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FEDERAL COMMUNICATIONS COMMISSION
Office of Engineering and Technology
Electromagnetic Compatibility Division

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Re: Aeronautical Radio, Inc.
Call Sign WC2XPE
File No. 0029-EX-ML-2004 ("Modification Application") and
File No. 0130-EX-RR-2004 ("Renewal Application")

The Boeing Company
"Informal Objection" filed September 13, 2004
to ARINC Modification Application
"Informal Objection" filed October 1, 2004
to ARINC Renewal Application

Rockwell Collins, Inc.
"Informal Objection" filed September 13, 2004
to ARINC Modification Application

Dear Counsel:

By this letter we dispose of (1) the above-referenced applications of Aeronautical Radio, Inc. ("ARINC"), File Nos. 0029-EX-ML-2004 (granted June 16, 2004) and 0130-EX-RR-2004 (pending), for modification and renewal, respectively, of the Experimental Radio Service ("ERS") license for Station WC2XPE; (2) the above-referenced informal objections to the ARINC modification application that were filed on September 13, 2004 by The Boeing Company ("Boeing") and Rockwell Collins, Inc. ("Rockwell"); (3) the above-referenced informal objection filed on October 1, 2004 by Boeing and directed to the ARINC

renewal application; and (4) the responsive pleadings filed with respect to the informal objections.¹ Based on our review, and for the reasons explained below, we find that the pleadings do not raise a substantial and material question of fact as to ARINC's qualifications to remain an ERS licensee; we dismiss the informal objections in part and deny them in part; and we grant the ARINC renewal application with conditions.

ARINC's original license for Station WC2XPE authorized it to install radios in up to 15 aircraft in order to test the technical feasibility of its experimental air-ground telecommunications system. The license for WC2XPE was due to expire on November 4, 2004, but ARINC timely filed the above-referenced renewal application, which is now before us for consideration. Under our rules, the existing authorization remains in effect under its current terms until such time as the Commission acts on the renewal application (*See* 47 C.F.R. § 1.62).

In its above-referenced application for modification of its experimental license, ARINC sought authorization to install radios in up to 120 aircraft and to charge subscribers service fees in order to conduct a limited market study of its SKYLink broadband system. We granted the modification license on June 16, 2004.

In their informal objections, Rockwell and Boeing request that we rescind grant of ARINC's modified authorization and authorize ARINC to operate communications facilities aboard no more than its originally-authorized number of 15 aircraft.² Boeing "does not object to ARINC . . . charging [subscribers] for service in the context of such a [limited market] study."³ In its responsive pleadings, ARINC has clarified that it no longer seeks authority to operate facilities aboard more than 15 aircraft and requests that it be granted renewal authority for this number.⁴ Therefore, we dismiss the informal objections as moot with regard to this particular issue, and we will limit ARINC's renewal of limited market study authority to a maximum of fifteen aircraft.

Rockwell also claims that ARINC's own public announcements suggest that it may have commenced commercial service under its experimental authority which clearly violates the Commission's Rules.⁵

¹ On October 12, 2004, ARINC filed a "Consolidated Opposition" to the informal objections and, on October 19, Boeing filed a "Consolidated Reply" to the opposition. On October 25, 2004, ARINC filed a "Surreply to Consolidated Reply." Previously, we had informed the parties that we would, for good cause shown, grant ARINC's Request, filed September 20, 2004, for Extension of Time to October 12, 2004 for filing its Consolidated Opposition.

² *See* Rockwell Informal Objection at 6 (requesting that the Commission "rescind the modification as granted to ARINC in June 2004 and order . . . ARINC to comply with the terms of its original" license); Boeing Informal Objection to Modification Application at 8 ("Commission should . . . limit ARINC's market study to 15 total aircraft"); Boeing Informal Objection to Renewal Application at 1 ("Commission should renew ARINC's limited market study authority for no more than 15 aircraft").

³ Boeing Informal Objection to Modification Application at 4.

