ORIGINAL

LAW OFFICES
LEVENTHAL, SENTER & LERMAN
SUITE 600
2000 K STREET, N.W.
WASHINGTON, D.C. 20006-1809

NORMAN P. LEVENTHAL
MEREDITH S. SENTER, JR.
STEVEN ALMAN LERMAN
RAUL R. RODRIGUEZ
DENNIS P. CORBETT
BARBARA K. GARDNER
STEPHEN D. BARUCH
SALLY A. BUCKMAN
DAVID S. KEIR
LINDA G. MORRISON*
J. BRECK BLALOCK
NANCY A. ORY**
WALTER P. JACOB+

*ADMITTED CA ONLY
**ADMITTED MA ONLY
+ADMITTED NY ONLY

TELEPHONE
(202) 429-8970

TELECOPIER
(202) 293-7783

OF COUNSEL
BRIAN M. MADDEN
NANCY L. WOLF

EX PARTE OR LATE FILED

September 14, 1994

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SEP 14 1994
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, NW, Room 222
Washington, DC 20554

Re: **Ex Parte Presentation -- CC Docket 92-166**

Dear Mr. Caton:

This Notice of Ex Parte Presentation is filed pursuant to Section 1.1206 of the Commission's rules. On September 14, 1994 Gordon Williams, Vice President and General Manager, Space & Electronics Group, TRW Inc., and the undersigned counsel for TRW Inc., met with Commissioner Susan Ness and legal assistant Mary McManus; Scott Harris, Chief, International Bureau; and Rudy Baca, legal assistant to Commissioner Quello, concerning the above-referenced proceeding. The discussion focused on the attached Joint Proposal and Supplemental Comments filed with the Commission in CC Docket 92-166 on September 9, 1994.

Respectfully submitted,

Norman P. Leventhal

NPL/vlp
Enclosure
cc w/out encl.: Commissioner Susan Ness
Mary McManus
Scott Harris
Rudy Baca

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BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of	)	
	)	
Amendment of the Commission's Rules to Establish Rules and Policies Pertaining To a Mobile-Satellite Service in the 1610-1626.5/ 2483.5-2500 MHz Frequency Bands	)	CC Docket No. 92-166

To: The Commission

JOINT PROPOSAL AND SUPPLEMENTAL COMMENTS

Constellation Communications, Inc., Mobile Communications Holdings, Inc. (successor in interest to Ellipsat Corp.), Motorola Satellite Communications, Inc. and TRW Inc., hereafter collectively referred to as the "Parties", hereby submit for the Commission's adoption the attached Joint Proposal and Settlement Agreement ("Joint Proposal") in this proceeding.

In the Joint Proposal, the Parties have agreed upon fair and workable solutions to most of the open issues in this proceeding. In this regard, each of the Parties has made compromises on different issues so that an agreement could be executed that best meets the individual needs of each. The spectrum sharing approach in this Agreement will facilitate the Commission's licensing of all of the qualified non-geostationary

mobile satellite applicants considered part of the June 3, 1991, processing group, and thereby avoid mutual exclusivity. This spectrum sharing approach, in conjunction with the other agreements set forth in the Joint Proposal, provide a reasonable opportunity for each of these applicants to enter into and compete in the new mobile satellite services marketplace throughout the world and will facilitate international coordination of these systems through a global accommodation of spectrum needs.

The Parties believe that the approaches set forth in the Joint Proposal -- the result of many months of negotiations -- will serve the public interest by greatly facilitating the Commission's deliberations, expediting the licensing of proposed systems, and providing for a competitive marketplace and manageable spectrum environment. The Parties therefore urge the Commission to adopt all of the approaches outlined in the Joint Proposal not only because they represent the most workable solution to the complicated matters involved, but also because they represent a good balance of interests and concerns by those most likely to be affected by the Commission's action in this proceeding.[1/]

1/ Loral/Qualcomm Partnership, L.P. participated throughout most of these negotiations but indicated that it was not willing to agree to all of the provisions contained in the Joint Proposal.

Wherefore the Parties urge the Commission to adopt the provisions set forth in the Joint Proposal in CC Docket 92-166.

Respectfully submitted,

Constellation Communications, Inc.

Robert A. Mazer, Esq.
Counsel for Constellation Communications, Inc.

