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Before the
Federal Communications Commission
Washington, D.C. 20554

In re:	)	
	)	
Application of In-Flight Phone Corp. for Pioneer's Preference to Operate a Live Audio News, Information, and Entertainment Service for Airline Passengers on the 901-902 MHz and 940-941 MHz Bands	)	ET Docket No. 92-100
	)	PP-_____

To: The Commission

APPLICATION FOR PIONEER'S PREFERENCE

by

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SUMMARY

In this application, In-Flight Phone Corp. ("In-Flight") requests issuance of a pioneer's preference in the award of licenses to operate in the proposed 900 MHz PCS service; In-Flight has spent more than $5 million to develop a live audio information and entertainment service for airline passengers using land-based transmitters operating in the 901-902 MHz and 940-941 MHz bands, and it has obtained an experimental license to provide this service. It is this service for which the present application seeks a preference.

Although the FCC set a June 1, 1992 filing deadline for preference requests for certain services within the proposed 900 MHz PCS service, In-Flight today has submitted a petition which asks the Commission to accept the present application and explains why it would be unlawful for the agency to reject it.

The present application demonstrates that In-Flight is entitled to a pioneer's preference for the development of the service referred to above for three reasons: (1) originating the service idea is itself innovative without regard to technological innovation because the service accommodates a large public demand for live audio news, sports, and entertainment in a huge airline passenger market, and this demand was unfilled until In-Flight created the idea; (2) In-Flight has improved the state-of-the-art in ground-to-air communications by developing special circuitry which mitigates the effects of multipath fading and by developing errorless, rate-buffered switch circuitry which provides seamless

handoff of programming transmissions as aircraft pass between ground stations; and (3) although another entity recently initiated a similar service using satellite transmission technology, it is more spectrum efficient and economical to use ground transmitters in providing this type of service, as In-Flight proposes.

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To: The Commission

APPLICATION FOR PIONEER'S PREFERENCE

In-Flight Phone Corp. ("In-Flight"), pursuant to Section 1.402 of the Commission's "pioneer's preference" rules, hereby submits this application for grant of a pioneer's preference in the award of licenses to operate in the new 900 MHz Personal Communications ("PCS") service which the FCC has proposed.[1/] Although the FCC set a June 1, 1992 filing deadline for preference requests for certain services within this proposed PCS service, In-Flight today has submitted a petition which explains why the agency may not lawfully decline to consider In-Flight's application.

BACKGROUND

In-Flight is the country's leading developer of communications services for airline passengers. The company holds a license to provide air-ground telephone and data service for U.S. airline

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[1/] See Notice of Proposed Rulemaking, GEN Dkt. No. 90-314 and ET Dkt. No. 90-100 (rel. August 14, 1992).

passengers, a communications market which the founders of In-Flight originated through their development and operation of the air-ground telephone network now owned by GTE Airfone.[2] Five months ago, In-Flight initiated air-ground telephone and data service on US Air flights using In-Flight's newly constructed nationwide, digital land-based ground network. More recently, American Airlines began testing In-Flight's telephone and data service, and earlier this month In-Flight signed a contract to provide this service on Continental Airlines' entire fleet of MD-80 aircraft.

About four months after the FCC adopted its pioneer's preference rules, In-Flight filed an application for an experimental license to supplement its existing telephone and data service by providing airline passengers with a live, multi-channel audio information and entertainment service.[3] At about the same time, In-Flight filed a petition for rulemaking proposing reallocation of these bands from the General Purpose Mobile Service to an airline audio service of the sort described in the experimental license application.[4] In-Flight stated in its petition that it intended to file an application for pioneer's preference at the appropriate time.[5] In-Flight sought authority, both in the experimental license application and the petition for

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[2] In-Flight's license was awarded on December 24, 1990, pursuant to FCC Rules governing the air-ground service. See 47 C.F.R. § 22.1100 et seq.

[3] The experimental license application and all subsequently filed documents connected with the application are located in FCC File No. 2234-EX-PL-91.

[4] Pet. for Rulemaking (filed Sept. 10, 1991).

