

## **RADIO STATION AUTHORIZATION**

 Name: MCI Communications Services, Inc.
 Call Sign: E930190

 Authorization Type: Renewal of License
 File Number: SES-RWL-20030624-00894

 Common Carrier
 Grant date: 06/27/2003
 Expiration Date: 06/25/2018

Nature of Service: Domestic Fixed Satellite Service Nature of Service: International Fixed Satellite Service

Class of Station: Fixed Earth Stations

#### A) Site Location(s)

# Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)	
1) 1	ROUTE 120, 494 ROXBURY POND ANDOVER #6, OXFORD, ME 04216	44°37'58.2"N	70°41'55.3"W	269.75	83	

Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209

Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning June 25, 2003 (3 AM Eastern Standard Time) and ending June 25, 2018 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is June 25, 1994 (3 AM Eastern Standard Time). Grantee must file with the Commission a certification upon completion of construction and commencement of operation.

## **B)** Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands. The General Provision 1900 applies to all transmitting frequency bands. For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarizatio Code	on Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services	
1)	5925.0000-6425.0000	H,V	36M0F3W	Tx	80.40	40.85	9.3M			
2)	5925.0000-6425.0000	H,V	51K2G2W	Tx	62.27	51.20	9.3M			
3)	5925.0000-6425.0000	H,V	51K2G7W	Tx	62.27	51.20	9.3M			
4)	5925.0000-6425.0000	H,V	69M0G2W	Tx	93.56	51.20	9.3M			
5)	5925.0000-6425.0000	H,V	69M0G7W	Tx	93.56	51.20	9.3M			
6)	5850.0000-5925.0000	H,V	36M0F3F	Tx	82.90	55.90	9.3M		ANALOG VIDEO	
7)	5850.0000-5925.0000	H,V	51K2G2W	Tx	76.90	65.83	9.3M		DIGITAL VIDEO	
8)	5850.0000-5925.0000	H,V	51K2G7W	Tx	76.90	65.83	9.3M		DIGITAL AUDIO	
9)	5850.0000-5925.0000	H,V	69M0G2W	Tx	82.90	40.53	9.3M		DIGITAL VIDEO	



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#	Frequency (MHz)	Polarizatio Code	on Emission	Tx/Rx Mode	EIRP /Carrier (dBW)	Density /Carrier (dBW/4kHz)	Associated Antenna	Provisions (Refer to Section H)	Modulation/ Services
10)585	0.0000-5925.0000	H,V	69M0G7W	Tx	82.90	40.53	9.3M		DIGITAL AUDIO
11) 370	0.0000-4200.0000	H,V	36M0F3W	Rx			9.3M		
12)370	0.0000-4200.0000	H,V	51K2G2W	Rx			9.3M		
13)370	0.0000-4200.0000	H,V	51K2G7W	Rx			9.3M		
14) 370	0.0000-4200.0000	H,V	69M0G2W	Rx			9.3M		
15)370	0.0000-4200.0000	H,V	69M0G7W	Rx			9.3M		
16)362	5.0000-3700.0000	H,V	36M0F3F	Rx			9.3M		ANALOG VIDEO
17)362	5.0000-3700.0000	H,V	51K2G2W	Rx			9.3M		DIGITAL VIDEO
18)362	5.0000-3700.0000	H,V	51K2G7W	Rx			9.3M		DIGITAL AUDIO
19)362	5.0000-3700.0000	H,V	69M0G2W	Rx			9.3M		DIGITAL VIDEO
20)362	5.0000-3700.0000	H,V	69M0G7W	Rx			9.3M		DIGITAL AUDIO

## **C) Frequency Coordination Limits**

		Satellite Arc (Deg. Long.)	Elevation (Degrees)	Azimuth (Degrees)	Max EIRP Density toward	
#	Frequency Limits (MHz)	East West Limit Limit	East West Limit Limit	East West Limit Limit	Horizon (dBW/4kHz)	Associated Antenna(s)
1)	5850.0000-6425.0000	0.1W-139.0W	05.0-06.6	103.9-254.4	26.02	9.3M
2)	3625.0000-4200.0000	0.1W-139.0W	05.0-06.6	103.9-254.4		9.3M

#### **D)** Points of Communications

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

1) 1 to Permitted Space Station List

2) 1 to INTELSAT 605 satellites @ 332.5 E.L. of the INTELSAT system (U.S.-licensed)



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#### E) Antenna Facilities

	Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1		9.3M	1	9.3	ANDREW	ES93HS	269.75	10.4 AGL/ 280.15 AMSL	
	Max Gains(s): 50.5 dBi @ 4.0000 GHz 53.9 Maximum total input power at antenna flange (Watts) = Maximum aggregate output EIRP for all carriers (dBW) =					= 1,585.00	00 GHz		

#### F) Remote Control Point:

1

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### G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions

- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
  - 1010 --- Applicable to all receiving frequency bands. Emission designator indicates the maximum bandwidth of received signal at associated station(s). Maximum EIRP and maximum EIRP density are not applicable to receive operations.
  - 1900 --- Applicable to all transmitting frequency bands. Authority is granted to transmit any number of RF carriers with the specified parameters on any discrete frequencies within associated band in accordance with the other terms and conditions of this authorization, subject to any additional limitations that may be required to avoid unacceptable levels of inter-satellite interference.
  - 2010 --- This authorization is issued pursuant to the Commission's Second Report and Order adopted June 16, 1972 (35 FCC 2d 844) and Memorandum, Opinion and Order adopted December 21, 1972 (38 FCC 2d 665) in Docket No. 16495 and is subject to the policies adopted in that proceeding.
  - 2454 --- All satellite uplink transmissions carrying broadband video information shall comply with the Automatic Transmitter Identification System (ATIS) requirements of Section 25.281 of the Rules, as modified by FCC Report No. DS-1066, released on April 3, 1991.
  - 2641 --- The provision of purely domestic service via the INTELSAT satellites is prohibited.
  - 2916 --- Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines.



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- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
  - 3219 --- All existing transmitting facilities, operations and devices regulated by the Commission must be in compliance with the Commission's radiofrequency (RF) exposure guidelines, pursuant to Section 1.1307(b)(1) through (b)(3) of the Commission's rules, or if not in compliance, file an Environmental Assessment (EA) as specified in Section 1.1311. See 47 CFR § 1.1307 (b) (5).
  - 3428 --- This authorization is not to be construed as including any uplink or downlink authority in other countries.
  - 3465 --- This authorization is subject to the policies adopted in the Report and Order, "Amendment of the Commission's Regulatory Policies to allow Non-US-Licensed Space Stations to provide Domestic and International Satellite Services in the United States," IB Docket 96-111, FCC 97-399 (Released November 26, 1997). (DISCO II)
  - 5011 --- The Licensee(s) shall maintain on file with the Commission a current list or plan of the precise frequencies in use at the station, specifying for each frequency the RF center frequency, polarization, emission designator, nominal EIRP (in dBW) and maximum EIRP density (in dbW/4kHz). This list or plan may be submitted either on a station-by-station basis or on a system-wide basis and shall be updated within seven (7) days of any changes in frequency usage at this station. The Licensee(s) need not notify the Commission of temporary usage of frequencies for periods of less than seven (7) days. However, the Licensee(s) shall maintain accurate station records of the times and particulars of such temporary frequency usage.
  - 5012 --- The authority granted here is limited to the operation of the facilities described above and does not include any authority to install and operate channelizing equipment or any other authority under Section 214 of the Communications Act of 1934, as amended, to establish channels of communications.
  - 5013 --- In the event of the failure of a satellite with which operations are authorized in Section D of this license, operations are authorized in conjunction with the authorized INTELSAT satellite in the affected Ocean Region that provides the services authorized herein in order to maintain the continuity of commercial service; provided that the licensee(s) immediately notify the Commission of the nature of this emergency and its expected duration; and provided that the operational limits of elevation angle and azimuth range specified in Section C of this license are not exceeded. In the event that such emergency operations require emissions not specified in Section B of this license, such emissions may be utilized provided that the EIRP's of such emissions do not exceed the limits set forth in this license.
  - 5014 --- With respect to potential co-channel interference to or from terrestrial microwave radio stations, the transmit and receive frequency bands listed in this license have been cleared for transmissions to and from satellites located in the geostationary or non-geostationary orbit for the emissions designated in Section B of this license.
  - 5015 --- Upon completion of construction, each licensee must file with the Commission a certification including the following information: name of the licensee, file number of the application, call sign of the antenna, date of the license and certification that the facility as authorized has been completed, that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209 and that the station is operational including the date of commencement of service and will remain operational during the license period unless the license is submitted for cancellation.