Motorola Satellite Communications, Inc.

Philip L. Malet, Esq.
Counsel for Motorola Satellite Communications, Inc.

Mobile Communications Holdings, Inc.

Jill Abeshouse Stern, Esq.
Counsel for Mobile Communications Holdings, Inc.

TRW Inc.

Norman P. Leventhal, Esq.
Raul R. Rodriguez, Esq.
Counsel for TRW Inc.

September 9, 1994

CERTIFICATE OF SERVICE

I, Philip L. Malet, hereby certify that copies of the foregoing Joint Proposal and Supplemental Comments was served by first-class mail, postage prepaid, this 9th day of September 1994, on the following persons:

* Chairman Reed E. Hundt
Federal Communications Commission
Room 814
1919 M Street, N.W.
Washington, D.C. 20554

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

* Commissioner Andrew C. Barrett
Federal Communications Commission
Room 826
1919 M Street, N.W.
Washington, D.C. 20554

* Commissioner Rachelle B. Chong
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

* Commissioner Susan Ness
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

* Karen Brinkmann
Special Assistant
Office of the Chairman
Federal Communications Commission
Room 814
1919 M Street, N.W.
Washington, D.C. 20554

* Rudolfo M. Baca
Legal Advisor
Office of Commissioner Quello
Federal Communications Commission
Room 802
1919 M Street, N.W.
Washington, D.C. 20554

* Byron F. Marchant
Senior Legal Advisor
Office of Commissioner Barrett
Federal Communications Commission
Room 826
1919 M Street, N.W.
Washington, D.C. 20554

* Jane E. Mago
Richard Welch
Office of Commissioner Chong
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

* Greg Vogt
Office of Commissioner Ness
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

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

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

* Scott Harris
Director
Office of International Communications
Federal Communications Commission
Room 658
1919 M Street, N.W.
Washington, D.C. 20554

* James R. Keegan
Chief, Domestic Facilities Division
Common Carrier Bureau
Federal Communications Commission
2025 M Street, NW, Room 6010
Washington, DC 20554

* Thomas Tycz
Deputy Chief
Domestic Facilities Division
Common Carrier Bureau
Federal Communications Commission
Room 6010
2025 M Street, N.W.
Washington, D.C. 20554

* Cecily C. Holiday
Chief, Satellite Radio Branch
Federal Communications Commission
Room 6324
2025 M Street, N.W.
Washington, D.C. 20554

* Fern J. Jarmulnek
Satellite Radio Branch
Federal Communications Commission
2025 M Street, NW, Room 6324
Washington, DC 20554

* William Kennard
General Counsel
Federal Communications Commission
Room 614
1919 M Street, N.W.
Washington, D.C. 20554

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

* Donald H. Gips
Deputy Chief
Office of Plans and Policy
Federal Communications Commission
1919 M Street, N.W.
Room 822
Washington, D.C. 20554

Michael Nelson, Ph.D.
Special Assistant --
Information Technology
Office of Science and Technology
Policy
Old Executive Office Bldg.
Room 423
17th & Pennsylvania Ave., N.W.
Washington, D.C. 20500

Mr. Lawrence Irving
Assistant Secretary for
Communications and Information
NTIA
U.S. Department of Commerce
14th & Constitution Ave., NW
Room 4898
Washington, DC 20230

Ms. Jean Prewitt
Associate Administrator
NTIA/OIA
U.S. Department of Commerce
14th & Constitution Ave., NW
Room 4720
Washington, DC 20230

Mr. Jack A. Gleason
Division Director
NTIA/OIA
U.S. Department of Commerce
14th & Constitution Ave., NW
Room 4701
Washington, DC 20230

Mr. Richard D. Parlow
Associate Administrator
Office of Spectrum Management
NTIA
U.S. Department of Commerce
14th & Constitution Ave., NW
Washington, DC 20230

Mr. William Hatch
NTIA
Room 4096
U.S. Department of Commerce
14th & Constitution Ave., NW
Washington, DC 20230

Bruce D. Jacobs, Esquire
Glenn S. Richards, Esquire
Fisher Wayland Cooper Leader
& Zaragoza L.L.P.
2001 Pennsylvania Ave., N.W.
Suite 400
Washington, D.C. 20006-1851
(Counsel for AMSC)