[5] Id. at 1 n.2.

rulemaking, to provide the proposed service using land-based transmitters operating on a total of 500 kHz in the 901-902 MHz and 940-941 MHz bands but using only 81.3 kHz of spectrum in any particular geographic area.[6/]

The FCC granted In-Flight an experimental license on the terms it had sought, but the agency dismissed In-Flight's petition for rulemaking without prejudice so that In-Flight could seek informally to resolve a concern of NTIA that certain Navy radars might interfere with reception of the In-Flight service.[7/] While NTIA later notified the FCC that this issue had been resolved,[8/] In-Flight decided to delay refiling the petition for rulemaking until after it began providing service under its experimental license in order to help the Commission decide whether to reallocate the subject spectrum to the new service by giving the agency information about the progress of the experiment.

In addition to In-Flight's receipt of an experimental license to provide the subject service in the United States, the Canadian Department of Communications has granted CUE Network Corp. an experimental license to provide the same service to airline

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[6/] A few geographic areas may require two 81.3 kHz channels in order to provide diversity protection against multipath fading.

[7/] See letter from Thomas P. Stanley to Rodney L. Joyce (CN910178, Oct. 1, 1991).

[8/] See letter from Richard D. Parlow to Thomas P. Stanley (Jan. 17, 1992). This letter states that NTIA no longer is concerned that the Navy radars will interfere with reception of In-Flight's live airline audio programming service because In-Flight had agreed not to object if the FCC required In-Flight and all other licensees permanently to accept interference from the subject radars.

passengers in Canada using the same frequencies.[9] As shown below, In-Flight has spent several million dollars in the past 12 months on design and development of this new service and the equipment necessary to provide it. In-Flight and CUE plan to initiate their respective experimental services early next year.

ARGUMENT

I. In Awarding Licenses To Operate in the Proposed 900 MHz PCS Service, the Commission Should Grant In-Flight a Pioneer's Preference for Development of a Live Audio Programming Service for Airline Passengers

The FCC stated in establishing pioneer's preference regulations that it would define most of the objective criteria by which it would measure innovation as it considers individual applications. Nonetheless, the agency provided general guidance at that time by holding that a preference could be awarded either for originating an innovative communications service idea or for developing one or more innovative technologies useful in providing a particular service:

> "We are persuaded that both a new radio service and a new technology. . .[which] significantly improve[s] spectrum efficiency should be considered for a preference.[10] (emphasis added)

The agency expanded on this holding by stating that, although it intended to award such preferences to both service and technology

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[9] See Letter from Tom Jones, Chief of Authorization Spectrum Management, Operations Directorate, to Gordon E. Kaiser, Chairman of CUE Network Corp. (Oct. 6, 1992).

[10] Report and Order in GEN Dkt. No. 90-217, 6 FCC Rcd. 3488, 3492 (1991), recon. 7 FCC Rcd. 1808 (1992). As the Commission noted, an innovative service must propose a "different use of the spectrum than previously available." 6 FCC Rcd. at 3494.

innovators, it would award preferences only to those service or technology innovators who demonstrate (1) that they have made a "significant investment" as opposed to a modest investment[11/] and (2) that they have "brought out the capabilities or possibilities of the technology or service or [have] brought them to a more advanced or effective state".[12/]

For applicants who claim to qualify for a preference on the basis of technological innovation, the Commission provided additional guidance by illustrating the types of technological innovation that will qualify for preferences; i.e., innovation which "add[s] functionality" to a service, "yields efficiencies in spectrum use, speed or quality of information transfer", or "significantly reduce[s] costs to the public."[13/]

The FCC should award In-Flight a pioneer's preference because, as shown in subsection A below, the live audio programming service it has developed for airline passengers is itself an innovative service idea allowing "a different use of the spectrum than previously available." In-Flight also deserves a pioneer's preference because, as shown in Subsection B below, it has improved the state-of-the-art in ground-to-air communications by developing two innovative technologies that improve the "speed. . .[and] quality of information transfer". Finally, In-Flight should receive a preference because, as shown below in Subsection C, the

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11/ Id., 6 FCC Rcd. at 3500 n.10.

12/ Id., 6 FCC Rcd. at 3494.

13/ Id.

use of land-based transmitters rather than satellites to provide live audio service to aircraft yields "efficiencies in spectrum use", allows for "increases in the speed. . .[and] quality of information transfer", and "significantly reduces costs to the public".

