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June 11, 2001

Mr. Jim Burtle
Chief, Experimental Licensing Branch
Electromagnetic Compatibility Division
Office of Engineering & Technology
Federal Communications Commission
455 12th Street, SW
Washington, DC 20554

Re: MDS America, Incorporated -- Phase I Test Plan for Clewiston,
Florida Experimental Testing under Call Sign: WC2XPU, File No.
0095-EX-PL-2001

Dear Mr. Burtle:

In accordance with Sections 1.7, 1.51(c) and 5.55(b) of the Commission's rules, 47 CFR §§1.7, 1.51(c) and 5.55(b), as well as paragraph 11 of the Commission's Authorization in MDS America, Incorporated's ("MDS America's") experimental license (File No. 0095-EX-PL-2001), enclosed for filing is an original plus four copies of the Phase I test plan for MDS America's Clewiston, Florida area experimental testing.

If you have any questions regarding the test plan, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "James W. Olson".

James W. Olson

JWO:vz

Enclosure

cc: Anthony Serafini

Clewiston Test Plan Phase I Testing For MDS America, Inc.

Prepared By



June 11 2001

**Bahman Badipour, Ph.D.
LCC International, Inc.
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Table of Contents

<u>Introduction</u>	3
<u>Test Methodology</u>	3
<u>MDS Transmitter Configuration</u>	4
<u>Field Measurements</u>	5
<u>Data Analysis and Report</u>	6
<u>Timetable for Transmission</u>	6

INTRODUCTION

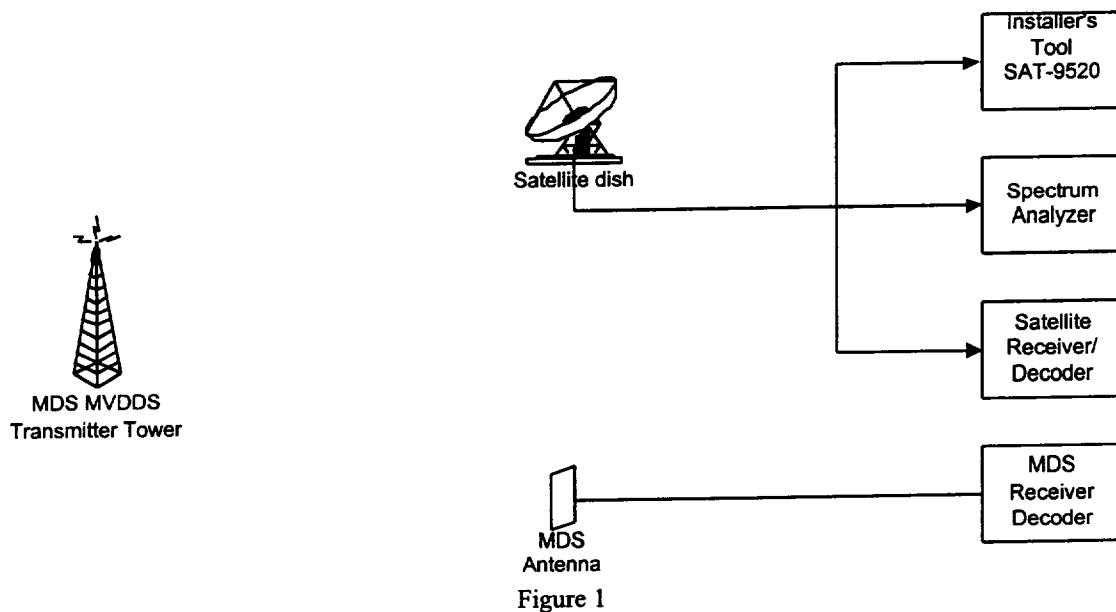
MDS America has been granted an experimental license by the Federal Communications Commission (FCC) for the purpose of demonstrating and testing the HyperCable broadband wireless technology developed by MDS International. Pursuant to this license, the following Phase I test plan is proposed in order to determine the ability of the MDS technology to share use of the 12.2-12.7GHz band with Direct Broadcast Satellite (DBS) systems. These tests will be conducted in a rural environment, near Clewiston, Florida under the designated call sign WC2XPU.

The primary objective for the test in Clewiston is to measure the HyperCable signal and to monitor the DBS satellite signals (DirecTV and EchoStar) in the presence of an MDS transmitter. Tests will be conducted at various receiving antenna sites and during a variety of atmospheric conditions, including rainy conditions (contingent on permission of the Experimental Licensing Branch of OET), within the test service area. Test sites will include sites that appear to be worst-case interference conditions.

