Before the
Federal Communications Commission
Washington, D.C. 20004



In re:

| | | |
|---|---|---|
| Amendment of Parts 2, 21, 25 and 94 of the Commission's Rules to Accommodate Common Carrier and Private Op-Fixed Microwave Systems in Bands Above 3 GHz | ) | RM-8004 |



Statement in Opposition of
Hughes Communications Galaxy, Inc.



Hughes Communications Galaxy, Inc. ("HCG") hereby submits this statement in opposition to the petition for rulemaking (the "Petition") filed by Alcatel Network Systems, Inc. ("Alcatel") in this matter. HCG opposes certain aspects of the petition that would adversely affect the domestic fixed-satellite industry, which operates C band satellites in the 4 GHz (3.7-4.2 GHz) and lower 6 GHz (5.925-6.425 GHz) bands.

HCG and its affiliates operate the largest fleet of domestic communications satellites. This fleet is comprised of the in-orbit Galaxy I, II, III, V-W and VI C-band satellites (which operate in the frequency bands Alcatel proposes to reallocate and rechannelize) and the SBS-4, SBS-5 and SBS-6 Ku band satellites. HCG also is authorized to launch Galaxy I-R, II-R, III-R (C band) and Galaxy IV(H) and VII(H) (combined C and Ku band) as replacement satellites, and Galaxy B-R (Ku band) as an expansion satellite. In addition, an HCG affiliate operates the fleet of Leasat satellites that provide essential communications services to the United States Navy.

HCG has provided a wide variety of reliable satellite services for over a decade. At C band, HCG's satellites provide means for commercial television and radio distribution, teleconferencing, video backhaul, high speed image transmission (e.g., medical imaging), and private data networks, among other services. HCG's continued commitment to provide satellite service to the public is evident from its plans to launch a replacement fleet of satellites in the next few years that is valued at over $700 million.

## I. Introduction

Alcatel's Petition is based on the Commission's proposal to allocate 220 MHz of spectrum for emerging telecommunications technologies, which would require the displacement of fixed microwave service users who operate in the 1.85 GHz to 2.20 GHz band.[1] Alcatel proposes that the Commission amend Part 25 of its Rules (among others) to accommodate these displaced fixed microwave services in the 4 GHz and lower 6 GHz bands. These bands are used by satellites in the C band domestic fixed-satellite communications service.

In particular, Alcatel suggests that the Commission (i) reallocate frequencies in the 4 GHz and lower 6 GHz bands to allow displaced microwave systems to operate there on a co-primary basis, (ii) rechannelize those bands to accommodate low and medium capacity traffic, and (iii) reduce to a secondary basis the use for

---

[1] In re Development of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, 7 FCC Rcd 1542 (1992).

satellite communications of 80 MHz of the 500 MHz now allocated for co-primary use by satellite communications and domestic public fixed radio services.

HCG strongly opposes Alcatel's proposal to reduce the amount of 4 GHz spectrum that is available to the burgeoning satellite industry. Making 16% of the spectrum that is now used for C band downlinks available only on a secondary basis would stifle the continued growth of the satellite industry. Alcatel simply has not justified the extraordinary cost to the satellite industry that would result from such a reallocation. This aspect of its Petition therefore should be dismissed without further consideration.[2]

In an attempt to justify the proposed disruption of satellite services, Alcatel claims that reallocation of spectrum is needed because means of telecommunications other than terrestrial microwave are not suitable for displaced microwave users. As set forth below, Alcatel's complaints about the availability and reliability of satellite communications are unfounded.

---

[2] HCG is still studying Alcatel's other proposals to reallocate and rechannelize the 4 GHz and lower 6 GHz bands to accommodate displaced microwave users. The Petition is over 150 pages long and proposes complicated technical changes to many existing services. Because it has been on public notice for only a month, HCG has not had the opportunity to complete its analysis. HCG will continue to analyze these other proposals and may file additional comments.

## II. Alcatel's Proposal Would Unnecessarily Disrupt the Satellite Industry

Alcatel proposes to reduce to a secondary basis the use for satellite communications of 80 MHz of the 4 GHz band that is now allocated on a co-primary basis to satellite services and terrestrial services. This reallocation would effectively result in the loss of 16% of the spectrum currently available to C band satellite operators.

500 MHz of spectrum (3.7-4.2 GHz) is now available for C band downlink purposes. Subject to coordination with terrestrial users, any C band earth station is able to use the full amount of this band. See 25 CFR § 25.203 (1991). When establishing new earth stations or new microwave facilities, each industry needs to reasonably accommodate the other. In HCG's experience, the current methods of coordinating earth stations with terrestrial systems have sufficiently met the needs of all affected parties.