⁴ ARINC Consolidated Opposition at 3 ("ARINC has never used more than fifteen aircraft . . . [n]or does it plan to. . . There is therefore no controversy regarding the renewal of ARINC's experimental license to continue to conduct its limited market study on up to fifteen aircraft."); ARINC Surreply at 1 (ARINC's renewal application requests authority for testing SKYLinkSM service on up to fifteen aircraft). *See also* ARINC Renewal Application, Narrative Statement at 2 ("Because executive jet aircraft typically fly only two or three days a week, and some may be out of CONUS for extended periods, ARINC tests its SKYLink service on up to fifteen aircraft. This permits ARINC to collect data from one to seven simultaneous flights.").

⁵ Rockwell Informal Objection at 3, *citing* ARINC Press Release, *ARINC's SKYLink Broadband System to Take Flight with Gulfstream Aerospace* (Sept. 11, 2002) (available at www.arinc.com/news/2002/09-11-02.html)

Likewise, Boeing asserts that a review of ARINC's press releases and related news items over the past two years suggests that ARINC may have already launched the SKYLinkSM service commercially in a manner that is inconsistent with the Commission's Rules and the conditions of its experimental license. It contends that it is difficult to reconcile ARINC's public announcements regarding SKYLinkSM equipment sales and launch of service in the United States with the requirements to maintain ownership of SKYLinkSM equipment and to explicitly notify customers that the service is experimental and may be cancelled at any time.⁶

In its Consolidated Opposition, ARINC states that it has conducted an internal investigation of this matter and has determined that "Gulfstream, an early partner in the deployment of the SKYLinkSM system, advanced certain monies to ARINC as a co-developer of the system. In connection with those advances, ARINC provided Gulfstream with two AESs [aeronautical earth stations]. The title to the two units was mistakenly transferred to Gulfstream in early 2004. . . . ARINC has since rescinded the title transfers and refunded all monies related thereto to Gulfstream."⁷ ARINC adds that it regrets its error, which it corrected as soon as possible after its discovery, it currently has and is maintaining full title to and ownership of the three SKYLinkSM units that are being used in the limited market study, and its customers, which are aircraft owners, have all been informed that the service is for experimental purposes only and can be cancelled at any time.⁸ Finally, ARINC avers that it has fully discussed this issue with its engineering and marketing staffs to assure that this mistake will not be repeated and that it will continue to maintain ownership of all units that it has deployed or will deploy and will continue to inform all future customers that the service is for experimental purposes only and can be cancelled at any time.⁹ In its Reply, Boeing asserts that in light of numerous public announcement by ARINC over the past several years that suggest that ARINC has inappropriately commenced commercial operations under its experimental authority, it is not clear that ARINC's SKYLinkSM service [is] fully consistent with the Commission's rules and the terms of ARINC's experimental license.¹⁰ In its Surreply, ARINC avers that it is not currently charging participants in its limited market study, that only three AES units exist, that its market puffery is unfortunate and will not be repeated, and that mistaken SKYLinkSM press releases cannot themselves transform three experimental units into commercial operations.¹¹

After reviewing the pleadings, we find that there is no substantial and material question of fact warranting further investigation as to whether ARINC violated the conditions of its limited market study authorization. First, we find that the Informal Objections are speculative on their face in that they do not allege any factual basis for denying ARINC's renewal application or for further limiting the scope of the renewal authorization. Instead, they merely assert that certain limited excerpts from various press releases "*suggest*" that ARINC "*may*" have commenced commercial operations prematurely. Second, we find that ARINC's explanation -- that, upon realizing that it erred in selling two units to Gulfstream, it immediately rescinded the sale and took additional corrective actions, that it has not yet begun to charge for service, and that it is taking care to alert potential customers that its service is experimental and can be

(announcing that "Gulfstream . . . has contracted to purchase ARINC's SKYLinkSM in-flight broadband system for installation on Gulfstream corporate jets").

⁶ Boeing Informal Objection to Modification Application at 5.

⁷ ARINC Consolidated Opposition at 5.