A. In-Flight Deserves a Pioneer's Preference for Originating the Idea of Providing Airline Passengers with Live Audio Programming Because the Airline Passenger Market Is Large, There Is Substantial Demand for Such Live Programming, and There Was a Total Absence of Such Programming Before In-Flight Originated the Idea

As shown below, In-Flight deserves a licensing preference for originating the idea of providing airline passengers with a live audio information and entertainment service because the service accommodates a large public demand for such programming in a huge airline passenger market, and this demand was unfilled until In-Flight created the idea for a new communications service.[14/]

[14/] On-board audio tape systems, which have been used by airlines for many years to provide audio programming, plainly are no substitute for the live news, sports, and entertainment programming which In-Flight's proposed system will provide. From the passengers' perspective, tape delayed information programming obviously is an extremely poor substitute to the nine channels of live information programming which In-Flight's proposed service will offer. The In-Flight creation also is advantageous to airlines when compared to an on-board tape delivery system because a live service provided by a communications licensee gives airlines a new profit center. Whereas an on-board tape system constitutes a cash drain for airlines since they must purchase programming and purchase and maintain on-board mechanical tape equipment, airlines should make a profit with In-Flight's proposed service since In-Flight will be responsible for purchasing programming and maintaining all solid state equipment, and airlines will share in the revenues which In-Flight obtains from the sale of advertising inserts in the programs and the rental of headsets by passengers for special event programs.

1. Among All Significant Modes of Travel, Airlines Alone Were Incapable of Receiving Live News, Sports, and Entertainment Programming Until In-Flight Originated the Idea of Providing Such Programming

People who travel by almost any means other than aircraft have been able for many years to receive live audio programming. For example, whereas radios formerly were optional features in most automobiles, now they are a standard feature of nearly every automobile sold in the United States. Moreover, in 1990 alone consumers bought 21.7 million personal stereos, 28 million portable radios, and 29 million portable radio/tape combos in order to give them access to live programming while they travel (e.g., by foot, train, bus, etc.) or while they otherwise are away from a place where television and radio receivers are located permanently.[15/]

2. Prior to In-Flight's Innovation, Some 1.25 Million Airline Passengers Per Day Had No Access to Live Audio Information Despite Substantial Passenger Demand for Such Programming

It is remarkable that the marketplace has condoned for so long a complete absence of live audio programming for air travelers. In the first place, the airline passenger market is huge. On an average day, 1.25 million people fly in the United States on

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[15/] Consumer Electronics Group -- Electronic Industries Association, Statistics Dept. (Aug. 1991, by telephone). In addition to these audio appliances, 1.5 million battery powered televisions were purchased during 1990. Thompson Consumer Electronics, Inc., Indianapolis, Ind. Aug. 1991, by telephone).

commercial aircraft;[16] this is more people than live in all but the five largest U.S. cities.[17] Moreover, there is tremendous demand for the live news, sports, and information and entertainment programming that In-Flight's proposed service will provide. With regard to sports, for example, 100 million fans watch games on television;[18] during 1987, more than 75 million people watched at least one NFL game every week,[19] and during 1989 12.8 million persons listened to regular season NFL games on the radio while 3.1 million listened to post-season games.[20] News coverage also are of special interest to the public as demonstrated by the fact that the Weather Channel has 160,000 viewers at any particular time on average and up to five times that many viewers during times of unusual weather such as hurricanes or tornados.[21] Similarly, a

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16/ FAA Aviation Forecasts, Fiscal Years 1990-2001 at 32.

17/ Statistical Abstract of the United States 1990, Table 40.

18/ "The NFL and You 1990-1991", Nat. Football League 1990.

19/ Nielson Television Index. In fact, the NFL, Super Bowl is the most-watched and highest-rated television show each year. "The NFL and You 1990-1991", supra.

20/ Simmons Market Research Bureau, 1990. Professional baseball and basketball also enjoy broad public support. In 1989, 16 million adults listened to baseball on radio and 59 million watched it on television. Simmons Market Research 1990. Likewise, 17.4 million spectators attended NBA basketball games during the 1989-90 regular season for an average attendance of 15,690 persons per game. According to a 1989 Harris Poll, 44 percent of the American public has an interest in professional basketball. College athletic programs also draw large audience ratings. For example, during 1989 31 million adults watched post season college football games on television. Simmons Market Research, 1990.

21/ The Weather Channel, Office of Publ. Affairs, Atlanta, Ga (Aug. 1991 by telephone).