Alcatel's proposal, however, would place satellite users in a secondary status vis-a-vis terrestrial users with respect to 80 MHz of this band. Satellite users that have been able to coordinate with existing terrestrial facilities would now be subject to preemption at any time by future terrestrial services. Such preemptible service would be unacceptable to many satellite users who need reliable and uninterrupted service. Conditioning continued authority to use certain parts of the spectrum on the absence of future terrestrial needs could well result in satellite users declining to use those preemptible frequencies. Of course, once those frequencies were used for terrestrial service, satellite

users would be prohibited from using a significant portion of the spectrum now available to them.[3]

This loss of C band satellite capacity would restrict the availability of an already limited resource. The C band satellites currently in orbit are heavily used. HCG currently operates five C band satellites. Approximately 90 percent of the 120 working transponders on those satellites are now committed to customers on a long-term basis. The remaining capacity is used primarily to fill customers' short-term needs. Considering that 24 of these transponders came into service only two months ago when Galaxy V-W was launched, and 24 came into service less than two years ago when Galaxy VI was launched, HCG's satellites are remarkably full. Other satellite operators also use a great amount of their available capacity.

Alcatel's proposal to make 16% of the current C band capacity available only on a secondary basis would effectively render 4 of the 24 transponders on a typical C band satellite unusable for many purposes[4]. This would adversely affect the industry in a number of ways. First, it would restrict the ability of current C band satellite operators to expand their satellite networks as their business expands. Second, it would impede the development of new services that otherwise might occur in an environment in which sufficient spectrum is available. Third, it

---

[3] Once the downlink frequencies became unavailable, the corresponding portions of the uplink frequencies in the lower 6 GHz band also would become useless.

[4] Although some transponders are provided to users on a "preemptible" basis, the vast majority of users are not willing to accept the risk of a disruption in service.

would limit the variety of video programming that can be delivered via C band to home dishes as an alternative to cable television.

Alcatel simply has not demonstrated (and cannot demonstrate) that the demand for C band capacity will abate.[5] Moreover, it has simply not explained why the needs of displaced microwave users could not be met by co-primary use of the 4 GHz band with satellite operators.[6]

As set forth above, HCG is investing over $700 million in satellites that will be launched over the next few years and will operate well into the next decade. Other satellite operators are collectively investing billions of dollars in their next generation satellite fleets as well. All this is being done in reliance on the current spectrum allocation scheme. Any departure from this scheme will provide instability in a highly capital intensive industry. Such changes would shake the stability that

---

[5] In the proposed rules attached to the Petition, Alcatel contends that "various factors could contribute to relieving the congestion in the 4 GHz band over the next 10-15 years", including migration "to the 11 GHz [Ku] band as this band becomes more economical than 4 GHz [C band]." Alcatel provides no basis for this prediction. Each of the Ku band and the C band has advantages that benefit certain services. But C band users simply have not begun wholesale "migration" to the Ku band. To the contrary, HCG has received sufficient customer commitments to essentially fill its first two "next generation" C band satellites, Galaxy V-W and Galaxy I-R, before launch.

[6] Alcatel baldly states that reallocation of 80 MHz for primary use by point-to-point microwave and for secondary use by satellite operators "would promote favorable frequency coordination between the fixed microwave and earth station users in this band." Petition at 19. However, it presents no basis for concluding that current frequency procedures, and co-primary use, would be inadequate to meet the needs of displaced microwave users.

has characterized the Commission's regulation of the satellite industry thus far.

## III. Alcatel Has Failed To Establish That Other Media Are Unsuitable Alternatives to Terrestrial Microwave Facilities.

In its Notice of Proposed Rulemaking in the emerging technologies docket, ET Docket No. 92-9, 7 FCC Rcd 1542 (1992), the Commission stated that other reasonable transmission alternatives to fixed microwave service are available, such as fiber, cable and satellite communications. Id. at 1544. Alcatel (the world's largest independent manufacturer and supplier of microwave telecommunications equipment) argues that the Commission cannot rely on these alternatives in reallocating spectrum for emerging technologies because these media "do not provide fixed microwave uses adequate reliability of or control over system performance." Petition at 12.

Alcatel's claim that microwave networks are the only means of providing reliable communications is simply unfounded. HCG's satellite services provide an unparalleled level of reliability for many essential industries, including medical, data and entertainment. Contrary to Alcatel's suggestion, satellite transmission bandwidth is readily available for the same services that are carried on microwave. Although many domestic C band satellites are now used for video transmission, many also carry

voice and data signals, and all are physically capable of providing the same services as terrestrial microwave facilities.[7]

## IV. Conclusion

Alcatel's proposal to reallocate 80 MHz of the 4 GHz band currently used for domestic satellite services would severely disrupt the satellite industry. Alcatel has failed to demonstrate that the needs of microwave users cannot be met through either shared co-primary use of the 4 GHz band, or by using alternate transmission media. For these reasons, this portion of Alcatel's petition should be dismissed without further consideration.