⁸ *Id.* at 5 & nn.15-16.

⁹ *Id.* at 5-6.

¹⁰ Boeing Reply at 3.

¹¹ ARINC Surreply at 2.

canceled at any time -- is reasonable, appropriate, and provides sufficient assurance that the public will not be misled as to the nature of the service. Finally, we have reviewed the limited excerpts relied upon by the objectors in the context of the complete wording of some twelve press releases that were released in the period running from August 13, 2002 to September 21, 2004 (ten of these press releases were released by ARINC, one by Gulfstream, and one by the National Business Aviation Association ("NBAA")).¹² Based on this review, we find that the evidentiary weight overwhelmingly establishes at most a minor error on the part of ARINC that did not result in any confusion or other harm to Gulfstream, other customers and potential customers, and the public.¹³ ARINC promptly and voluntarily investigated the situation and took timely corrective actions, including the return of monies to Gulfstream and instructing its marketing and engineering staffs to assure that similar errors will not recur. In sum, we do not find that any further action is warranted with respect to this matter.

ACCORDINGLY, the Informal Objections of Rockwell and Boeing ARE HEREBY DISMISSED IN PART AND DENIED IN PART, and the application of ARINC for renewal of ERS license for Station WC2XPE IS GRANTED with the condition that its market study authorization is limited to a maximum of fifteen aircraft. ARINC's authorization will be mailed to it under separate cover.

Sincerely,



Ira Keltz
Chief,
Electromagnetic Compatibility Division

¹² See Appendix attached hereto for a list of these press releases, including references to all excerpts that appear relevant.

¹³ The press releases, for the predominant part, properly refer to ARINC's SKYLink system as "in development," undergoing "tests," or as being "experimental." Its reference to Gulfstream as its "launch customer" is not inconsistent with ARINC's limited market study authorization.

APPENDIX

1. ARINC, "ARINC Tests Its Ku-Band Receiver for In-Flight Satellite Broadband," www.arinc.com/news/2002/08-13-02.html (Dec. 13, 2002) (ARINC "has *successfully tested* a true broadband communications receiver for aircraft," "performed this *Phase I test* to validate the pointing accuracy of [its] dish antenna for a business jet and to demonstrate the high data rates that are attainable," "*is marketing its system as SkyLinkSM broadband*, targeted at manufacturers of business jets and other general aviation aircraft whose customers want high-speed in-flight connectivity to their business networks and the Internet," and states "*transmission tests are scheduled for Phase II of SkyLink evaluations later this year [2002]. . . . ARINC solved the return-path problem last year . . . and has received FCC experimental approval* to proceed with development and testing of the SkyLink system.") (emphases added).
2. ARINC, "ARINC and SES AMERICOM in Agreement to Launch Broadband for Executive Aircraft in 2003," www.arinc.com/news/2002/09-10-02_b.html (Sept. 10, 2002)) (ARINC "has entered into a *joint development agreement* with SES AMERICOM *to facilitate the launch* of ARINC's SkyLinkSM broadband communications service for executive aircraft. The agreement covers *final development* of . . . SkyLink"; "*SkyLink is being designed and fully customized* to meet the in-flight broadband connectivity and high-speed data rates expected by users of larger corporate jets. *When fully deployed, SkyLink will be capable of delivering data rates of 8 to 10 Mbps*"; "*ARINC . . . received FCC approval to proceed with testing. Flight tests are scheduled for late 2002, with expected launch of the service in the second quarter of 2003.*") (emphases added).
3. ARINC, "ARINC's SKYLink Broadband System to Take Flight with Gulfstream Aerospace," www.arinc.com/news/2002/09-11-02.html (Sept. 11, 2002) (ARINC "today announced that Gulfstream Aerospace Corporation *has contracted to purchase* ARINC SkyLinkSM in-flight broadband system for installation on Gulfstream corporate jets. The commitment makes Gulfstream the *launch customer* for SKYLink . . . service"; "*Gulfstream . . . will offer* the SKYLink system as an option on new jet purchases and as a retrofit for existing customers. *Rollout of the first operational SKYLink service is anticipated in North America during the second quarter of 2003.*") (emphases added).
4. NBAA Convention News, "Gulfstream orders Arinc's broadband," www.ainonline.com/Publications/nbaa/NBAA_02/nbaad3_02_gulfstreampg46.html (Sept. 12, 2002) ("*Gulfstream yesterday ordered 40 of Arinc's new SkyLink inflight broadband satellite communications systems* for installation on its jets. *It is the launch order for the system*"; "SkyLink is now achieving connection rates of around 540 kilobits per second. *By the time the service goes fully operational during the second quarter of next year [2003]* it is expected to deliver data rates as high as 8 to 10 megabits per second. [ARINC] sells monthly subscription packages along the lines of those in the cellphone market and these equate to a connection cost of around \$3.33 per minute.").
5. ARINC, "ARINC DirectSM Announces "One-Stop-Shopping" for Business Jet RVSM Certification," www.arinc.com/news/2002/12-31-02_b.html (Dec. 31, 2002) ("Nearly 6,000 business jet aircraft will need monitoring or modifications to take advantage of the new RVSM (reduced vertical separation minima) airspace that goes into effect over North America in 2005. ARINC . . . today announced it will offer all the services business jets need for RVSM certification – airframe modifications, flight monitoring, and the preparation of RVSM approval packages in the form of an aircraft manual. Complete RVSM support services are offered through ARINC DirectSM, a division of ARINC that provides comprehensive services to the business aviation market. . . . Expanding our RSVM services is part of

