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April 1, 2002

Mr. Mr. William F. Caton
Acting Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: *Ex Parte* Presentation
IB Docket No. 01-185; ET Docket No. 95-18

Dear Mr. Caton:

AT&T Wireless Services, Inc. ("AWS") hereby files, as an *ex parte*, the attached "Further Comments of AT&T Wireless Services, Inc." submitted in response to the Commission's March 6, 2002, Public Notice ("Public Notice") in this proceeding, which requested comments regarding the technical feasibility of severing terrestrial service from MSS in the current MSS bands. AWS hired an independent consultant -- Comsearch -- to conduct a technical analysis addressing the Commission's questions. Due to the complexity of the issues, however, this technical analysis could not be completed by the date for comments set by the Public Notice, and therefore is being submitted as soon as possible after that date.

AWS's attached submission demonstrates that severance is technically feasible and would have little effect on the requirements applicable to providers or impact on satellite service or providers in adjacent bands. AWS's technical comments and appendix improve the record upon which the Commission will base its decision in this proceeding, thereby benefiting the public, and should be considered carefully by the Commission in its decisionmaking process. Docket No. 01-185 has been designated a permit but disclose proceeding. *See* Public Notice at 3.

Respectfully,

/s/Douglas I. Brandon
Douglas I. Brandon

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Flexibility for Delivery)	IB Docket No. 01-185
Of Communications by)	
Mobile Satellite Service Providers)	
In the 2 GHz Band, the L-Band, and the)	
1.6/2.4 GHz Band)	
)	
Amendment of Section 2.106 of the Commission's)	ET Docket No. 95-18
Rules to Allocate Spectrum at 2 GHz for Use)	
By the Mobile-Satellite Service)	

FURTHER COMMENTS OF AT&T WIRELESS SERVICES, INC.

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April 1, 2002

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FURTHER COMMENTS OF AT&T WIRELESS SERVICES, INC.

AT&T Wireless Services, Inc. ("AWS") hereby submits its comments on the *Public Notice* issued on March 6, 2002 in the above-captioned proceeding.^{1/}

INTRODUCTION AND SUMMARY

In response to the Commission's questions, AWS notes that there is no dispute between proponents of the ancillary terrestrial component ("ATC") proposals and terrestrial wireless providers about whether, from a technical point of view, the operations of mobile satellite services ("MSS") in the 2 GHz band, the L-band, and Big LEO band can be "severed" from terrestrial operations in each band. The answer is plainly yes. In addition, there is no reason that the technical requirements for a separate terrestrial carrier in those bands should be substantially different or more complicated than they would be for an integrated MSS/terrestrial provider.

^{1/} *Commission Staff Invites Technical Comments on Certain Proposals to Permit Flexibility in the Delivery of Communications by Mobile Satellite Serv. Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Band*, IB Docket No. 01-185, ET Docket No. 95-18, *Public Notice* (rel. Mar. 6, 2002).

Terrestrial service – whether integrated or not – must be provided in a manner that protects both adjacent channel satellite and terrestrial services from harmful interference.

New ICO Global Communications (Holdings) Ltd. (“New ICO”) and Motient Services Inc. (“Motient”) propose an “integrated” satellite/terrestrial wireless service, not because of any technical imperative that such services be integrated, but because they perceive the exclusive spectrum subsidy that they would receive as essential to their business plans.^{2/} The Commission’s policy, however, is to avoid picking technological or industry winners or losers and, instead, to promote efficient use of spectrum by leaving such choices to the market whenever possible. Indeed, in the absence of a countervailing public interest rationale, the Commission is required to auction spectrum to be used for commercial mobile radio service (“CMRS”), regardless of the identity of the potential licensees.

Spectral severance is technically feasible, would impose no more burdensome regulatory or technical requirements than the implementation of an integrated service, and would not degrade service to consumers. Accordingly, because segmentation is technically feasible and in the public interest, any spectrum authorized for terrestrial wireless use should be licensed via a system of competitive bidding.

I. IT IS TECHNICALLY FEASIBLE FOR DIFFERENT OPERATORS TO PROVIDE MSS AND TERRESTRIAL WIRELESS SERVICE IN THE CURRENT MSS BANDS.