Lon C. Levin
Vice President
American Mobile Satellite Corp.
10802 Parkridge Blvd.
Reston, VA 22091

Leslie Taylor, Esquire
Leslie Taylor Associates
6800 Carlynn Court
Bethesda, MD 20817-4302
(Counsel for Loral Qualcomm)

* John T. Scott, III, Esquire
William Wallace, Esquire
Robert Halperin, Esquire
Crowell & Moring
1001 Pennsylvania Ave., N.W.
Washington, D.C. 20004-2505
(Counsel for Loral Qualcomm)

* Dale Gallimore, Esquire
Counsel
Loral Qualcomm
7375 Executive Place, Suite 101
Seabrook, MD 20706

Don F. Tang
President
Lockheed Space Systems
P.O. Box 3405
Dept. 60-01
Bldg. 104
Sunnyvale, CA 94088-3504

C. Dale Reis
Vice President
Raytheon Corporation
1001 Boston Post Road
Marlborough, MA 01752

Nancy J. Thompson
COMSAT Mobile Communications
22300 COMSAT Drive
Clarksburg, MD 20871

Dr. Robert L. Riemer
Committee on Radio Frequencies
HA-562
National Research Council
2101 Constitution Ave., N.W.
Washington, D.C. 20418

Richard G. Gould
Telecommunications Systems
1629 K Street, N.W.
Suite 600
Washington, D.C. 20006

John L. Bartlett
Wiley, Rein & Fielding
1776 K Street, N.W.
Washington, D.C. 20006
(Counsel for ARINC/ATA)

Edward R. Adelson
Vice President
Industry Activities
Aeronautical Radio, Inc.
2551 Riva Road
Annapolis, MD 21401-7465

Linda C. Sadler
Manager, Government Affairs
Rockwell International Corp.
1745 Jefferson Davis Highway
Arlington, VA 22202

Guy M. Gooch
Director, Systems Engineering
Mobile Communications Satellite Systems
Rockwell International Corp.
400 Collins Road, NE
Cedar Rapids, IA 52498

Paul J. Sinderbrand, Esquire
Dawn G. Alexander, Esquire
Sinderbrand & Alexander
888 16th Street, N.W.
Suite 610
Washington, DC 20006-4103
(Counsel for Wireless Cable
Association International, Inc.)

Robert A. Frazier
Gerald G. Markey
Spectrum Engineering & Planning
Division - ASM-500
Federal Aviation Administration
800 Independence Avenue, S.W.
Washington, D.C. 20591

Paul R. Schwedler
Carl Wayne Smith
National Communications System
Dept. of Defense
Code AR
Defense Information Systems Agency
701 S. Courthouse Rd.
Arlington, VA 22204

David Struba
NASA Headquarters
Code OI
Washington, D.C. 20546

Dr. Willem A. Baan
Cornell University
Spectrum Manager, and
Senior Research Associate
National Astronomy and
Ionosphere Center
P.O. Box 995
Arecibo, PR 00613

Scott A. Sawyer
TX-ACSEC
Assistant Attorney General
State of Texas
P.O. Box 12548
Austin, TX 78711-2548

Donald K. Dement
President
Novacom, Inc.
1568 Ritchie Lane
Annapolis, MD 21401

Theodore A. Miles
National Public Radio, Inc.
635 Massachusetts Ave., N.W.
Washington, D.C. 20001-3753

Peter A. Rohrbach
Hogan & Hartson L.L.P.
555 13th Street, N.W.
Washington, D.C. 20004
(Counsel for Mobile Datacom)

J.H. Nunnally
General Manager, Communications
Division
Electronics Systems
Westhinghouse Electric
Elkridge Landing Road
P.O. Box 1693
Baltimore, MD 21090

Tom W. Davidson
Akin, Gump, Strauss, Hauer
& Feld, L.L.P.
1333 New Hampshire Ave., N.W.
Suite 400
Washington, D.C. 20036
(Counsel for Teledesic)

David Cosson
National Telephone Cooperative
Association
2626 Pennsylvania Ave., N.W.
Washington, D.C. 20037

H.W. Beningfield, Ph. D.
Director of Engineering
Honeywell, Inc.
5353 West Bell Road
M/S51RAV
Glendale, AZ 85308-9000