ARINC's new focus on service to the business aviation community. *ARINC Direct services include RSVM support, flight support systems, affordable data link, SKYLinkSM broadband communications, and aircraft modification and maintenance services.*")

6. ARINC, "ARINC Achieved Solid Growth, Launched New Businesses in 2002," www.arinc.com/news/2003/02-05-03.html (Feb. 5, 2003) ("ARINC entered the corporate aviation market in September 2002, announcing a package of communications, flight planning, and support services through ARINC DirectSM, a new division. *The company also introduced SKYLinkSM, an in-flight satellite broadband system targeted at the commercial airlines and the corporate jet market.*")

7. ARINC, "ARINC Launches New Broadband, Satellite Services Operation," www.arinc.com/news/2003/06-12-03.html (June 12, 2003) ("ARINC Incorporated today announced the creation of a new business unit to pursue global opportunities in providing aeronautical satellite voice, narrowband, and broadband data services for the commercial airline, government/military, and business aviation markets. ARINC Satellite Services combines the company's GLOBALink/Satellite operations, which provides global Inmarsat voice and data communications to airlines, government, and military customers, *with its SKYLink Ku-band satellite business, currently targeted at the large business jet market. ARINC will be launching the SKYLink service in the 4th quarter of 2003 with launch customer Gulfstream Aerospace Corporation.*")

8. ARINC, "SKYLinkSM by ARINC DirectSM Enters Production – First Satellite Broadband for Business Aircraft," www.arinc.com/news/2003/10-06b-03.html (Oct. 6, 2003) (ARINC "today announced that SKYLinkSM by ARINC DirectSM, the world's first satellite broadband data system for business aircraft, *is in production following the successful flight trials and final conformance testing. The company demonstrated its two-way broadband system this week at the 56th annual convention of the [NBAA].*"; "The first two production SKYLink units will be delivered to Gulfstream Aerospace in mid-October."; "We expect to complete our first customer installations later this month, and we'll launch full SKYLink service coverage of [CONUS] at that time."; "SKYLink Broadband Service and SKYLink hardware will be offered by manufacturers as a factory option on new aircraft. In addition, ARINC Direct will work with aircraft owners, manufacturers and completion centers to retrofit SKYLink on in service aircraft.")

