairman's determination is to publish the document as adopted.
- 7.2. The appeal shall state in particular the nature of the complaint and describe in detail the reasons for the appeal. The Activity Chairman, with the advice of the IA secretariat, is empowered to try to resolve the appeal by prompt consultation with the interested party.
- 7.3. In the event that consultation is unsuccessful, the Chairman shall forward the written appeal to the Secretary of Aeronautical Radio, Incorporated with a request that an Appeal Board be appointed.
- 7.4. The Appeal Board shall consist of three persons with technical expertise in the particular area of the Standard document. The three members of the Appeal Board shall not be members of the Activity Leadership. The Appeal Board will act by majority vote based upon the written appeal, records of all the Activity deliberations pertaining to the matter, and any further written views submitted by the party seeking the appeal, other interested parties, or the Activity Leadership within reasonable time limits set by the Appeal Board.
- 7.5. The Appeal Board shall rule favorably on an appeal where it finds that there has been a substantial violation of the appealing party's procedural rights or where it finds that the technical conclusions of the Activity Leadership are clearly erroneous.
- 7.6. The decision of the Appeal Board shall be given in writing to the appealing party and to the Activity Leadership for dissemination to other interested parties. The Appeal Board shall have the authority to direct that the subject Standard document be withdrawn from publication. The Appeal Board may make such other further recommendations as it deems desirable but in no event shall the decision of the Appeal Board result in the publication of a technical Standard which has not been adopted pursuant to the procedures described previously.

8. Publication as an ARINC Standard

- 8.1. When a technical standard is fully approved in accordance with the SDD, a suitable document shall be referred to ARINC IA for publication as an ARINC Standard and distribution to interested parties.

9. Periodic Review of Technical Standard Documents

- 9.1. The Activity Leadership for each activity, with the advice of the IA secretariat, shall review each ARINC Standard at least once every five years.

Attachment 1
Policy on Inclusion of Patented or Copyrighted Technology
in ARINC Standards

March 26, 2008

1. Introduction

- 1.1. The objectives of the voluntary technical Standards developed by the AEEC, AMC, and FSEMC—the aviation industry activities organized by ARINC—include improving cost effectiveness and reducing life-cycle costs.
- 1.2. The AEEC, AMC, and FSEMC (hereinafter, Activity) may consider developing and adopting a proposed standard in terms that include the use of patented technology or that require the use of copyrighted subject matter if Activity Leadership (i.e., AEEC Executive Committee, AMC Steering Group, FSEMC Steering Committee) concludes that the patented technology or copyrighted subject matter offer significant technical or economic benefits over nonproprietary technology.
- 1.3. For purposes of this Policy, the term “patented technology” means technology that is claimed in an issued or pending patent or for which the owner intends to seek patent protection.
- 1.4. For purposes of this Policy, the phrase “includes the use of patented technology” and variants thereof mean that the technology is referenced in a standard or proposed standard or that compliance with or implementation of the standard would, as a practical matter, require the use of the technology.
- 1.5. For the purposes of this Policy, the phrase “require the use of copyrighted subject matter” and variants thereof, mean that compliance with or implementation of the standard would, as a practical matter, require the use of the copyrighted subject matter (e.g., computer programs or interface protocols). The phrase is not directed to the Standard document itself and is not intended to encompass the need to make copies of the Standard document for reference purposes.
- 1.6. For purposes of this Policy, the phrase “rights holder” shall mean the owner of, or any other person who has a relevant proprietary interest in, the technology that is claimed in an issued or pending patent or subsisting copyright or for which the owner intends to seek patent protection.
- 1.7. If a proposed ARINC Standard may include the use of patented technology or may require the use of copyrighted subject matter, the provisions of this Policy shall be followed.

2. Disclosure of Patented Technology and Licensing Considerations

2.1. Notification

- 2.1.1. Any Activity Participant that offers, proposes, or suggests patented technology or copyrighted subject matter for inclusion or reference in an ARINC standard (or is otherwise aware that technology being considered for inclusion in a standard is or

may be subject to an existing or pending patent or copyright) shall notify the Activity that the technology is patented or copyrighted or is expected to be patented and shall disclose to the Activity the subject matter of any relevant copyright or patent claims or intended claims and their relationship to the standard. Notification and disclosure shall be made as early as possible after the proposal is made.