Eugene S. Cavallucci
Harris Corporation
Aeorspace Systems Division
P.O.Box 94000
Melbourne, Fl 32902-9400

Larry P. Yermack
Fairchild Space and Defense
Corp.
20301 Century Blvd.
Germantown, MD 20874

Stephen L. Goodman
Halpern, Temple & Goodman
Suite 650
East Tower
1100 New York Ave., N.W.
Washington, D.C. 20005

David A. Gross
AirTouch Communications
1818 N Street, N.W.
Washington, D.C. 20036

Bernard J. Trudell
6100 Westchester Park Drive
College Park, MD 20740

Trevor Nash
Barclays de Zoete Wedd Ltd
Ebbgate House
2 Swan Lane
London, England EC4R 3TS

J.D. Hersey
Chief, Spectrum Management
U.S. Coast Guard
2100 Second Street, S.W.
Washington, D.C. 20593-0001

Philip L. Malet

* Delivery by hand.

JOINT PROPOSAL AND SETTLEMENT AGREEMENT

This Joint Proposal and Settlement Agreement ("Agreement") dated this 8th day of September 1994, by and between Constellation Communications, Inc. ("**Constellation**"), Mobile Communications Holdings, Inc. ("**MCHI**", successor in interest to Ellipsat Corp.), Motorola Satellite Communications, Inc. ("**Motorola**") and TRW Inc. ("**TRW**") (collectively referred to herein as the "Parties") is being entered into for the purpose of settling their differences and submitting a joint proposal to the Federal Communications Commission ("FCC" or "Commission") in CC Docket No. 92-166.

For the purpose of this Agreement, an "MSS permittee/licensee" means those non-geostationary systems considered part of the June 3, 1991 processing group established by the FCC for the Above 1 GHz Mobile Satellite Service ("MSS") applicants.

For the purpose of this Agreement, a "CDMA system" and a "TDMA system" means an MSS permittee/licensee which uses CDMA or TDMA/FDMA modulation techniques, respectively.

The Parties hereby submit to the FCC in CC Docket No. 92-166 the following points of agreement between them:

1. Band Segmentation Plan

(a) Subject to Sections 3, 5, 6 and 7, the 1610-1626.5 MHz band should be segmented as follows:

(1) 1610-1621.35 MHz	Shared among the CDMA systems (Constellation, MCHI, TRW and Loral/QUALCOMM Partnership ("LQP")).
(2) 1621.35-1626.5 MHz	Exclusive use by the TDMA system.

(b) Constellation, MCHI and TRW agree to operate as CDMA systems and no CDMA system shall be allowed to change to a TDMA system.

(c) The entire 2483.5-2500 MHz band should be assigned to and shared by the CDMA systems.

(d) The aforementioned bands should only be assigned to non-geostationary MSS systems.

(e) If the TDMA system ceases to hold its construction permit or license, then the CDMA systems should gain access to the entire 1610-1626.5 MHz band.

(f) If all of the CDMA systems cease to hold their construction permits or licenses, then the TDMA system should gain access to the entire 1610-1626.5 MHz band.

(g) Each CDMA MSS permittee/licensee should be authorized to construct its system over the entire 1610-1626.5 MHz and 2483.5-2500 MHz bands, and the TDMA MSS permittee/licensee should be authorized to construct its system over the 1616-1626.5 MHz band.

2. Avoidance of Mutual Exclusivity

The adoption of the terms of this Agreement by the FCC avoids mutual exclusivity in this proceeding.

3. Resolution of GLONASS Issue

The following is based upon the information received by the Parties on the recent discussions between the United States and the Russian Administration regarding the coordination of the GLONASS system.

(a) The Parties understand as follows:

(1) An agreement on GLONASS CA code spectrum utilization and implementation timing between the United States and Russia will be concluded; and

(2) The standards for the use of GLONASS signals for aeronautical radionavigation will be established by the RTCA, Inc. ("RTCA") and in the U.S., will be adopted or rejected by the Federal Aviation Administration ("FAA"). Engineering criteria, such as receiver protection criteria, aircraft operational scenarios, and methods for determining utilization of GLONASS (e.g., protection of individual channels vs. navigation integrity) and other criteria will be developed by the RTCA. It is anticipated that the RTCA criteria will be adopted by the FAA.