1990 study showed that 98 million Americans listen regularly to the news on radio while 137 million regularly watch news programming on television.[22] Further, Cable News Network ("CNN) had an average viewership of 391,000 households at any given moment of 1990,[23] and during January and February 1991 CNN viewership increased to 1.9 million homes due to coverage of the Persian Gulf War.[24]

3. It Was In-Flight, Rather than Any Other Party, Who Originated the Idea of Providing Live Audio Programming to Airline Passengers

In-Flight originated the idea of providing live audio programming to airline passengers despite the longstanding need for such programming in this particular mobile market. While USA TODAY Sky Radio ("Sky Radio"), on November 4, 1991, filed an application with the FCC for an experimental license to provide a live audio programming service to airlines via Ku-Band satellite, that application was submitted three months after In-Flight filed its petition for rulemaking and application for experimental license to provide this service via land-based transmitters. Moreover, it was In-Flight which gave Sky Radio's owners the idea of providing this service. In early 1990 -- more than a year before Sky Radio filed its experimental application, In-Flight informed Gannett Corp., the

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[22] Times-Mirror Center for the People and the Press, "The American Media -- Who Reads, Who Watches, Who Cares", July 1990.

[23] Cable News Network, Office of Publ. Relations, Atlanta, Ga. (Aug. 1991, by telephone).

[24] Id. Other news events such as the San Francisco Earth Quake or the Bombing of Lybia caused CNN viewership to increase to over 1 million homes on average at any given moment during the day. Id.

owner of Sky Radio's primary investor, of In-Flight's plan to provide this service and proposed that the two entities cooperate in the development and provision of the service. Although lengthy negotiations ended without producing a cooperative business venture, Sky Radio began almost immediately to develop a service of its own, and it hired one of In-Flight's engineers to help design the Ku-Band satellite service for which Sky Radio later filed a license application.[25/]

Moreover, although Claircom Communications Group, L.P. recently filed an application with the FCC for an experimental license to provide a similar service using land-based transmitters operating in the 901-902 MHz and 940-941 MHz bands, it is plain that Claircom has no claim to being an innovator for this service. In the first place, the Claircom application was filed seven months after the date In-Flight filed its experimental application and nearly two months after issuance of In-Flight's experimental license.[26/] Even more revealing is the fact that substantial portions of Claircom's application are plagiarized from In-Flight's earlier application and petition for rulemaking; a real innovator

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[25/] In addition, in obtaining an FCC license to provide its service, Sky Radio sought and obtained a waiver of Section 2.106 of the FCC's rules based on precedent which In-Flight had helped establish. Section 2.106 bars the use of Ku-Band satellite receivers on board aircraft by prohibiting use of Ku-Band satellites to provide "aeronautical mobile" service, but in July 1990 the FCC waived this provision in order to permit use of such receivers for the provision of data services to In-Flight's airline customers. See FCC File No. S-0175-EX-90; Call Sign KA2XPW.

[26/] See FCC File No. 3071-EX-PL-90 (dated April 15, 1992).

would not have found it necessary to take this type of shortcut in seeking an experimental license.

B. Due to Significant Investment, In-Flight Has Developed a Terrestrial-Based System Which Provides Live Audio Programming to Airline Passengers with Higher Signal Quality than the Present State-of-the-Art in Ground-to-Air Transmission Permits

In addition to qualifying for a pioneer's preference as the entity who originated the idea of providing live audio programming to the only large mobile market in this country lacking access to such programming, In-Flight also qualifies for a preference because it has made a "significant investment"[27/] totalling more than $5 million within the last year to design and develop a terrestrial system which will provide signal quality that exceeds the existing state-of-the-art in ground-to-aircraft communications in two ways. Each is described below.

First, under contract to In-Flight, Harris Corporation engineers have improved substantially the "quality of information transfer"[28/] in ground-to-aircraft audio communications by developing special circuitry which mitigates the effects of annoying multipath interference. Because multipath interference often produces signal fading in ground-to-air transmissions, In-Flight and Harris conducted extensive aircraft flight tests this past spring in order to test the severity of multipath fading in the UHF band. After flight tests verified that this problem was

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27/ See n.11, supra.

28/ See n.13, supra.

serious and provided data defining the problem's characteristics, Harris developed a circuit for installation in each airborne receiver which mitigates interference from this source. The circuit employs an innovative technique called "dual diversity combining" which uses a combination of both frequency diversity and spatial diversity to combat multipath fading; by comparing signals transmitted from two different transmit sites or from two different frequencies at the same site (using redundant transmissions in the 901-902 MHz and the 940-941 MHz bands), the circuit automatically aligns the signals in time and dynamically selects the better signal.