Neither New ICO nor Motient contend that it would be impracticable, from a technological perspective, to segment the current MSS bands to support both MSS and terrestrial

^{2/} See generally Letter from Lawrence H. Williams, New ICO Global Communications (Holdings) Ltd. to FCC Chairman Michael Powell, Mar. 8, 2001 (“New ICO Letter”); *In the Matter of Motient Servs. Inc. and Mobile Satellite Ventures Subsidiary, LLC for Assignment of Licenses and Authority to Launch and Operate a Next-Generation Mobile Satellite Serv. Sys.*, File No. SAT-ASG-20010302-0017 (filed Jan. 16, 2001) (“Motient Application”).

service.^{3/} Such a proposition, in fact, would be entirely unpersuasive in light of the fact that both of these MSS licensees propose to segment the band themselves in the same way that it would be severed for nonaffiliated providers. As described in the attached technical appendix (“Attachment A”), ATC and the Satellite Component (“SC”) cannot operate co-frequency in the same cell regardless of whether MSS and terrestrial wireless service are provided by a single or different providers.^{4/}

Moreover, any contention that the provision of different services by unaffiliated providers would somehow be unworkable is plainly contradicted by the fact that spectrum is currently authorized for use by independent, disparate providers (including satellite and terrestrial users) in a wide variety of contexts.^{5/} The Commission’s interference rules have long and successfully

^{3/} Indeed, New ICO asserts that segmentation “will technically work, quite easily” and “from a purely theoretical technical view, it would appear that yes, having the spectrum and associated services operated by separate companies may be possible.” New ICO Letter, Exh. B. at 14; Letter from Cheryl A. Tritt, Counsel to ICO Global Communications (Holdings) Ltd. to William F. Caton, Acting Secretary of the Federal Communications Commission, IB Docket No. 01-185, ET Docket No. 95-18, Power Point Presentation at 14, March 8, 2002 (emphasis omitted).

^{4/} Attachment A at 1 (“The analysis clearly shows that, regardless of which air interface is used, ATC and SC cannot operate co-frequency within the same cell, and therefore that band segmentation is already contemplated.”); *id.* at 2 (“In order to effectively use both the SC and the ATC, nonoverlapping spectrum would be required.”).

^{5/} See *In the Matter of Amendment of Parts 2 and 25 of the Commission’s Rules to Permit Operation of NGSO FSS Sys. Co-Frequency with GSO and Terrestrial Sys. in the Ku-Band Frequency Range; Amendment of the Commission’s Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7 GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates and; Applications of Broadwave USC, PDC Broadband Corp. and Satellite Receivers, Ltd. to Provide a Fixed Serv. in the 12.2-12.7 GHz Band*, ET Docket No. 98-206, RM-9147, RM-9245, *First Report and Order and Further Notice of Proposed Rule Making*, 16 FCC Rcd 4096 ¶ 326 (2000) (citing *Amendment to Parts 1, 2, 87 and 101 of the Commission’s Rules to License Fixed Servs. at 24 GHz*, WT Docket No. 99-327, *Report and Order*, 15 FCC Rcd 16934 (2000); *Amendment of the Commission’s Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands*, ET Docket No. 95-183, *Report and Order and Second Notice Proposed Rule Making*, 12 FCC Rcd 18600 (1997) and *39 GHz Band Auction Closes*, DA 00-1035, Report No. AUC-30-E, *Public Notice*, 15 FCC Rcd 13648 (2000); *39 GHZ Report and Order*, 12 FCC Rcd 18600, 18636 (1997);

regulated multiple uses of spectrum in adjacent and shared bands, and neither Motient nor New ICO has demonstrated that such rules would not be similarly successful here. Moreover, there is no technical obstacle to MSS operators cooperating with non-affiliated terrestrial providers to offer an integrated satellite/terrestrial service for those customers that want the option of accessing both services via a single handset.^{6/} Indeed, these handsets are available and in use today.^{7/}

New ICO and Motient insist not that “integration” is the only technically feasible way to offer both satellite and terrestrial service within the MSS spectrum, but rather that such “integration” is essential to their particular business plans.^{8/} The Commission’s practice, however, is not to choose industry or technology favorites, but to promote the most efficient use of spectrum.^{9/} Thus, in the absence of technical concerns, the determining factor in whether to

Amendment of the Commission’s Rule with Regard to the 3650-3700 MHz Gov’t Transfer Band, ET Docket No. 98-237; *The 4.9 GHz Band, Transferred from Federal Gov’t Use*, WT Docket No. 00-32, *First Report and Order and Second Notice of Proposed Rulemaking*, 15 FCC Rcd 20488 ¶ 20 n.64 (2000).