(b) If GLONASS is operating the CA code at no higher than Channel +6 (1605.375 MHz center frequency), and the EIRP emissions level for MSS mobile earth stations which are required to protect GLONASS receivers utilizing the CA code is set at no lower than -70 dBW/4 kHz, then no adjustment for GLONASS operations to the band segmentation plan set forth in Section 1 above is necessary.

(c) Until such time as 3(b) occurs, the MSS permittees/licensees should share the burden caused by the loss of the use of any spectrum impaired by GLONASS operations and not available for MSS in the 1610-1626.5 MHz band, and any such burden should be equitably apportioned among the CDMA and TDMA systems in a manner to be determined as outlined below:

(1) Once the events identified in 3(a) above have occurred, the Parties agree to negotiate in good faith for a period of 60 days to determine the amount of spectrum above 1610 MHz which is likely to be impaired for MSS operations and to reach agreement on how to equitably apportion the burden of the loss of the use of any such impaired spectrum. Any MSS permittee/licensee not a Party hereto should be required by the FCC to participate in these negotiations in good faith.

(2) If all the events identified in 3(a) above have not occurred by April 1, 1995, the negotiations identified in

3(c)(1) above should promptly begin based on the information available at that time, unless all Parties agree to postpone the negotiations at that time.

(3) At the conclusion of the 60 day period identified in 3(c)(1), if agreement is not reached, the Parties will file within 10 days a joint request to the FCC to resolve the issue on an expedited basis.

(4) In order to make a determination as to whether the use of any MSS spectrum is impaired by GLONASS operations, the MSS permittees/licensees and, if necessary, the FCC should consider the following factors:

- GLONASS receiver specifications and interference susceptibility criteria and method of calculating navigational capability;
- MSS out-of-band emissions limitations;
- Practicability of employing filters on MSS terminals (volume, weight and cost);
- Extent to which GLONASS channels above Channel +6 will be used;
- Satellite-to-satellite over-the-horizon (GLONASS into MSS) interference issues;
- Extent to which the impaired spectrum can be used for some commercial MSS applications by the MSS permittees/licensees; and
- Any other relevant factors.

(5) The equitable apportionment of the burden caused by the loss of the use of impaired spectrum should take into account maximization of the use of the available

spectrum by licensed systems with due regard to channelization of the systems, the time frame for any modification to the GLONASS frequency plan, the schedule for commencement of commercial operations by the licensed MSS systems, and the possible reduction in available MSS spectrum as a result of international coordination with MSS systems.

(6) Any such band plan to address spectrum impairment would only take effect if by the time the second CDMA system certifies that it has begun providing "Commercial MSS Service," GLONASS is operating in such a manner as to impair MSS operations above 1610 MHz as determined pursuant to this Section 3.

(7) "Commercial MSS Service" is defined for each system as the launch and operation of the minimum number of satellites through which space segment capacity can be utilized to provide two-way voice service for which revenues are generated; provided however, that the operating satellites represent at least 25 percent of the authorized fully operational satellite constellation.

(8) MSS satellite systems and associated handsets shall have the capability to operate within the spectrum plan determined pursuant to this Section 3 to the extent such operation is required.

(9) The spectrum plan developed pursuant to this Section 3 should remain in effect until 3(b) above has occurred or until otherwise agreed to by the MSS permittees/licensees.

4. CDMA Coordination Procedures and Timing

(a) All CDMA systems should attempt to coordinate in accordance with the procedures and mechanisms set forth in the attached relevant portions of the negotiated rulemaking report. CDMA

MSS permittees/licensees will use their best efforts to agree upon baseline coordination parameters.

(b) CDMA MSS permittees/licensees will attempt to coordinate their systems to maximize the channel capacity of their respective systems.

(c) The coordination process should begin within thirty days of the grant of a construction permit to the second CDMA system and following completion of initial coordination CDMA MSS permittees/licensees may amend system designs accordingly.

5. Subsequent Spectrum Assignments (If only One CDMA System Becomes Operational)

If only one of the CDMA systems and the TDMA system become operational, all or a portion of the 1618.25-1621.35 MHz band would be available for assignment or reassignment only to the two remaining MSS systems in the U.S. (with any recoordination throughout North America as may be necessary) based upon a showing of need. Either system operator can petition the FCC to open a proceeding to consider such reassignment at any time that it is clear that at most one CDMA system will become operational.

