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December 6, 2004

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Re: WT Docket No. 03-103
Notice of *Ex Parte* Communication

Dear Ms. Dortch:

This is to inform you that, on behalf of AirCell, Inc. ("AirCell"), Bill Gordon, VP for Government Affairs, and I, counsel to AirCell, spoke by telephone with Jennifer Manner, senior counsel to Commissioner Abernathy, on December 3, 2004 to discuss issues in the above-referenced docket.

During the call, we discussed the topics covered in the attached document entitled "Air-to-Ground Myths & Realities." In particular, we emphasized the negative consequences that would occur should the Commission decide to permit the use of ancillary terrestrial operations in the air-to-ground band.

Pursuant to Section 1.1206(b)(1) of the Commission's rules, I am filing this notice electronically in the above-referenced docket. In addition, I am sending one copy of this notice to the FCC representative listed below. Please contact me directly with any additional questions.

Respectfully submitted,

/s/ Michele C. Farquhar

Michele C. Farquhar
Counsel to AirCell, Inc.

Enclosure

cc: Jennifer Manner

AIR-TO-GROUND
MYTHS & REALITIES

COMPETITION & SPECTRUM POLICY ISSUES

Myth: *To ensure maximum use and flexibility of the ATG spectrum, it is necessary to permit the licensee(s) to provide terrestrial-based services, in addition to air-to-ground services.*

Reality:

- **Allowing terrestrial operations on ATG spectrum would skew the auction results.** Located adjacent to cellular spectrum, a nationwide ATG license with terrestrial authority would have enormous value to an incumbent wireless provider, who would have a motivation to bid much more than other entities who intend to make maximum spectrum capacity available to the flying public. As noted by T-Mobile and Sprint, ancillary service could also skew the terrestrial CMRS market. Although Airfone has publicly stated that ancillary terrestrial authority for ATG "wouldn't be appropriate," nothing guarantees that it would ignore the additional revenue potential in calculating its maximum bid, if the Commission were nevertheless to make terrestrial authority available.

- **Allowing terrestrial operations would increase the risk of interference to neighboring public safety licensees.** With antennas tilted down to provide service on the ground, interference from ATG out-of-band emissions would be a serious concern. A number of commenters – including Sprint, Cingular, Nextel, Verizon Wireless and the American Mobile Telecommunications Association – have opposed such use due to interference concerns, and there is nothing in the record that would alleviate this concern. Space Data alone has proposed terrestrial use of ATG spectrum on a "secondary" basis, yet its proposal – involving no terrestrial base stations – would appear to be suited only to Space Data's stratospheric platform technology. There is inadequate information in the record to assess the interference potential of Space Data's proposal, so the grant of any such authority would be premature at this time.

- **Ancillary terrestrial authority is not needed, from either a technical or economic perspective, to make ATG service viable and competitive.** Under the AirCell/Boeing proposal, service to aircraft on the ground (and below altitudes of 200-500 feet) would be provided over non-ATG terrestrial spectrum. ATG is *not* analogous to the mobile satellite service, where the Commission authorized the use of an ancillary terrestrial component ("ATC") to solve the problem of providing reliable satellite service to "urban canyons" and inside buildings. This technical enhancement was needed to improve the competitiveness of MSS offerings vis-à-vis traditional CMRS and other providers, and was conditioned on a number of significant prerequisites. *See* 47 C.F.R. § 25.149. At a minimum, the FCC would need to develop a record in this proceeding regarding appropriate prerequisites before allowing ancillary service in the ATG band.

• **As WTB Chief John Muleta recently commented, additional flexibility is appropriate only where it would lead to greater competition.** No such justification exists here.

Myth: *Competition in the ATG band won't benefit passengers, because even under the two-license approach there will only be one system available on any given plane.*

Reality: • **Airlines *and passengers* will benefit from the interplay between two competitors.** ATG competition will enable airlines to negotiate lower rates and more innovative services for their passengers (as well as for their own use). With competitive pricing, the service cost could be low enough that airlines may decide to provide some services as an amenity (*e.g.*, in-flight WiFi) to passengers at no cost. Thus, there is no justification for abandoning the statutory competition objective simply because the initial purchasing decision will be made by companies rather than individuals. (Under this theory, there would be no need for competition in the market for any telecom services provided to enterprise customers.)