^{6/} Attachment A at 3. (“The band could be segmented and allow for two separate providers for the satellite and terrestrial components. In fact these types of hybrid phones are currently in operation. For instance, this service can be purchased from Globalstar today.”).

^{7/} *Id.*

^{8/} See New ICO Letter at (“[D]ue to the failures of early MSS projects and the instability of the telecom and satellite financial markets,” the viability of the MSS industry “is in dire jeopardy”) (emphasis omitted); *id.* at 3-4 (describing the financial woes of various MSS providers); Motient Application at 12-14 (asserting that a satellite-only mobile communications business is not viable). It should be noted that even this view is not held industry-wide. Inmarsat, for instance, asserts that there is no need for such integrated service in order to provide an economically viable MSS offering. Inmarsat Ventures PLC, IB Docket No. 01-185, ET Docket No. 95-18, *Comments*, 27 (Mar. 22, 2002).

^{9/} See *Deployment of Wireline Servs. Offering Advanced Telecomms. Capability*, CC Docket No. 98-147, *Memorandum Opinion and Order and Notice of Proposed Rulemaking*, 13 FCC Rcd 24011, 24014 (1988) (asserting that the Commission’s role “is not to pick winners or losers, or select the ‘best’ technology to meet consumer demand, but rather to ensure that the marketplace is conducive to investment, innovation, and meeting the needs of consumers.”); *Inquiry Concerning the Deployment of Advanced Telecomms. Capability to All Americans in a*

segment this spectrum should be what action would maximize the spectrum's value to the public and ensure that it is put to its most efficient use. Both the Commission and Congress have traditionally concluded that the market -- and thus competitive bidding -- is the best method by which to achieve these goals.^{10/} Since segmentation is technically feasible, the terrestrial portion of the spectrum should be auctioned in accordance with the requirements of Section 309(j) of the Communications Act.^{11/}

The only "technical" argument for integration offered by New ICO and Motient is that integration would permit "dynamic management" of the licensed spectrum, which would allow the operator to shift frequencies based upon traffic demands.^{12/} It should first be noted that

Reasonable and Timely Fashion and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecomms. Act of 1996, Docket No. 98-146, *Report*, 14 FCC Rcd 2398 ¶ 5 (1999) (noting that the Commission's role is not to select technological winners and losers and that it "intends to rely as much as possible on free markets and private enterprise"); *In the Matter of Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Dev. of Secondary Mkts., Policy Statement*, 15 FCC Rcd 24178 ¶ 8 (2000) ("[T]he best way to realize the maximum benefits from the spectrum is to permit and promote the operation of market forces in determining how spectrum is used").

^{10/} See *In the Matter of Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Dev. of Secondary Mkts., Policy Statement*, 15 FCC Rcd 24178 ¶ 8 (2000) ("[T]he best way to realize the maximum benefits from the spectrum is to permit and promote the operation of market forces in determining how spectrum is used"); *Cf.* H.R. 2264, 103d Cong., 139 Cong. Rec. H3088 (1993) (enacted) (finding that "a carefully designed system to obtain competitive bids from competing qualified applicants can speed delivery of services, promote efficient and intensive use of the electromagnetic spectrum, prevent unjust enrichment and produce revenues and produce revenues to compensate the public for use of the public airwaves"); H.R. Conf. Rep. No. 103-213, at 481 (1993), *reprinted in* 1993 U.S.C.C.A.N. 1088, 1173 (incorporating such findings by reference).

^{11/} Section 309(j) of the Communications Act requires the auction of spectrum to be used to provide CMRS, except for very limited circumstances not relevant here or when such auction would not be in the public interest. See 47 U.S.C. 301(j)(1); 309(j)(6)(e); *Implementation of Sec. 309(j) of the Communications Act -- Competitive Bidding*, PP Docket No. 93-253, *Third Report and Order*, 9 FCC Rcd 2941 ¶¶ 4-6 (1994).