6. Out-of-Band Emissions Mask Between CDMA and TDMA Band Segments

The MSS permittees/licensees will enter into coordination discussions and negotiate in good faith for a period of 60 days in conjunction with the negotiations involving the GLONASS band plan as set forth in Section 3, provided however, that such negotiations are to begin no later than April 1, 1995, in order to develop an emissions mask between the CDMA and TDMA band segments pursuant to the following statement of principles:

(a) The recognition that the primary MSS uplink transmissions and, to the maximum extent technically and economically practicable, the secondary MSS downlink transmissions, are to

be protected from interference across the CDMA/TDMA band segment boundary; and

(b) To the extent that a guard band may be required, the equitable sharing of the burden among MSS permittees/licensees of any loss or impairment of use of MSS spectrum resulting from interference caused by CDMA systems to the TDMA system, and vice versa, operating in adjacent segments within the 1610-1626.5 MHz band.

Absent an agreement of the MSS permittees/licensees, the dispute will be jointly presented to the FCC for expeditious resolution within 10 days of the end of the 60 day negotiating period.

7. Global Band Segmentation Sharing Requirement

(a) In North America,[1] operations by MSS permittees/licensees would be limited to the same spectrum assignments permitted in the U.S. as set forth in Sections 1 and 5, above.

(b) For the period of time specified in 7(d) below, outside of North America, MSS permittees/licensees would be authorized to operate their systems as follows:

(1) CDMA systems would be limited to the 1610-1619.75 MHz band; and

(2) The TDMA system would be limited to the 1619.75-1626.5 MHz band.

(c) All U.S. international coordination activity should be based upon the band segmentation plans set forth in 7(a) and 7(b) above.

1/ For purposes of Sections 5 and 7, North America means ITU Region 2 north of 14 degrees N. Latitude.

(d) The requirements and restrictions of 7(b) above will not apply after the earlier of the following dates:

(1) Two years after the first U.S. MSS permittee/licensee begins providing "Commercial MSS Services," as defined in Section 3(c)(7); or

(2) By the time the second U.S. MSS permittee/licensee begins providing "Commercial MSS Services," as defined in Section 3(c)(7).

(e) The FCC should provide that no U.S. MSS permittee/licensee can seek or accept an exclusive assignment of the entire 1610-1626.5 MHz band segment or otherwise enter into any arrangement that would exclude other MSS systems from providing service in any foreign country.

8. Financial Qualifications Standard

(a) Each system applicant must show financial preparedness, including reliance on projected revenues and future public offerings, in conjunction with the FCC's adoption of defined progress milestones in order to be found sufficiently qualified to obtain a construction permit.

(b) Within one year from the date of grant of its construction permit, each MSS permittee/licensee must demonstrate to the FCC that it meets the FCC's Domestic Fixed Satellite Service financial standard (current assets, which need not be committed to the project, and/or committed outside financing) sufficient to construct, launch and operate for one year at least 25 percent of the total authorized fully operational satellite constellation and TT&C ground segment.

9. U.S. Coverage Requirement

Each CDMA and TDMA system should be capable of providing MSS on a continuous basis throughout all fifty states, plus Puerto Rico and

the U.S. Virgin Islands (i.e., that at least one satellite will be visible above the horizon at an elevation angle of at least 5 degrees at any point).

10. Global Coverage Requirement

Each CDMA and TDMA system should be capable of providing MSS to all areas of the world between 70 degrees North and 55 degrees South Latitudes at least 75 percent of every 24-hour period (i.e., that at least one satellite will be visible above the horizon at an elevation angle of at least 5 degrees for at least 18 hours each day).

11. Implementation Milestones

The FCC should adopt the following milestones:

(a) Commencement of construction milestones:[2]

2/ Commencement of construction must require more than the signing of a contract with a satellite manufacturer. All MSS permittees/licensees shall, within 10 days after a required implementation milestone as specified in the system authorization, certify to the Commission that the milestone has been met or notify the Commission by letter that it has not been met. Certification of meeting a milestone shall include specific information on the progress of satellite design, ordering of system parts, and financial expenditures toward satellite construction. At its discretion, the Commission may require the submission of additional information (supported by a person or persons with knowledge thereof) to demonstrate that the milestone has been met. It is anticipated that MSS permittees/licensees will submit this information pursuant to confidentiality requests. If any such request is denied by the FCC, parties would only be entitled to review this information subject to a suitable protective order.