Second, In-Flight has improved the "quality of information transfer"[29/] by developing errorless, rate-buffered switch circuitry which provides seamless handover as aircraft pass from one ground station to the next. Due to their high speed of travel, aircraft pass from one ground station to another very quickly. In order to avoid gaps in the audio as a receiver on board an aircraft switches from one ground site to another, In-Flight commissioned Harris to develop special circuitry to ensure errorless and seamless handover of the signal between ground sites. The Harris airborne radio simultaneously receives from the ground transmitter that it has been listening to (but traveling away from) as well as the (preferred) ground transmitter that it is approaching. A unique, innovative circuit aligns the two signals (in time and in data rate) to enable errorless handover at the appropriate time.

[29/] Id.

The onboard processor controls the alignment and switching based on received signal characteristics and ancillary data transmitted from ground sites.

C. It Is More Spectrum Efficient and Economical to Use In-Flight's Land-Based Transmission System than a Satellite System for Providing Airline Passengers with Multiple Channels of Live Audio Programming

In addition to creating technological innovations which improve the existing state-of-the-art for ground-to-aircraft transmissions, it is more economical and more spectrum efficient for four reasons to provide live audio service to airline passengers through the terrestrial system which In-Flight has developed than through a satellite-based system. Each of these reasons is discussed below.

First, a terrestrial-based system "adds functionality"[30/] by providing more channels of programming efficiently than a satellite-based system. Since the signal strength of satellite-based transmissions is about 40dB lower than the signal strength of terrestrial-based transmissions due largely to the substantially greater distance from a satellite to an aircraft than from a terrestrial transmitter to an aircraft (22,000 miles vs. a maximum of 250 miles), a prohibitively large aircraft antenna would be required in order for an aircraft to receive a comparable number of audio channels from a standard commercial broadcast satellite.

Second, the on-board antenna necessary to receive audio programming from the terrestrial service developed by In-Flight (a

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[30/] Id.

five inch omni-directional blade antenna) "significantly reduces costs to the public"[31/] because it is substantially smaller, less complex, and thus less expensive than the phased-array antenna that must be installed on-board aircraft in order to provide service by satellite. This smaller antenna also reduces costs and thus constitutes a beneficial improvement for airline customers because it is much easier to install than a phased-array antenna, does not interface with the aircraft navigation/INS system, weighs less than a phased-array antenna, and does not require a beam steering processor.

Third, both the diversity combiner and the handover circuitry described above "reduces costs"[32/] by allowing In-Flight to provide service more economically than is possible by using satellite. The combiner circuitry reduces the cost of ground stations since the power amplifiers do not need to provide as much link margin, and the handover circuitry reduces cost by making a cellular airborne entertainment system feasible (any practical ground-based transmission system must be cellular in nature due to the limited line-of-sight range to aircraft).

Finally, in order to maximize the number of channels of audio programming provided to airline passengers in the 500 kHz available to In-Flight pursuant to its experimental license, In-Flight will use highly bandwidth-efficient quadrature amplitude modulation ("QAM") and state-of-the-art audio bandwidth compression with

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31/ Id.

32/ Id.

statistical multiplexing of audio channels; these techniques will produce a very high speed of audio information transfer and thus yield "efficiencies in spectrum use".[33/] This high degree of bandwidth efficiency is typically not achievable via satellite broadcast system. This is because satellite transponder power amplifiers generally do not operate with the very high degree of linearity required for very highly bandwidth-efficient signals since such signals generally contain amplitude-encoded information as well as phase-encoded information.

II. The FCC Should Award In-Flight a Nationwide Preference Because the Commission Already Has Held that the Type of Service In-Flight Proposes Inherently is Nationwide in Scope, and the Service Uses So Little Spectrum In Any Event that the Commission, If It Desires, Could Issue Two Licenses to Provide It

In adopting pioneer's preference rules, the FCC held that, while it generally would award a licensing preference only for a single regional area, it would award a nationwide preference where the service justifying the preference inherently is nationwide in character.[34/] The Commission later held that it also might award a nationwide preference for a service which is not inherently nationwide if the agency adopts licensing rules governing the service which promote competition by allowing the issuance of two or more nationwide licenses.[35/]

[33/] Id.

[34/] See Report and Order in GEN. Dkt. No. 90-217, supra, 6 FCC Rcd. at 3495.

[35/] See Notice of Prop. Rulemaking and Tent. Decision in GEN. Dkt. No. 90-314 and ET Dkt. No. 92-100 at ¶ 151 (rel. Aug. 14, 1992).