TEST METHODOLOGY

The general test methodology is to measure and record changes in the DBS $C/(N+I)$ and Bit Error Rate (BER) with the MDS transmitter ON and OFF. An MDS transmitter will be placed at a height of 30 meters and will transmit in an Easterly direction for a worst-case scenario. While the MDS transmitter is ON, a series of measurements will be made and recorded. At each test site, the DBS receiver will be set up to receive signal and display from one of the visible satellites. An MDS receiver will also be set up to receive and display the MDS signal. A simplified view of the test configuration is shown in Figure 1. Next, the MDS transmitter will be turned OFF and again a series of measurements will be performed.

Test receive sites will be selected with the intention to represent random variation as well as the worst-case scenarios. These sites will be chosen in different directions and distances from the transmitter, including sites very close to the MDS transmitter. Reception of the MDS signal is not a prerequisite for choosing a reception test site.



The measurement equipment, instrumentation, and DBS receivers will be installed in a van for field transportation and deployment. The equipment will include:

- DBS Meter SAT 9520
- DBS systems purchased on the general market
- Spectrum analyzer model E4407B
- Television monitor
- Portable Boom lift
- Multi-media Equipment Van
- Titanium G4 Laptop Computer
- GPS receiver

MDS TRANSMITTER CONFIGURATION

The MDS transmitter will be installed on an existing telecommunications tower at a height of 30 meters (AGL). The transmitter output power will initially be set to 24 dBm Effective Isotropic Radiated Power (EIRP) with the maximum possible bandwidth of 500 MHz centered at 12.450 GHz. The transmit antenna will be pointed in an Easterly direction, and with horizontal polarization.

The transmitter and related equipment are as follows:

- Custom Horn Antenna, 180°, H pol, 24 dB gain
- One Block ODU, Transmitter power 0 dBm max
- One L band amplifier with variable attenuator
- One IDU, 10 MHz Clock reference, 50 meters of RG 214 cable

To facilitate the evaluation process, the MDS transmitter will be periodically turned ON and OFF during the field tests as shown in the timetable attached. Short term variations of schedule will be reported to the Experimental Licensing Branch. The MDS transmitter site will be manned so that any transmitter adjustments can be made as required by the tests. Power, bandwidth and center frequency adjustments may be made during initial stages of the field operations. Beam tilt will initially be set at 0°, but some beam tilt adjustment may be made as the tests proceed.

FIELD MEASUREMENTS

Prior to commencement of testing, the MDS transmitter will be calibrated for the maximum output power. Thereafter regular field strength tests will be made using a calibrated EIRP test set. The calibrated EIRP test set will also be used for maintaining the DBS receiver set calibration. At each site, measurements will be made using both the DBS receiver set and the calibrated EIRP test set.

A benchmark BER test will be performed to establish the clear sky DBS BER and (C/N) with the MDS transmitter OFF. During testing, with the MDS transmitter in the OFF state, the measured DBS BER and (C/N) will be compared to the benchmark and deviations and possible causes will be recorded.

The procedure for each test site is as follows:

1. The calibrated EIRP test set antenna, the DBS antenna and the MDS receive antenna will be positioned at a height of approximately 1 - 5 meters and a GPS reading will be taken. Heights will be chosen to represent typical DBS subscriber DBS Antenna installation.
2. The DBS satellite receiver will be set to receive the satellite signal. Carrier power will be measured using the Agilent ESA-E Spectrum Analyzer. The signal strength count, (C/N) and

BER will be read from the SAT 9520 and recorded. The audiovisual signal quality will be monitored using a television.

3. The MDS Transmitter will be turned ON and the MDS receiver will be set to receive its signal, which will be monitored using a television.
4. With the MDS transmission system ON, the satellite carrier power will be measured using the Agilent ESA-E Spectrum Analyzer. The signal strength count and BER will be observed and recorded. The audiovisual signal quality will also be monitored.
5. A site log will be maintained with all the comments and notations about the sites and conditions.

DATA ANALYSIS AND REPORT

During testing and following the completion of Phase I testing, test results will be processed and analyzed by LCC International. Recommendations for further testing, if any, will be made by LCC during or after the Phase I testing.

TIMETABLE FOR TRANSMISSION

Date	Start Time	End Time	Transmitter Status	Transmission Type
Jun 18, 2001	12:00	14:00	ON	Intermittent
Jun 18, 2001	16:00	18:00	ON	Intermittent
Jun 19, 2001	08:00	12:00	ON	Intermittent
Jun 19, 2001	14:00	18:00	ON	Intermittent
Jun 20, 2001	08:00	12:00	ON	Intermittent
Jun 20, 2001	14:00	18:00	ON	Intermittent
Jun 21, 2001	08:00	12:00	ON	Intermittent
Jun 21, 2001	14:00	18:00	ON	Intermittent
Jun 22, 2001	08:00	12:00	ON	Intermittent
Jun 22, 2001	14:00	18:00	ON	Intermittent