^{12/} Although New ICO also contends that the presence of omni-directional antennas would cause harmful interference to the MSS service, AWS's technical analysis indicates that terrestrial

Motient and New ICO, despite the submission of voluminous comments and multiple *ex partes*, have failed to provide sufficient technical information about the precise manner in which their integrated systems and their “dynamic management” system would actually operate to allow the Commission or other interested parties to fully evaluate the real-world feasibility of their proposals.^{13/} New ICO, for instance, has yet to settle on a single technical model for its system, offering instead only four vaguely-described options.

Nonetheless, it appears that, under any of the models ultimately chosen by New ICO, the satellite service would be technically ancillary to the terrestrial service.^{14/} As New ICO concedes, nonoverlapping spectrum would be required for the MSS and terrestrial wireless services.^{15/} Moreover, it appears that -- even under the very limited circumstances discussed more fully below when spectrum sharing might be possible -- the satellite signal would be overridden in favor of the terrestrial signal when both signals are actually present.^{16/} Since the

wireless service, if coordinated with other users, would not interfere with or jam satellite service. Attachment A (spread sheets).

^{13/} See Cellular Telecommunications and Internet Association, IB Docket No. 01-185, ET Docket No. 95-18, *Comments*, 2-3 (Mar. 22, 2002) (“CTIA Technical Comments”); Verizon Wireless, IB Docket No. 01-185, ET Docket No. 95-18, *Comments*, 2 (March 22, 2002) (“Verizon Wireless Technical Comments”). Verizon Wireless provides a good description of the information that ATC proponents should be required to provide prior to further consideration of this issue so that a full analysis of the ATC proposals can be made.

^{14/} Attachment A at 1, 3 (“The analysis clearly shows that, regardless of which air interface is used, ATC and SC cannot operate co-frequency within the same cell [o]ver time it appears that the terrestrial component would come to dominate the areas where most of the customers are.”).

^{15/} New ICO Letter at App. B 6-7, 12-13.

^{16/} See Attachment A at 1 (“The main thing that appears to be obvious from looking at the interference calculations is that the Mobile terminal should not operate in the Space Component mode when in the presence of an ATC base. This means that, in general, the ATC system proposed will heavily favor the use of the terrestrial network over the satellite network when both systems are present.”).

majority of New ICO's customers are expected to be urban customers,^{17/} who would be served entirely by terrestrial signals, the terrestrial segment of the system would clearly carry the bulk of the network's traffic.^{18/}

In light of the undisputed fact that urban customers would rely almost entirely on the terrestrial frequencies while rural customers would rely on the MSS frequencies (to the extent these companies make satellite service available at all), the benefits of New ICO's "dynamic management" proposal -- its primary technical justification for integration -- have been significantly overstated.^{19/} The dynamic management system would be beneficial only (if at all) in the rare situation when customers are accessible via either the terrestrial or satellite frequencies, which likely will be limited to those comparatively few customers living between urban/suburban and rural areas.

II. SEVERING MSS AND TERRESTRIAL OPERATIONS WOULD NOT HARM SATELLITE OPERATIONS OR REQUIRE DIFFERENT TECHNICAL PARAMETERS.

A. Allowing Separate Operations Would Have No Effect on Domestic and Foreign Satellite or Terrestrial Operations or Providers' Noninterference Obligations

Permitting carriers to compete for spectrum to provide terrestrial wireless services rather than simply giving away such spectrum to existing MSS licensees would have no substantial technical effect on satellite or terrestrial operations or interference requirements. Regardless of whether MSS providers implement their ATC proposals or other providers are permitted to use a

^{17/} See New ICO Letter at 1-6; Motient Application at ii-iii, 12-13.

^{18/} See Attachment A at 3 ("Over time, it appears that the terrestrial component would dominate the areas where most of the customers are.").