9. Gulfstream, "Gulfstream to Begin Customer Evaluation of In-Flight High Speed, Broadband Multi-Link Service," www.gulfstream.com/news/releases/2003/100603_3.html (Oct. 6, 2003) (Gulfstream "is currently actively involved in a program to evaluate a new in-cabin high-speed, multi-link service. Gulfstream will select three to five customers with aircraft currently in-service to participate in this evaluation program.... Gulfstream customers selected to participate in this program will be the beneficiaries of introductory pricing for equipment and subsequent service."; "Gulfstream and ARINC . . . are working together to launch ARINC SKYLink, the company's newest satellite data link service, offering performance similar to the high-speed Internet connections and corporate networks found in modern offices."; "Gulfstream recently embarked on a development and evaluation program to ensure the SKYLink system provides operators of GV, GIV, GIV-SP, G300, G400, G500 and G550 business jets the broadband data performance as well as the same reliability they expect of their Gulfstream aircraft."; "Flight-testing of prototype hardware conducted over the past year confirms the system's performance. The service evaluation phase, which will begin next month when Gulfstream installs the four-component system on two customers' aircraft, will verify the system's reliability and compatibility with the Gulfstream business jet. Gulfstream will begin offering the high-speed, broadband data link as a retrofit and as a new-aircraft option in the first quarter of 2004."; "As a launch customer for the SKYLink service, Gulfstream will provide system installations for competing business jets, including Dassault and Bombardier aircraft.")

10. ARINC, "ARINC Captured Major Share of World Aviation SATCOM Market in 2003," www.arinc.com/news/2004/01-30-04.html (Jan. 30, 2004) (ARINC emerged in 2003 as the world's leading provider of aeronautical satellite communications for the aviation industry and carries the majority of the world's air operational messages over its global networks of VHF, HF DL, and Inmarsat Satellite stations. Total number of aircraft using ARINC's satellite services grew almost 20% in 2003. This reflected an expanded international marketing presence by ARINC as well as domestic growth from its new ARINC DirectSM unit which focuses on the business aircraft market. *In late 2003, ARINC demonstrated its SKYLinkSM broadband satellite technology for the commercial, corporate, and civil aviation markets. ARINC actively markets SKYLink through the one-year-old ARINC Direct business unit focused on business aviation.*).

11. ARINC, "ARINC and Telenor Introduce a Breakthrough: Cell Phone Service for Airline Passengers," www.arinc.com/news/2004/06-17-04.html (June 17, 2004) (ARINC and Telenor will soon market new technology, using GSM, to allow airline passengers to use personal mobile phones aboard commercial flights. The new technology initially will leverage classic Inmarsat SATCOM systems. *The system is also flexibly designed to accommodate evolving technologies such as the Inmarsat Swift/BGAN and Ku broadband systems such as ARINC's SKYLinkTM.*

12. ARINC, "ARINC Selects MiltopeTM Wireless Cabin Hub for Future SKYLinkSM Inflight Internet Service," www.arinc.com/news/2004/09-21e-04.html (Sept. 21, 2004) ("*After final performance tests earlier this month, ARINC . . . has chosen MiltopeTM wireless cabin technology for its prototype SKYLinkSM inflight broadband Internet service for airline passengers.*"; "*ARINC has developed SKYLink inflight broadband service for business aircraft under an FCC experimental license. The SKYLink Ku-band technology has great potential for use on commercial aircraft following development and regulatory approval.*"; "*A prototype SKYLink inflight wireless system using the Miltope technology will be demonstrated at the World Airline Entertainment Association 2004 convention, September 21-24 in Seattle, WA.*"; "*In recent tests, a prototype SKYLink satellite broadband system demonstrated sufficient bandwidth to deliver today's most-wanted passenger applications.*"; "*A major advantage of ARINC's SKYLink technology is its compact size. The prototype version for commercial aircraft weighs just 150 pounds, and offers a low aerodynamic profile for low drag and significant fuel savings versus other broadband solutions.*"; "*The prototype SKYLink design is smaller, cheaper, lighter and more capable than other solutions for commercial aircraft.*").