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- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
  - 5017 --- Operation of this station is governed by the terms, conditions and limitations in Part 25 of the Commission's Rules and Regulations and the following additional conditions: 1. This license shall not vest in the Licensee(s) any right to operate the station or any right in the use of the frequencies designated in the license beyond its term or in any other manner than authorized in the license; 2. Neither the license nor the right granted under it shall be assigned or otherwise transferred in violation of the Commissions or otherwise transferred in violation of the Communications Act of 1934, as amended, or the Commission's Rules and Regulations issued under it; and 3. This station is subject to the right of use or control conferred by Section 706 of the Communications Act of 1934, as amended.
  - 5018 --- This license shall be forfeited automatically if this station is not ready for operation within the time specified unless, prior to the expiration date of this license, the Commission receives an Application for Additional Time to Construct a Radio Station (FCC Form 701) filed by the Licensee(s) showing good cause why the Licensee(s) could not complete construction on time.
  - 5023 --- The extended C-band frequencies 5850-5925 MHz and 3625-3700 MHz have been cleared with the National Telecommunications & Information Administration. These frequency bands are for INTELSAT use only.
  - 5215 --- All operations shall be on a common carrier basis.
  - 5225 --- This action constitutes the final step with respect to the provision of the services only insofar as the US regulatory process is concerned. However, this authority shall not be construed as authorizing the distribution of programming where the approriate copyright clearances have not been obtained or where the U.S. Government has determined that appropriate copyright protection does not otherwise exist.
  - 5240 --- All operations via the INTELSAT satellites are limited to the countries excluding the restricted countries listed in Comsat's international tariff provisions for the space components of authorized services in Section B..
  - 5525 --- This authorization is issued pursuant to the Commission's Report and Order released January 22, 1996 (FCC 96-14), Disco I.
  - 5630 --- International services shall be consistent with this emission designator, the underlying title III application(s) and the acquisition of any necessary Section 214 authority.
  - 5723 --- All communications shall be in accordance with the satellites and services which have completed any necessary technical consultations under Article XIV (d) of the INTELSAT Agreement and which the Commission has approved.
  - 5736 --- Licensee is authorized to provide fixed-satellite service other than Direct-to-Home service via non-U.S. licensed satellites.
  - 5781 --- Operation of the authorized earth station having Level 3 direct access to the INTELSAT space segment must comply with the INTELSAT EARTH STANDARDS (IESS) 207, 208 or 601, as appropriate, and all applicable Federal Communications Commission (FCC) rules and regulations.



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- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
  - 5797 --- The EIRP and EIRP Density values for the digital carriers are the maximum permissible under the Section 25.212 of the Commission's Rules.
  - 5802 --- This authorization is issued pursuant to and subject to the terms and policy adopted in the Commission's Order, released December 11, 2000 (FCC 00-363).
  - 5822 --- The 3600-3650 MHz band is shared on a co-primary basis in the U.S. and Possessions with Federal Government radiolocation systems. Unacceptable interference may be caused to this earth station from radiolocation systems, including high-powered, highly mobile, shipborne and airborne radar transmitters, operating in the frequency band. Consistent with the applicant's EMC analysis (as required by US245 and based on the NTIA TR-99-361 Report, Technical Characteristics of Radiolocation Systems operating in the 3.1-3.7 GHz Band and Procedures for assessing Fixed Station Receivers EMC with Earth (available at http://www.ntia.doc.gov/osmhome/reports.html), the licensee accepts this potential for unacceptable interference. In the case that out-of-band interference does occur, the licensee is further aware that use of a RF filter ahead of the low noise amplifier (LNA) will limit potential out-of-band interference to its receiving earth station. Additionally, per US 245, in the band 3600-3650 MHz, these fixed-satellite service operations are limited to international inter-continental satellite systems.
  - 5823 --- The 5850-5925 MHz band is shared in the U.S. and Possessions on a co-primary basis with Federal Government radiolocation systems. Unacceptable interference may be caused to this earth station's communication links from radiolocation systems, including high-powered land-based transportable and shipborne radar transmitters, operating in the frequency band in accordance with footnote G2. (See, e.g., NTIA Report Federal Radar Spectrum Requirements, (http://www.ntia.doc.gov/osmhome/reports/ntia00-40/ntia00-40.pdf), NTIA Report 83-115. Spectrum Resource Assessment in the 5650-5925 MHz Band (http://www.fcc.gov/ib/srd/fedreg\_ntiareport.html), and FCC Fifth Notice of Inquiry in Preparation for a General World Administrative Conference in 1979 (Docket No. 20271; FCC 77-349)). As required by US245, the earth station licensee is aware of the EMC environment and this sharing situation with the radiolocation service and accepts the potential for unacceptable interference. Additionally, this fixed-satellite service earth station is limited to operations over international inter-continental satellite systems.
  - 5859 --- The 3650-3700 MHz band is shared on a co-primary basis in three Federal Government radiolocation systems identified in US348. Unacceptable interference may be caused to this earth station from these three radiolocation systems operating in the frequency band. Consistent with the applicant's EMC analysis (as required by US348 and based on the NTIA TR-99-361 Report, Technical Characteristics of Radiolocation Systems operating in the 3.1-3.7 GHz Band and Procedures for assessing EMC with Fixed Earth Station Receivers (available at http://www.ntia.doc.gov/osmhome/reports.html), the licensee accepts this potential for unacceptable interference from the three stations identified in US348. In the case that out-of-band interference does occur, the licensee is further aware that use of a RF filter ahead of the low noise amplifier (LNA) will limit potential out-of-band interference to its receiving earth station. Additionally, per US 245, in the band 3650-3700 MHz, these fixed-satellite service operations are limited to international inter-continental satellite systems.



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**B**) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R.§ 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station is not ready for operation by the required date of completion of construction unless an application for modification of authorization to request additional time to complete construction is filed by that date, together with a showing that failure to complete construction by the required date was due to factors not under control of the grantee.

Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulatees is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993." These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.