^{19/} In addition, as Verizon Wireless notes in its technical comments, New ICO's analysis of the expected efficiency benefits of an integrated system rests upon several questionable assumptions. See Verizon Wireless Technical Comments at 3-4.

segment of MSS spectrum for terrestrial wireless service (either alone or in conjunction with an MSS provider), terrestrial service would be offered on a segmented portion of the MSS band. Accordingly, those terrestrial providers -- whether existing MSS licensees or new auction winners -- would have to ensure that their use of the spectrum does not unduly interfere with other authorized uses of spectrum in that band or adjacent bands.

As they do now in a wide variety of contexts, the Commission's rules can ensure easily that disparate spectrum uses can successfully coexist in adjacent bands. It would be no more difficult for non-affiliated terrestrial providers to comply with Commission interference requirements than ATC providers, and the Commission's oversight would be no more complicated or burdensome with regard to non-MSS providers than it would be for MSS providers. In either case, the terrestrial wireless provider would be required to coordinate with MSS licensees, including its own "integrated" services, to prevent harmful interference. The coordination procedures could be based upon those currently used by CMRS licensees under the Commission's rules.^{20/}

The Commission's interference rules for the use of disparate services in the same or adjacent bands are well-established, have been long and successfully applied, and could prevent interference problems in this context as well. Specifically, as other commenters have suggested in these proceedings, Section 24.238 of the Commission's Rules should govern terrestrial link emissions and Section 25.202 should apply to satellite link transmissions.^{21/} These rules would be equally effective in preventing interference caused by the use of spectrum either by MSS providers or new auction winners.

^{20/} See CTIA Technical Comments at 4.

^{21/} See CTIA Technical Comments at 9.

Similarly, whether the service provider is an MSS licensee or an independent terrestrial wireless provider would have no different impact on cross-border operations than it would on domestic operations. Again, any terrestrial wireless provider -- whether integrated or independent -- would be required to comply with all cross-border interference agreements and requirements and to coordinate with affected foreign users.

B. Severing the MSS Bands Would Not Degrade Service to Rural or Urban Consumers

Complying with the auction requirements of Section 309(j) of the Communications Act would have no detrimental effects on either urban or rural service.^{22/} As indicated above, under either structure, urban consumers would be served by terrestrial wireless systems, and their service would be the same regardless of whether it was provided by an ATC provider or an independent terrestrial provider. Similarly, assuming that MSS providers choose to continue providing MSS service (a highly unlikely proposition as discussed more fully in AWS's initial and reply comments in this proceeding), severing the MSS band would not adversely impact rural or remote service. Again, under both the ATC and the independent operator scenarios, it would be necessary to provide separate bandwidth for terrestrial services, and the remaining spectrum should be adequate to support rural satellite service (especially in light of the fact that most consumers will be utilizing the terrestrial rather than the satellite service).^{23/} Moreover, any potential benefits of integration could be achieved through partnerships between non-affiliated terrestrial and MSS providers.

^{22/} Indeed, in contrast to the ATC proposal, severing the terrestrial authorization would leave MSS licensees with the ongoing obligation (even if they won the auction for terrestrial rights) to build and operate the satellite service in rural areas or give the spectrum back, thus protecting rural service.

^{23/} See CTIA Technical Comments at 5.

By contrast, grant of ATC authority would harm both rural and urban service because it would allow MSS providers to transition easily from the unprofitable MSS market to the far more lucrative terrestrial wireless market, thereby decreasing or even eliminating service opportunities available to rural customers. In addition, such a spectrum subsidy would confer a significant competitive advantage upon MSS providers competing directly with terrestrial wireless providers, thereby hindering competition in the terrestrial wireless market by reducing the ability of existing service providers to maintain and expand services.

CONCLUSION

For the foregoing reasons, the Commission should sever the MSS band and license the newly authorized terrestrial wireless spectrum through a system of competitive bidding as required by Section 309(j) of the Communications Act.

Respectfully submitted,

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/s/ Douglas I. Brandon

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April 1, 2002

CERTIFICATE OF SERVICE

I, Angela Brunson, hereby certify on this 1st Day of April, that I caused copies of the foregoing "Further Comments of AT&T Wireless Services, Inc." to be filed in IB Docket No. 01-185 and ET Docket No. 95-18, and sent to the following by electronic mail (*) or U.S. Mail in accordance with the Commission's rules:

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