2.2. Statement from Rights Holder

- 2.2.1. Prior to Activity Leadership action on a proposed ARINC standard that includes the use of patented technology or that requires the use of copyrighted subject matter, the Activity must receive from a putative rights holder either:
 - 2.2.1.1. a binding commitment that a license will be made available without compensation to any person to make, use, practice or sell the patented technology or, if applicable, to copy, publicly, distribute, transmit digitally, or adapt the copyrighted subject matter, for the purposes contemplated by the Standard; or
 - 2.2.1.2. a binding commitment to license the patented technology, or copyrighted subject matter, in form and substance acceptable to Activity Leadership, to all interested parties for the purposes contemplated by the Standard under reasonable terms and conditions that are demonstrably free of any unfair discrimination or limitation of access. The form of a commitment to license is attached as Annex 1.
- 2.2.2. In addition, the putative rights holder shall commit to notify ARINC IA in the event of a corporate change in control of the rights holder or assignment of the patented technology or copyrighted subject matter.
- 2.2.3. Any commitment under sections 2.2.1.1, and 2.2.1.2 shall be made expressly for the third party benefit of any party interested in a license for purposes contemplated by the Standard and shall be enforceable by any such party.

3. Notice (Advisory)

- 3.1. In the event an Activity adopts a Standard which may include patented technology or requires the use of copyrighted subject matter, the standard should include the following notice:
 - 3.1.1. Compliance with this Standard may require the making, using or selling of a patented or patentable invention or the reproduction, distribution, transmission or adaptation of copyrighted subject matter that is claimed by a rights holder. Parties involved with designing, building or using equipment that is to meet this standard are advised that it may be necessary to license the associated technologies through: (Include the name, address, and other contact information of any rights holder of which the Activity has been notified)
 - 3.1.2. The Activity takes no position on the validity or scope of any patent or copyright claims relating to this standard. A statement from the claimant of rights is on file with the Activity Secretariat and may be consulted upon request.

4. Notice (Disclaimer)

4.1. The following notice should appear in all ARINC Standards:

4.1.1. This document is based on material submitted by various participants during the drafting process. Neither the Activity (Note: Specify AEEC, AMC, or FSEMC as appropriate) nor ARINC has made any determination whether these materials could be subject to valid claims of patent, copyright or other proprietary rights by third parties, and no representation or warranty, expressed or implied is made in this regard. Any use of or reliance on this document shall constitute an acceptance thereof “as is” and be subject to this disclaimer.

5. Activity Secretariat Not Responsible for Identifying Patents or Conducting Inquiries

5.1. The Activity Secretariat shall not be responsible for identifying patents or copyrights for which a license may be required to meet an ARINC Standard or for conducting inquiries into the legal validity or scope of those patents and copyrights brought to its attention.

6. Policy Availability

6.1. This policy is available on the ARINC IA web site at URL: <http://www.aviation-ia.com> or by mail.

Annex 1
COMMITMENT TO LICENSE

_____, the (“Proponent”) wishes to have _____ the “Activity” (Note: specify AEEC, AMC, or FSEMC, as appropriate) incorporate into, or refer to in INSERT DOCUMENT NAME an Activity-published specification, standard or report (“the Standard”), technology that is or may in the future be covered or otherwise subject to a patent or copyright owned or subject to license by Proponent (said technology required for compliance with or implementation of the Standard being defined herein as the “Relevant Technology”). In consideration of Activity allowing continued consideration of said technology for incorporation into the Standard, and recognizing that ARINC, Activity, its members and other potential users of the Relevant Technology intend to rely on this Commitment To License, Proponent unconditionally agrees as follows:

1. Proponent agrees that, if the Relevant Technology is required for compliance with or implementation of the Standard, it shall license (a) the making, using and selling of all of the Relevant Technology that is covered by or otherwise subject to any patent and the ability to sublicense same to intermediaries and end users, and (b) the rights to copy, publicly distribute, transmit digitally and adapt all of the Relevant Technology that is covered by otherwise subject to any copyright, to all interested parties who wish to use said technology in connection with the Standard, under reasonable terms and conditions that are demonstrably free of any unfair discrimination or limitation of access.
2. Proponent agrees that in determining whether terms and conditions are “reasonable”, consideration shall be given to the benefits to Proponent resulting from inclusion of the technology in the Standard.
3. Proponent acknowledges (i) that this Commitment To License is binding upon it and its successors and assigns, and has been provided to “Activity” for the third party benefit of all who wish to obtain a license to the Relevant Technology for use in connection with the Standard or is otherwise necessary, as a practical matter for, compliance with the Standard, and (ii) that the parties contemplate that if the Relevant Technology is incorporated or otherwise referred to in the Standard, this Commitment To License shall be enforceable by each such third party.
4. Proponent’s submission of this Commitment To License does not in any way obligate “Activity” to include or otherwise refer to the Relevant Technology in any ARINC Standard (including, without limitation, the Standard), and Activity may decide for any reason not to do so. ARINC, Activity, its members, secretariat or standards development participants shall have no obligation to pay any royalties or similar charges for use of the Relevant Technology in the creation or publication of the Standard.
5. By signing below, Proponent agrees to submit any dispute concerning whether it is complying with this Commitment To License to binding third party arbitration under the rules of the American Arbitration Association in Washington, D.C.

Company Name (Proponent): _____

Signature/Date: _____

Name: _____

Title: _____

Attachment 2

Policy on Publications and Copyrights

March 25, 2008

1. Introduction

- 1.1. The AEEC, AMC, and FSEMC are aviation industry activities organized by ARINC. ARINC Industry Activities (IA) provides the secretariat for AEEC, AMC, or FSEMC, any one of which is hereinafter referred to as the “Activity.”
- 1.2. The IA secretariat may collect and disseminate the technical materials submitted in connection with the Standard setting process. The IA secretariat may make information submitted to the Activity broadly available to persons interested in the processes and results of the Activity (“Activity Participants”).
- 1.3. In addition, the IA secretariat performs a drafting function, preparing meeting reports and participating in the preparation of ARINC Standards and the precursors to ARINC Standards, including, by way of example, project papers, draft standards, specifications, and supplements (collectively “Standards Precursors”).

2. Technical Materials and Development of ARINC Standards

- 2.1. There are two general classes of technical materials that may be submitted by Activity Participants.
 - 2.1.1. Preexisting materials submitted to ARINC IA during the development of technical Standards or in industry meetings (including face-to-face and electronic meetings). The IA secretariat would normally expect to include such materials in meeting reports and Standards Precursors prepared by the IA secretariat and in ARINC Standards approved by the Activity, as appropriate.
 - 2.1.2. Contributions and materials made or developed by Activity Participants (including ARINC IA) as part of the standards setting process itself (e.g., meetings). This may include written materials as well as all other kinds of content including verbal, visual, or electronic materials. Such materials developed during the Standard setting process also may be included in meeting reports, ARINC Standards and Standards Precursors.
- 2.2. The IA secretariat expects to distribute or electronically post meeting reports and Standards Precursors and to be the print and electronic publisher of ARINC Standards. Moreover, some of ARINC IA’s costs of supporting its industry activities functions may be defrayed by its publication, sale and licensing of the approved ARINC Standards, Standards Precursors, and other technical materials related to the Activity.

3. ARINC IA Secretariat and Rights in Technical Materials

- 3.1. In support of the foregoing, industry participants must provide ARINC IA the necessary rights in the materials to collect and disseminate both classes of technical materials, as well as meeting reports, ARINC Standards and Standards Precursors.

- 3.2. By participating in the Activity or making a contribution to same, each Activity Participant shall be deemed to have agreed to the provisions of this policy. Participants who do not wish to have their materials subject to this policy should refrain from participating in meetings supported by ARINC IA and from submitting materials or other content to Activity-related meetings or to the IA secretariat.