• **With a monopoly provider, it is more likely that some passengers could be left without service if the single ATG provider decided – or was pressured by major airlines – not to serve some market segments (*e.g.*, low-fare airlines, certain routes, or regional competitors).**

Myth: *The airlines are mainly interested in the rapid deployment of broadband ATG; having more than one provider is not a major issue for them.*

Reality: • AirTran, Frontier, American, Northwest, United and the Air Carrier Association of America are all on record in this proceeding as calling for competition in the ATG band.

• **Unlike current ATG system architecture, the new approach will mean far cheaper equipment, thus allowing for shorter term contracts and making it economically feasible to change providers after the relatively short period of time needed to recoup the equipment investment**. This potential advantage over the old ATG structure will be lost if there is only one provider (who would still be able to use its monopoly status to force airlines into long-term contracts).

• **Airlines understand that passenger ATG demands vary based on the particular route – *e.g.*, cities served, flight length and other variables.** With two providers, an airline could, for example, outfit short haul planes with one service and longer haul planes with the other, in order to obtain the most appropriate pricing structure and/or types of services offered for a given route.

Myth: *Two ATG providers are not needed because satellite service will provide adequate competition.*

Reality: **Satellite service cannot compete effectively on domestic routes because equipment is too heavy and expensive, and per-minute costs**

are too high. Even the newest satellite offerings will be priced at $2-7/min., with equipment costs ranging from $500,000 to well over $1 million. By comparison, ATG broadband could be provided for $0.50/min. for a voice call, with equipment costing under $100,000 per plane. No satellite service provider currently serves any domestic routes, nor are there plans to do so. Even satellite service provider Boeing agrees with this assessment.

Myth: *The small, discrete ATG band presents a great opportunity for the Commission to experiment with novel approaches to structuring auctions and developing maximum flexibility service rules.*

Reality:

- **ATG is not a new or generic wireless spectrum band, but is the <u>only</u> band specifically designated for the underserved commercial air-to-ground market.** Experimenting with new competitive bidding and spectrum policy approaches is better suited for one of the many general purpose bands where there is no preconceived notion of what service will be offered and no existing market demand. By contrast, if the experiment fails here, millions of underserved and unserved potential customers (*i.e.*, the flying public) would be adversely affected, and some passengers and airlines may never get access to broadband ATG service.

- **The structure of the ATG band can have broader consequences for wireless services on the ground.** Airfone already offers dramatic savings (83% or more) to Verizon Wireless customers for its current narrowband offering; the availability of discounted broadband ATG will make Verizon's service even more attractive relative to other terrestrial carriers, which won't have the option of partnering with an ATG provider if Airfone remains the monopoly ATG provider. This raises the stakes for getting the policy right in this band, and counsels against a sharp departure from precedent. The FCC generally imposes eligibility restrictions and/or license caps to ensure competitive entry opportunities, particularly for CMRS services and most recently for DBS (*see* FCC 04-271).

Myth: *Because it provides the absolute maximum degree of rule and service flexibility possible, the single-provider approach is the only approach consistent with the Commission's current spectrum policy goals.*

Reality: **Flexibility is just one of several spectrum policy goals.** The Commission recently determined that "promoting efficient spectrum use through sharing spectrum is consistent with our overall spectrum policy," and that requiring "spectrum users to share is consistent with the [Spectrum Policy Task Force Report]." (FCC 04-134, ¶ 45 and note 131). Providing exclusive use licenses is not listed among any of the Communication Act's auction objectives of: (1) promoting the deployment of new technologies and services for the benefit of the public; (2) promoting competition by disseminating licenses among a variety of applicants; (3) recovering for the public a portion of the value of the spectrum; and (4) promoting the efficient and intensive use of spectrum. 47 U.S.C. § 309(j)(3).

