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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)
)
Amendment of the Commission's Rules)
Regarding the 37.0-38.6 GHz and)
38.6-40.0 GHz Bands)
)
Implementation of Section 309(j) of the)
Communications Act — Competitive)
Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz)

ET Docket No. 95-183
RM-8553

PP Docket No. 93-253

To: The Commission

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**CONSOLIDATED JOINT REPLY TO OPPOSITIONS OF
TRW INC. AND LOCKHEED MARTIN CORPORATION**

TRW Inc. ("TRW"), joined by Lockheed Martin Corporation ("Lockheed Martin"), hereby replies to various oppositions filed with respect to TRW's Petition for Reconsideration ("Petition") of the Commission's Report and Order in the above-captioned proceeding.^{1/} In particular, TRW and Lockheed Martin respond to assertions made by Advanced Radio Telecom Corp. ("ART"), BizTel, Inc. ("BizTel"), and WinStar Communications, Inc. ("WinStar"), and by Alcatel Network Systems, Inc., Digital Microwave Corporation, and Harris Corporation-Farion Division filing jointly ("Joint Commenters").

^{1/} *Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands*, FCC 97-391, slip op. (released November 3, 1997) ("Report and Order").

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In its Petition, TRW asked that the Commission reconsider its channelization and assignment approach to the 39 GHz bands^{2/} to ensure that a portion of the global spectrum allocation for fixed-satellite service (“FSS”) at 38.6-40.0 GHz remains viable for implementation of next-generation satellite networks.^{3/} TRW urged the Commission to achieve this result by preserving some of the global spectrum allocation for FSS use, *e.g.*, by restricting terrestrial authorizations to those frequencies below 39.5 GHz that are already widely utilized for high density fixed services outside the United States, and at a minimum, by clarifying generally that fixed/mobile service authorizations in the 39 GHz band will not confer exclusive spectrum rights, *i.e.*, that such licensees will need to coordinate with satellite operators to facilitate spectrum sharing to the extent feasible.

The oppositions filed concerning these requests take a broad brush approach, in effect urging the Commission to ignore potential use of these bands for satellite services and allow them to be set aside for exclusive terrestrial use regardless of actual opportunities for sharing between these services. In general, the oppositions contain only conclusory assertions about the appropriateness of exclusive terrestrial allocations at 39 GHz and fail to respond to the substance of TRW’s Petition.

^{2/} These bands are the frequencies from 38.6-40.0 GHz for which the Commission amended its rules in the subject Report and Order.

^{3/} The bands 37.5 - 40.5 GHz are currently allocated to FSS (space-to-Earth) on a global basis. The bands 40.5 - 42.5 GHz were allocated for FSS at the 1997 World Radiocommunication Conference (“WRC”), but the allocation is not global, and is partially subject both to further international study and to subsequent actions by a future WRC.

Contrary to the assertion by BizTel, for example, TRW has not challenged the Commission's comprehensive spectrum allocation plan.^{4/} Instead, repeating a proposal TRW first advanced nearly a year ago in the Commission's omnibus rulemaking proceeding to allocate spectrum between 36 - 51.4 GHz, TRW expressed its support for a more comprehensive approach to spectrum allocation than the Commission has taken in the instant docket. The Commission should, in TRW's and Lockheed Martin's view, pursue coordinated spectrum allocations in the ongoing proceeding in IB Docket No. 97-95 instead of the inconsistent piecemeal allocation it has made in this docket.

Similarly, and contrary to ART's claim, TRW has not asked that the operational terrestrial 39 GHz industry be placed "on hold" in anticipation of future satellite requirements.^{5/} All that TRW has requested is that the Commission adhere to the objective of promoting "flexibility" in these bands^{6/} and make clear that it is not precluding terrestrial/satellite sharing in the allocated bands. To the extent practicable, the Commission should also manage the roll-out of fixed service systems in these bands to facilitate such sharing. TRW and Lockheed Martin believe that any other course of action would be both arbitrary and short-sighted.

^{4/} Compare BizTel Opposition at 2.

^{5/} Compare ART Opposition at 3.

^{6/} See Report and Order, FCC 97-391, slip op. at 4 (¶ 1).