4. Preexisting Materials Submitted During the Development of Technical Standards or in Industry Meetings

- 4.1. Activity Participants shall make all material presented as part of the Activity available to ARINC IA to provide to other Activity Participants.
- 4.2. By providing material (whether orally, visually, or in writing, in the form of text, tables, drawings or other means of information transference) to the IA secretariat or to any other participant in conjunction with development of ARINC Standards or in industry meetings related to an Activity supported by ARINC IA, including meetings conducted without ARINC IA staff participation, the providing party grants ARINC IA, the nonexclusive, paid-up, worldwide perpetual license:
 - 4.2.1. to use, copy, distribute and publish the material in any form and in any medium, for review, copying, use and modifications by Activity Participants, directly or indirectly, in the development of an ARINC Standard,
 - 4.2.2. to use, copy, distribute, publish, modify, and create derivative works from such material with respect to a meeting report, ARINC Standard or Standard Precursor (or amendments thereto),
 - 4.2.3. to allow another industry standards organization (e.g., RTCA or Eurocae) to include portions of a final ARINC Standard (which may include or encompass such material) in standards precursors or standards published by such organizations and
 - 4.2.4. to designate a third party as its agent to distribute ARINC Standards in printed, electronic or optical form.
- 4.3. In addition, ARINC IA shall have the right to sublicense others to exercise the foregoing rights. By way of example, but not by way of limitation, ARINC IA may, for the purposes described above, (i) copy and distribute any documents, correspondence or other materials (electronic, written or otherwise), including attachments thereto obtained (directly or indirectly) by ARINC IA in association with ARINC Standard development, (ii) use, copy, modify, revise, publish, or create the derivative works from such materials as part of creating an ARINC Standard.
- 4.4. Any legends or statements purporting to limit the rights granted above or asserting confidentiality or other proprietary rights inconsistent with the rights granted above shall be null and void and without effect and ARINC specifically disavows any duty to provide confidential or proprietary treatment to such materials.

5. Contributions and Materials Made or Developed as Part of the Standards Development Process

- 5.1. It is understood and agreed that ARINC IA employees normally will contribute copyrightable material to ARINC Standards approved by the Activity and to meeting reports and Standards Precursors.
- 5.2. ARINC IA shall be considered a joint author of such ARINC Standards, meeting reports and Standards Precursors, shall be the owner or, at a minimum, a joint owner of the copyright in such ARINC Standards, meeting reports and Standards Precursors, shall be entitled to claim copyright in same, and, acting on its own behalf and for its sole recovery, shall be entitled to take appropriate action, including bringing an infringement action, to prevent infringement of same.
- 5.3. ARINC IA shall have no obligation to account to any other copyright holders or joint owners for any revenue or other benefits received from the sale or distribution of ARINC Standards, Standard Precursors and meeting reports.

6. Responsibilities of Activity Participants

- 6.1. Activity Participants are expected to be aware of this policy regarding publications and copyrights.
- 6.2. By participating in any Activity, including submitting material in relation to the meeting or any industry activity related thereto, you or your representative will be deemed to confirm that you understand and accept the ARINC IA policies and agree to comply with same on behalf of yourself and any company or other organization in whose behalf you are acting.
 - 6.2.1. The failure of any party to sign an Attendance Sheet for an Activity meeting or signing with a purported reservation of rights will not be treated as an exception to this policy. Rather, all parties participating in an ARINC IA activity are deemed to be aware of this policy, and by their participation alone, whether via meeting attendance or otherwise, shall be deemed to have accepted this policy as if they had signed an acknowledgement and agreement personally.
 - 6.2.2. All attendees or participants who are acting on your behalf (whether as an employee, consultant or otherwise) are authorized to commit to the foregoing on your behalf via their participation.
 - 6.2.3. Participation in a meeting (including participation via conference telephone or via web cast or similar remote means) shall be deemed to authorize the meeting secretary to sign the attendance sheet on behalf of the participant with the same effect as if such participant had signed it manually.

7. Policy Availability

- 7.1. This policy is available on the ARINC IA web site at URL: <http://www.aviation-ia.com> or by mail.

