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

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of the Petition of )  
 )  
DIRECTV ENTERPRISES, INC. ) RM No. 9118  
 )  
To Amend Parts 2, 25 and 100 )  
of the Commission's Rules to Allocate )  
Spectrum for the Fixed-Satellite Service and )  
the Broadcasting-Satellite Service )

**STATEMENT IN SUPPORT OF  
DIRECTV ENTERPRISES, INC.'S  
PETITION FOR RULEMAKING**

Pursuant to Section 1.405 of the Commission's rules, Lockheed Martin Corporation ("Lockheed Martin"), by its attorneys, hereby submits its Statement in Support of the Petition for Rulemaking filed by DirecTV Enterprises, Inc. ("DirecTV") in the above-captioned proceeding.

In its Petition for Rulemaking, DirecTV requested the Commission to amend Parts 2, 25 and 100 of its rules to allocate additional spectrum for the fixed-satellite service ("FSS") and the broadcasting-satellite service ("BSS"). Specifically, DirecTV requested the Commission to amend the Table of Frequency Allocations and its rules to allocate the 24.75-25.25 GHz band for FSS in the Earth-to-space direction for BSS feeder links and to allocate the 17.3-17.8 GHz band in the space-to-Earth direction for BSS downlinks.

Lockheed Martin, the licensee for the Astrolink™ System, concurs with DirecTV's request for a rulemaking proceeding to allocate additional spectrum for BSS and BSS feeder links. There is simply insufficient capacity available for use in the United States in the Planned BSS bands to support the development and expansion of new BSS businesses. Allocating the

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17.3-17.8 GHz and 24.75-25.25 GHz bands for BSS and BSS feeder links would provide essential spectrum required for the development of next-generation BSS services and advanced satellite telecommunications technologies needed to implement those services.

Further, the proposed spectrum allocations are consistent with the ITU Region 2 allocations supported by the United States. The 17.3-17.8 GHz and 24.75-25.25 GHz bands are allocated for BSS in Region 2 countries, but these allocations have not been implemented in the United States. The proposed allocations would align the international and U.S. allocations in the 17.3-17.8 GHz and 24.75-25.25 GHz bands.

However, Lockheed Martin urges the Commission to refrain from viewing the proposed rulemaking as merely an allocation of additional spectrum for traditional BSS services. Rather, as noted in the Petition for Rulemaking, the need for additional BSS capacity is also driven by the demand for new BSS services to satisfy a variety of business information, distance-learning, and broadband multimedia requirements of U.S. consumers. Although Lockheed Martin acknowledges that there may be increased demand for traditional video programming, Lockheed Martin believes that the introduction of other new and innovative BSS services will provide far greater benefits to U.S. businesses and consumers, and will help fuel the growth of the U.S. satellite industry in the years to come.

Lockheed Martin is committed to bringing such advanced satellite communications services to the U.S. market. For example, the Astrolink™ System, a Ka-band GSO FSS satellite system recently licensed by the Commission, will provide a wide array of digital voice, data, and multimedia services in the United States and around the world, and will be a critical new component of the Global Information Infrastructure ("GII"). Lockheed Martin believes that

next-generation BSS services would naturally complement and be more closely linked to the advanced, broadband satellite communications services to be provided by the Astrolink™ System than to traditional video programming. Indeed, the frequency bands under consideration are immediately adjacent to or near the Ka-band FSS frequencies in which the Astrolink™ System and other Ka-band licensees will operate.

Thus, in addition to increased competition in traditional BSS services, the allocation of "Ka-band BSS" spectrum would permit new satellite operators and Ka-band licensees to offer innovative, new BSS services to complement the FSS services to be provided at Ka-band. Notably, service providers would be able to offer relatively inexpensive satellite dishes capable of receiving both Ka-band BSS and Ka-band FSS signals, thereby lowering equipment costs for consumers and facilitating the widespread availability of advanced BSS and FSS services.<sup>1/</sup>

In this connection, the Petition for Rulemaking requests the Commission to adopt a 4.5° orbital spacing policy in the 17.3-17.8 GHz and 24.75-25.25 GHz bands. DirecTV justifies its request by suggesting, among other reasons, that the technical characteristics of these bands would permit the Commission to double the orbital resources available for Ka-band BSS services by dividing the existing U.S. BSS orbital separation requirement of 9° in half. While the simplicity of such an orbital spacing arrangement may seem appealing, Lockheed Martin believes that this approach is overly simplistic and would preclude the significant benefits derived from providing complimentary Ka-band BSS and Ka-band FSS services using a single satellite dish because it would effectively prohibit the co-location of Ka-band BSS and Ka-band

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<sup>1/</sup> In contrast, it may be more difficult and more expensive to manufacture a satellite dish capable of receiving both Ka-band BSS and C-band or Ku-band FSS signals.

FSS satellites. Lockheed Martin believes that a smaller spacing requirement may be appropriate and could permit the co-location of Ka-band BSS satellites with either U.S. Ka-band FSS satellites or BSS satellites. Despite its reservations with respect to the proposed 4.5° orbital spacing arrangement, Lockheed Martin believes that the Commission should proceed with the requested rulemaking proceeding in which interested parties will be able to fully address this and other relevant issues.

For the foregoing reasons, Lockheed Martin supports DirecTV's Petition for Rulemaking and urges the Commission to institute a rulemaking proceeding to allocate the 17.3-17.8 GHz and 24.75-25.25 GHz bands for BSS and BSS feeder links, respectively.

Respectfully submitted,

**LOCKHEED MARTIN CORPORATION**



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## CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing "Statement in Support of DirecTV Enterprises Inc.'s Petition for Rulemaking" was mailed, postage prepaid, this 31st day of July, 1997, to the following:

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