Within one year of grant,[3] commence construction of first two satellites.

Within two years of grant, commence construction of 50 % of the satellites in the authorized constellation.

Within three years of grant, commence construction of 100 % of the satellites in the authorized constellation.

(b) Completion of construction milestones:[4]

Within four years of grant, complete construction of first two satellites.

Within five years of grant, complete construction of 50 % of the satellites in the authorized constellation.

Subject to Section 11(d) below, within six years of grant, complete construction of 100 % of the satellites in the authorized constellation.

(c) Subject to Section 11(d) below, within six and a half years of grant, launch and operation of the entire authorized constellation.

(d) The FCC should adopt a rule which permits downstream flexibility in meeting any remaining milestones once fifty percent of an authorized satellite constellation is built. This should include a procedure for subsequent phase in of milestones based upon a showing of good cause. In no event

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3/ Grant for purposes of these milestone schedules means the date a construction permit is awarded to the MSS applicant which includes all necessary feeder link assignments (including conditional feeder link authorizations) as set forth in Section 13 below.

4/ Completion of construction means the satellite is ready to be shipped to the launch site.

would any MSS permittee/licensee's milestone schedule for launch and operation of its entire system be extended by more than two (2) years.

(e) The FCC should adopt a requirement that it will issue an order, subject to prior comment by the MSS permittee/licensee, before declaring any permit or license null and void.

12. Regulatory Treatment of Space Segment

Non-geostationary MSS system operators may elect to provide space segment capacity on a non-common carrier basis.

13. Feeder Links

(a) To the extent possible, the FCC should accommodate all MSS feeder link assignment requests including all steps necessary to achieve feeder link allocations in the specified bands for the full amount requested by the Parties. Preferable assignments are as follows:

(1) Constellation: At least 200 MHz of uplinks and 200 MHz of downlinks below 7075 MHz.

(2) MCHI: 6725-7025 MHz for downlinks and 300 MHz at Ku-band or lower for uplinks.

(3) TRW: Approximately 300 MHz in the 19/20 GHz band for downlinks and approximately 300 MHz in the 29/30 GHz band for uplinks.

(4) Motorola: 19.4-19.6 GHz for downlinks and 29.1-29.3 GHz for uplinks.

(b) With respect to 13(a) above, all necessary steps include an indication in the Report & Order in CC Docket No. 92-166 (expected to be released in October 1994, hereinafter "Report

& Order") that the FCC intends to issue conditional or unconditional authorizations for using the specified bands.

(c) The FCC should reaffirm its interpretation of international RR 2613 in the NPRM in CC Docket No. 92-166 at ¶¶ 72-74, and seek the adoption of its interpretation internationally.

14. Procedures for Implementing Settlement Agreement

(a) If the FCC adopts all the material terms of this Agreement in its Report & Order, the Parties agree to amend their applications to conform to the Report & Order.

(b) If the Report & Order is inconsistent in any respect with the terms of this Agreement, and any Party asserts in good faith by written notice to all of the other Parties by telecopy to counsel of record within five (5) business days of the release of the Report & Order that these inconsistencies are material to it, then the Parties agree to negotiate in good faith to modify this Agreement to attempt to conform to the Report & Order and/or to seek reconsideration of or appeal those aspects of the Report & Order which are inconsistent with this Agreement. If the Parties cannot agree on a modified agreement within twenty (20) days of the release of the Report & Order and decline jointly to seek reconsideration of the Report & Order, this Agreement is terminated and all Parties will have no further rights or obligations hereunder.

(c) If no Party gives notice under 14(b) above, the Parties agree to withdraw petitions and objections against each other's applications and Section 319(d) waiver requests, and further agree not to file challenges to any future amendment or request to the extent such amendments or requests are consistent with this Agreement.

(d) No Party will file any objections, petitions, oppositions or comments in opposition to any pending Section 319(d) waiver request on file at the FCC and submitted by any other Party to