Attachment 3

Use of Excerpts or References to ARINC Standards in Aviation Standards Developed by Other Organizations

1. March 25, 2008 Introduction

- 1.1. The AEEC, AMC, and FSEMC are aviation industry activities organized by ARINC. ARINC Industry Activities (IA) provides the secretariat for AEEC, AMC, or FSEMC, any one of which is hereinafter referred to as the “Activity.”
- 1.2. The Activity develops ARINC Standards through an open industry process. The standards represent the product of industry consensus. The primary objectives of the technical standards developed by the Activity are to improve cost effectiveness and reduce life-cycle costs.
- 1.3. From time to time, other aviation industry standards bodies have requested the right to extract material from an ARINC Standard for inclusion in aviation technical standards being developed by that organization. AEEC, AMC, FSEMC, and ARINC IA permit extractions from and references to ARINC Standards when it is in the best interest of the aviation community and under appropriate circumstances.
- 1.4. In particular, but not exclusively, this policy focuses on use of or reference to ARINC Standards materials in ICAO Standards and Recommended Practices (SARPs), and RTCA and EUROCAE Minimum Operational Performance Standards (MOPS) or Minimum Aviation System Performance Standards (MASPS).
 - 1.4.1. Aviation organizations develop standards using procedures that differ somewhat from the procedures used by AEEC, AMC, or FSEMC. Furthermore, SARPs, MOPS, and MASPS and other aviation standards may have more of a focus on safety and regulatory concerns that may not be addressed in detail during the development of ARINC Standards.
 - 1.4.2. The intent of this policy is allow the use of ARINC Standard material but to require the organization making use of same to conduct an independent technical review of the material extracted from an ARINC Standard prior to such material being incorporated into a standard being developed by such organization. This independent technical review should include a review of safety and regulatory concerns, as necessary.

2. Extraction of Technical Material from ARINC Standards for Inclusion in Other Industry Standards

- 2.1. To facilitate the efficient development of standards by ICAO, RTCA, EUROCAE and similar standards organizations, ARINC IA will consider requests to provide such organizations the appropriate material in ARINC Standards for use in the development of other industry standard documents.
 - 2.1.1. In reviewing any such request, ARINC IA expects to confirm that the incorporating organization has accepted responsibility for conducting its own

independent technical review of the extracted material, including safety and other regulatory considerations.

2.1.2. If a request is granted, ARINC IA will provide the extract as a technical input to the organization. ARINC IA would ordinarily provide the input without proprietary claim, and, if necessary, would assign or waive its copyright to facilitate publication provided that the other organization confirms that it takes responsibility for review in light of safety or other considerations.

2.1.3. The material may be provided with a disclaimer that AEEC, AMC, FSEMC, and ARINC and take no responsibility for safety and regulatory matters implicated by the extracts.

2.2. The request to ARINC IA should be in writing and designate the specific extract needed. The letter of request should be signed by an authorized representative and be directed to ARINC Industry Activities, 2551 Riva Road, Annapolis, Maryland 21401 USA.

3. Referencing ARINC Standard Documents by Name or Number In Other Industry Standards

3.1. Industry Standards organizations may refer to ARINC Standards by name or number in their document lists, pamphlets, brochures or other publications in the interest of promoting interoperability in the manner described below.

3.1.1. ARINC Standards are voluntary technical standards and it would be inappropriate for compliance with the ARINC Standards to be made mandatory by certification or regulatory documents that may reference them.

3.1.2. Accordingly, references stating that the AEEC referenced standards “shall or will” be used or complied with are contrary to this policy.

3.1.3. Furthermore, such references to ARINC Standards must recognize the fact that ARINC Standards primarily address cost effectiveness and life cycle costs and such references shall not suggest or imply that the adoption of such ARINC Standards explicitly considered safety or regulatory requirements.

3.2. Citations of ARINC Standards in other standards or regulatory documents should contain the following notice:

3.2.1. NOTICE: ARINC permits other standard setting organizations to cite or refer to ARINC standards documents by name or number so long as there is no inference, suggestion or impression that when the ARINC Standard was adopted that safety or regulatory issues were explicitly considered.

4. Updates to ARINC Standards and Relationship to Standards Developed by Other Organization

4.1. Where ARINC IA has authorized other organizations to make reference to or use extracts of ARINC Standards, ARINC IA will endeavor to retain in its files a list of acknowledged references which notes such authorization.