Respectfully submitted,

HUGHES COMMUNICATIONS GALAXY, INC.

By: _____

Gary M. Epstein
John P. Janka
Latham & Watkins
1001 Pennsylvania Ave., N.W.
Suite 1300
Washington, D.C. 20004
(202) 637-2200

July 2, 1992

---

[7] Furthermore, Alcatel's claim that satellite services are an uneconomical alternative is disingenuous. In calculating costs, Alcatel does not take into account the length of the signal path needed (e.g., trans-USA), the levels of backup protection provided on a given satellite, or other variables that affect cost.

## CERTIFICATE OF SERVICE

I, Joy A. Freemire, do hereby certify that the attached Statement in Opposition of Hughes Communications Galaxy, Inc. was mailed, postage prepaid, this 2nd day of July, 1992, to the following:

* The Honorable Alfred C. Sikes
Chairman, Federal Communications Commission
1919 M Street, N.W., Room 814
Washington, D.C. 20554

* The Honorable James H. Quello
Commissioner
Federal Communications Commission
1919 M Street, N.W., Room 802
Washington, D.C. 20554

* The Honorable Sherrie P. Marshall
Commissioner
Federal Communications Commission
1919 M Street, N.W., Room 826
Washington, D.C. 20554

* The Honorable Andrew C. Barrett
Commissioner
Federal Communications Commission
1919 M Street, N.W., Room 844
Washington, D.C. 20554

* The Honorable Ervin S. Duggan
Commissioner
Federal Communications Commission
1919 M Street, N.W., Room 832
Washington, D.C. 20554

* Dr. Thomas P. Stanley, Chief
Federal Communications Commission
2025 M Street, N.W., Room 7002
Washington, D.C. 20554

* Mr. Robert Pepper, Chief
Office of Plans and Policy
Federal Communications Commission
1919 M Street, N.W., Room 822
Washington, D.C. 20554

* Mr. Ralph Haller, Chief
Private Radio Bureau
Federal Communications Commission
2025 M Street, N.W., Room 5002
Washington, D.C. 20554

* Cheryl A. Tritt, Chief
Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W., Room 500
Washington, D.C. 20554

* Bruce A. France, Deputy Chief
Office of Engineering and Technology
Federal Communications Commission
2025 M Street, N.W., Room 7002
Washington, D.C. 20554

* Terry L. Haines, Esq.
Chief of Staff
Office of the Chairman
Federal Communications Commission
1919 M Street, N.W., Room 814
Washington, D.C. 20554

* Carla M. Rath
Telecommunications Advisor to Chairman Sikes
Federal Communications Commission
1919 M Street, N.W., Room 814
Washington, D.C. 20554

* Fred Thomas
Office of Engineering and Technology
Federal Communications Commission
2025 M Street, N.W., Room 7002
Washington, D.C. 20554

Jeffrey L. Sheldon, Esq.
Sean A. Stokes, Esq.
Utilities Telecommunications Council
1140 Connecticut Avenue, N.W., Suite 1140
Washington, D.C. 20036

* David R. Siddall, Esq.
Chief
Frequency Allocation Branch, OET
Federal Communications Commission
2025 M Street, N.W., Room 7102
Washington, D.C. 20554

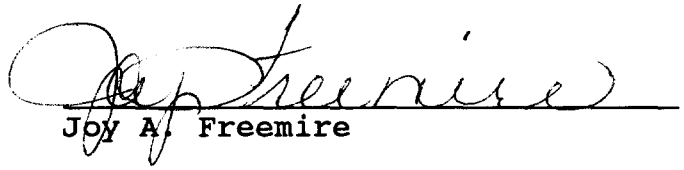
Norbert Schroeder
Private Sector Coordinator
Radio Frequency Spectrum Management
U.S. Department of Commerce
National Telecommunications and Information
Administration
14th & Pennsylvania Avenue, N.W., Room 4090
Washington, D.C. 20230

Thomas J. Keller, Esq.
Erwin G. Grasnow, Esq.
Lawrence R. Sidman, Esq.
Jacqueline R. Kinney, Esq.
Verner, Liipfert, Bernhard, McPherson
and Hand, Chartered
901 15th Street, N.W., Suite 700
Washington, D.C. 20005
Counsel for The Association of American Railroads
and the Large Public Power Council

Wayne V. Black, Esq.
Keller & Heckman
1001 G Street, N.W., Suite 500 West
Washington, D.C. 20001
Counsel for The American Petroleum Institute

Ben Griffin, Esq.
Reed, Smith, Shaw & McClay
1200 18th Street, N.W.
Washington, D.C. 20036
Counsel for Home Box Office

Sheila A. Mellody, Esq.
GTE Spacenet Corporation
1700 Old Meadow Road
McLean, Virginia 22102



Joy A. Freemire

* HAND-DELIVERED