Indeed, as TRW noted in its Petition, the Commission stated in the Report and Order that the actions it was taking “do not alter” the existing allocation for satellite services in these bands.^{7/} This would certainly appear to leave open the possibility of development of satellite services in at least a portion of the 39 GHz spectrum. For this reason, TRW and Lockheed Martin seek a clarification that the Commission’s action in this docket does not foreclose future compatible satellite uses of the international co-primary FSS allocation, and that fixed/mobile service licensees will be expected to coordinate their use with satellite systems and to maximize spectrum efficiency in order to facilitate such sharing.^{8/}

While each of the Oppositions proclaims that the Commission justifiably concluded in its Report & Order that FSS/fixed service sharing would not be possible in these bands,^{9/} the record in the proceeding does not support such a broad conclusion. The evidence submitted in this docket concerning sharing was largely anecdotal and based on supposed fixed service studies that are not formally part of the record. In any case, sharing studies are

^{7/} Report and Order, FCC 97-391, slip op. at 9 (¶ 7). ART itself acknowledges the Commission’s statement in this regard. See ART Opposition at 3.

^{8/} WinStar’s apparent belief that the existence of previously authorized licensees in these bands should preclude the Commission from adopting standards in the future (*see* WinStar Opposition at 3) is misplaced, as there were no standards in place at the time that the initial terrestrial licenses were issued in these bands. In this era of limited spectrum availability and high demand from multiple services, the Commission’s paramount concern should be efficient spectrum utilization. Any entity that obtains its authorization in advance of the establishment of an allocation and associated service rules — particularly one that operates in a manner that is inimical to spectrum sharing — has no justifiable expectation that the Commission will perpetuate the *status quo ante*.

^{9/} See ART Opposition at 2-3; BizTel Opposition at 2-3; Joint Comments at 2; WinStar Opposition at 1-2.

only as valid as their assumptions, and the bulk of the studies relied upon by the fixed service commenters appear to have postulated only spectrum sharing involving satellite systems that would employ very small ubiquitous user Earth terminals. Such studies are clearly of no utility in determining whether high density fixed service systems might share with other types of satellite networks, *e.g.*, those using a relatively small number of widely-dispersed, larger dish earth stations. Given the wide range of satellite technologies proposed for these bands, evidenced by more than a dozen distinct applications in the recently established “V-band” processing round,^{10/} exclusion of satellite networks from these bands based on preliminary studies examining only one service model would be particularly unwarranted.

BizTel’s related suggestion that it would somehow be “inappropriate” for the Commission to consider approaches to sharing in the 39 GHz band prior to WRC-99^{11/} is nonsense. The Commission is capable of evaluating technical criteria on its own; therefore, it need not await the outcome of WRC-99 to take steps to promote sharing in a band where allocations already exist. Indeed, it is generally preferable for the U.S. to consider advantageous sharing approaches in advance of international conferences.

In summary, TRW and Lockheed Martin believe that it is incumbent upon the Commission not to foreclose shared use of spectrum between wireless and satellite service

^{10/} See FCC Public Notice, Report No. SPB-89 (DA 97-1551), released July 22, 1997, as corrected by FCC Public Notice, Report No. SPB-95 (DA 97-1723), released August 13, 1997 and FCC Public Notice, Report No. SPB-99, released September 4, 1997.

^{11/} BizTel Opposition at 3.

providers. All realistic sharing scenarios should continue to be explored. Accordingly, the Commission should clarify that, while fixed service licensees in the 39 GHz bands will receive exclusive licenses with respect to terrestrial use of the spectrum, the frequencies remain allocated for FSS as well, and FSS use may be authorized in the future to the extent that it is technically compatible with the fixed service.^{12/} In this connection, the Commission should make clear that it reserves that right to impose necessary standards to prevent inefficiencies in the design and deployment of fixed service terminals from precluding otherwise compatible satellite uses.

Respectfully submitted,

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^{12/} To the extent that ART cites language concerning the exclusivity of fixed service spectrum assignments, the language identified refers only to assignments to terrestrial service providers *vis à vis* other terrestrial licensees, and would not appear to preclude use of the same bands for space-based services. See ART Opposition at 4 (*citing Report and Order at ¶ 62*).

CERTIFICATE OF SERVICE

I, Lorene J. Miller, hereby certify that I have this 21st day of April, 1998, caused true copies of the foregoing "Consolidated Joint Reply to Oppositions of TRW Inc. and Lockheed Martin Corporation" to be served by first class mail, postage prepaid, on the following:

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