4.2. However, responsibility shall rest with the receiving organization to monitor subsequent Supplements to the relevant ARINC Standard to determine if the standard itself or the

extracted language there from has been modified and make its own determination whether any change in its standard should be made to reflect such changes.

- 4.3. ARINC IA will respond to inquiries from receiving organizations and will help them review changes made to ARINC Standards from which material was extracted.

5. ARINC IA Technical Assistance

- 5.1. ARINC IA will endeavor to respond in a timely manner to requests from ICAO, RTCA, EUROCAE, and other aviation industry organizations. ARINC IA will work with the AEEC, AMC, and FSEMC and aviation community to prepare suitable technical input, extracting appropriate material from ARINC Standards.

6. Policy Availability

- 6.1. This policy is available on the ARINC IA web site at URL: <http://www.aviation-ia.com> or by mail.

Attachment 4

Policy on Use of Key Words in ARINC Standards

March 25, 2008

1. Introduction

- 1.1. At one time the groups preparing ARINC Standards were instructed to avoid the use of the word “shall” in favor of the word “should.” The purpose of this guidance was to avoid implying a ‘regulatory’ or mandatory connotation in ARINC-published voluntary Standards. This prior guidance led to some confusion.
- 1.2. This new policy is being established as set forth below in order to eliminate that confusion.

2. Key Words or Imperatives in ARINC Standards

- 2.1. Any previous informal policy on avoiding the word “shall” in ARINC Standards is hereby rescinded.
- 2.2. In ARINC Standards certain key words may be used to signify what is required to conform with the specification. This policy defines these key words as they should be used and interpreted in ARINC Standards. These key words may be capitalized. ARINC Standards are voluntary standards in all cases and word use does not change that status.
- 2.3. The following sentence should be included near the beginning of any new ARINC Standard adopted after June 1, 2007.
 - 2.3.1. The key words "MUST", "MUST NOT," "REQUIRED," "SHALL," "SHALL NOT," "SHOULD," "SHOULD NOT," "MANDATORY," "RECOMMENDED," "MAY," and "OPTIONAL" in this document are to be interpreted as described in the Policy on Key Words in ARINC Standards. The use of any of these terms is not intended to affect the status of this document as a voluntary standard but rather to clarify which features are necessary to claim compliance to the standard.

3. Definitions of Keywords or Imperatives

- 3.1. MUST - This word, or the terms "REQUIRED," "SHALL” or “MANDATORY,” means that the definition is an absolute requirement to claim compliance with the specification.
- 3.2. MUST NOT - This phrase, or the phrase "SHALL NOT,” means that the definition is an absolute prohibition to claim compliance with the specification.
- 3.3. SHOULD - This word, or the adjective "RECOMMENDED,” means that there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course.
- 3.4. SHOULD NOT - This phrase, or the phrase "NOT RECOMMENDED," means that there may exist valid reasons in particular circumstances when the particular behavior is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behavior described with this label.

3.5. MAY - This word, or the adjective "OPTIONAL," means that an item is truly optional. One vendor may choose to include the item because a particular marketplace requires it or because the vendor feels that it enhances the product while another vendor may omit the same item. An implementation which does not include a particular option MUST be prepared to interoperate with another implementation which does include the option. In the same vein an implementation which does include a particular option MUST be prepared to interoperate with another implementation which does not include the option (except, of course, for the feature the option provides.)

4. Guidance in the use of these Key Word or Imperatives

4.1. Imperatives of the type defined in this policy must be used with care. In particular, they MUST only be used where it is actually required for interoperation or to limit behavior which has potential for causing harm (e.g., limiting retransmissions) or impairing functionality or interoperability. For example, they must not be used to impose a particular method on implementers where the method is not required for interoperability.

5. Guidance for existing ARINC Standards

5.1. No existing ARINC Standard need be changed. If a supplement is developed, it should be written in the same style and with the same terminology usage as the original ARINC Standard. Exceptions to this guidance may be made after review by the staff and with the concurrence of the Chairman.

6. Policy Availability

6.1. This policy is available on the ARINC IA web site at URL: <http://www.aviation-ia.com> or by mail.