Myth: *Maximum service and rule flexibility is needed in the ATG band in case some superior, future technology becomes available that cannot operate with cross polarization. Besides, the lack of competition resulting from a single-provider approach will not be permanent, as new spectrum suitable for ATG may become available in the future.*

Reality: **Starting off with a single broadband ATG provider gives that carrier a "first to market" advantage that is particularly significant in the ATG context, given that it will have time to form important relationships and place many airlines under long-term contracts.** A newcomer arriving years later will be at a distinct disadvantage. The best approach would be to start with two providers. Should one licensee later wish to deploy some as-yet-unconceived technology that is not compatible with overlapping licenses, then that licensee would have the option of acquiring spectrum in the new ATG-suitable band(s).

Myth: *The significance of Airfone's deep-pocketed parent is overrated; ATG can't be that important to Verizon's overall strategy.*

Reality: **While current narrowband ATG usage may be small, all parties agree that there is tremendous airline and passenger demand for broadband ATG**. The market potential is enormous, with more than 600 million enplanements per year and an annual market revenue that AirCell estimates at over $500 million. Moreover, ancillary terrestrial service on a nationwide basis would have enormous value to any incumbent wireless provider and Verizon is already offering lower ATG prices for its wireless customers: $0.69/ min. (or $0.10/ min with a $10 monthly fee) for Verizon customers, compared to $4/min. plus a $4/call connection fee for non-Verizon customers.

TECHNICAL ISSUES

Myth: *The rules needed to enable the AirCell/Boeing proposal would be too complicated and burdensome (even requiring the networks to operate in tandem), thereby increasing the cost of providing the service.*

Reality:

- **No tandem operation or common emission control system will be required.**
- **Like many other services, some minimal coordination will be required, relating principally to the placement of ground stations**. However, for ATG, fewer than 300 total ground stations should be required to provide service across the continental U.S., including airport sites, so the coordination burden will be far less than in any other services. Moreover, if Airfone wins one license, its existing sites should be suitable in most cases, greatly simplifying its coordination obligations.

- **There will be no difference in equipment costs between the single-provider and two-provider approach.** No special base station or aircraft antennas are needed.

- **AirCell agrees that the rules should be flexible.** If default rules are established, the licensees should be able to alter those rules upon mutual consent.

Myth: *True, reliable broadband service cannot be achieved under a two-provider, overlapping license approach.*

Reality: **AirCell, working together with Boeing to develop a joint technical proposal, has demonstrated in multiple technical filings, *to the satisfaction of OET technical staff*, that the use of cross polarization – a tried and true technique – will permit two licensees to provide full broadband service without harmful interference.** Moreover, AirCell has conducted actual flight tests that support its findings. AirCell is willing to invest millions of dollars to enter the commercial air-ground market based on its confidence in the two licensee plan.

Myth: *The license configuration of the ATG band has no implication on the ability of the licensee(s) to comply with any necessary out-of-band emission limit.*

Reality: **The AirCell/Boeing approach can – and will – satisfy the out-of-band emission ("OOBE") limitations urged by Nextel, APCO and other parties.** AirCell agrees that there is an important need for such a limit to ensure protection to neighboring public safety and other spectrum users. As Nextel has noted, a two-license approach would actually *diminish* harmful OOBE, and the "AirCell/Boeing approach is unlikely to cause harmful interference to adjacent-band operations." Conversely, Airfone and Space Data have not indicated in the record that they would be able to satisfy the necessary OOBE limit. As Nextel stated, these proposals "are *extremely likely* to cause harmful interference to adjacent-band licensees."

Myth: *Deck-to-deck coverage cannot be achieved under a two-provider, overlapping license approach.*

Reality: **Under the AirCell/Boeing proposal, the transceiver unit installed in the aircraft will be dual mode, so that while the plane is on or near the ground (*i.e.*, at the gate, taxi, take off and landing), the unit will communicate on terrestrial frequencies**. This airport-vicinity ground coverage may be provided by existing cellular/PCS carriers, or by use of other terrestrial spectrum. Once above 200-500 feet, the unit will switch seamlessly to the ATG band (much like current terrestrial hand-offs between networks, as occurs in roaming situations). AirCell has demonstrated that this system will experience no difficulties at different airports – even more challenging airports near mountains, such as Denver and Salt Lake City.