In-Flight's application for pioneer's preference plainly meets the FCC's announced criteria for justifying a nationwide preference. Although many paging and data communications services encompassed within the proposed 900 MHz PCS service may be regional in character, the Commission already has ruled that telecommunications services for airline passengers are inherently nationwide:

> "[I]n contrast to the cellular radio service, the air-ground service is inherently nationwide in scope as many airlines today serve large portions of the United States rather than a single region. Indeed, any attempt to regionalize. . .[such] service would be arbitrary.[36/]

Moreover, even if the service proposed by In-Flight were not inherently nationwide in scope, a nationwide preference still would be justified because the FCC has proposed as one alternative the adoption of licensing rules for the new 900 MHz PCS service which would permit the issuance of several nationwide licenses.[37/] Within this nationwide licensing structure, the Commission clearly could award two or more nationwide licenses for the provision of live audio programming to airline passengers since each licensee needs less than 0.1 percent of the total amount of spectrum contained in the proposed PCS service at any particular geographic

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[36/] See Report and Order in GEN. Dkt. No. 88-96, 5 FCC Rcd. 3861, 3869 (1990); recon. 6 FCC Rcd. 4582 (1991).

[37/] See Notice of Prop. Rulemaking and Tent. Decision in GEN. Dkt. No. 90-314 and ET Dkt. No. 92-100, supra. at ¶¶ 56-62.

area (i.e., 81.3 kHz of the 93 MHz of spectrum that the FCC has proposed to allocate to the PCS service).

III. It Would Be Arbitrary and Capricious for the Commission To Deny In-Flight a Preference Since In-Flight's Service Contains at Least as Much Innovation as the Services of Two Applicants Who Already Have Been Tentatively Granted Preferences

It would be unlawful for the Commission to deny a pioneer's preference to In-Flight because In-Flight's innovations are equal to, if not greater than, the innovations of Mobile Telecommunication Technologies Corp. ("Mtel") and Volunteers in Technical Assistance ("VITA"), both of whom already are tentative preference recipients.[38]

The FCC has decided tentatively to award a pioneer's preference to Mtel for its proposal to offer more two way paging service functions based on Mtel's development of a bit transmission rate which exceeds by tenfold the present state-of-the-art bit transmission rate used by paging systems.[39] Similarly, the Commission has decided tentatively to award a pioneer's preference to VITA because it was the first seriously to study providing communications services via low-Earth orbit satellites, and it developed a technology allowing direct terminal-to-terminal

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[38] See, e.g., Int'l Union v. NLRB, 459 F. 2d 1329, 1341 (1972) ("It is an elementary tenet of administrative law that an agency must either conform to its own precedents or explain its departure from them.")

[39] Notice of Prop. Rulemaking and Tent. Decision, GEN. Dkt. No. 90-314 and ET Dkt. No. 92-100, supra, at ¶ 149.

operations to replace gateway operations, thus permitting service to be provided more cheaply.[40/]

For three reasons, the live audio service for airline passengers that In-Flight proposes is at least as innovative as the services proposed by Mtel and VITA. First, while Mtel and VITA proposed merely to improve certain communications services which already exist, In-Flight developed a new communications service that previously was unavailable in any form in a mobile market of 1.25 million people. Second, technologies developed by In-Flight (i.e., technologies eliminating multipath fading and ensuring undetectable handoff between ground stations) are at least as innovative as the technology developed by Mtel which allows more rapid data transmission and by VITA which allows direct terminal-to-terminal operations by certain satellite systems. Finally, whereas the Commission tentatively awarded preferences to Mtel and VITA without finding that their respective technological innovations would allow provision of any service more economically or more spectrum efficiently than otherwise is possible, In-Flight has proved that, due to its technological innovations, live audio programming can be transmitted to aircraft more economically and more spectrum efficiently by using ground-to-air technology rather than satellite technology.

[40/] Tent. Dec. in ET Dkt. No. 91-280, FCC Rcd. 1625, 1627 (1992).

CONCLUSION

For the three reasons described in Section I above, the Commission should grant a pioneer's preference to In-Flight in the 900 MHz PCS licensing process for its live multi-channel audio information and entertainment service for airline passengers. Moreover, as explained in Section II, in-Flight's preference should be for a nationwide license rather than for a regional license. Finally, as explained in Section III, failure to grant the requested preference would be unlawful since the FCC already tentatively has granted preferences to two companies whose service proposals are no more innovative than that of In-Flight.

Respectfully submitted,

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