

May 18, 2005

Federal Communications Commission – International Bureau
445 12th Street, S.W.
Washington, D.C. 20554

Subject: Engineering Certification of SES Americom

To whom it may concern:

This letter certifies that SES Americom Inc. ("SES") is aware of the application filed by General Dynamics C4 Systems, Inc ("GD"), to access SES satellites AMC-9 at 83 degrees W.L. licensed by the Federal Communications Commission ("FCC"), using Ku-band transmit/receive antennas that are not strictly compliant with the FCC 2-degree spacing requirements for off-axis sidelobe gain. The SES AMC-9 satellite provides coverage of the Continental United States (CONUS) from its orbital location at 83 degrees W.L. Within the +/- 6 degrees orbital arc from AMC-9¹, SES Americom owns and operates the following satellites:

- AMC-5 at 79 degrees W.L.
- AMC-16 at 85 degrees W.L. (operations to begin in the near-term)
- AMC-3 at 87 degrees W.L.

SES Americom understands that GD will be deploying an antenna manufactured by GD/VertexRSI, Model S825-1100 in a transmit/receive transportable remote terminals with a 60cm circular aperture. The proposed antennas are not compliant with the FCC part 25 rules. These antennas exhibit their non-compliance in the region from 1.0 to 3.0 degrees off axis from maximum gain in the transmit band, due to the width of their main gain lobe. The amount of non-compliance is 8 dB in this range of off-axis angle. The terminals are compliant with the side lobe pattern requirements specified in Section 25.209 of the Commission's Rules for off-axis angles starting at 3.0 degrees in the transmit band. The off-axis EIRP values generated by the terminal in the transmit band are reduced to that of a compliant antenna by decreasing the antenna flange power spectral density² from -14 dBW/4KHz to -29.3 dBW/4KHz.

These antennas are equipped with tracking systems which results in a pointing accuracy of less than or equal to +/- 0.20 degrees. The maximum input power density

¹ There are no operational satellites at this time at 77 degrees W.L., and 81 degrees W.L. There is no operational satellite at 89 degrees W.L. also, but IA-8 is expected to be operational at this orbital location on or after August 1, 2005.

² 47 CFR § 25.134


5/18/2005

at the antenna waveguide flange of -29.3 dBW/4 kHz stated above includes margin for a pointing error of ± 0.20 degrees. Additionally, the terminal has a built-in feature of stopping uplink transmission if the pointing error accidentally exceeds ± 0.2 degrees.

Furthermore, in order to prevent unacceptable interference into adjacent satellites, SES and GD acknowledge that these antennas will be operated in compliance with the technical, operational, and performance requirements of Part 25 of the FCC rules and any requirements set forth in the licenses granted by the FCC for the above GD/VertexRSI antenna. SES and GD acknowledge that the use of the GD/VertexRSI non-conforming antennas will not cause unacceptable interference into adjacent satellites in accordance with the FCC's 2-degree spacing policy and will accept interference from adjacent satellites at the same levels as that of an earth station employing an antenna conforming to the reference patterns defined in § 25.209 of the FCC rules.

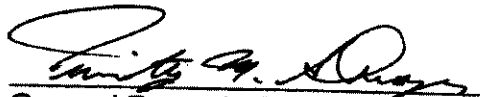
SES Americom will do any inter-system coordination required within the satellites operated by SES Americom. In the event that new satellites become operational at orbital locations 77 degrees W.L. and 81 degrees W.L., SES Americom will do the necessary inter-system coordination with the new satellites.

Sincerely,


Krish Jonnalagadda
Satellite Market Development, Manager
SES Americom

Acceptance by GD:

GD testifies that the information provided to SES Americom and reflected in this Affidavit is true and accurate to the best of GD's knowledge.


General Dynamic C4 Systems

By: Timothy M. Sauer
Its: Vice President



10 June 2005

Federal Communications Commission
International Bureau
445 12th Street, S.W.
Washington, D.C. 20554

To whom it may concern:

This letter certifies that Intelsat is aware that GENERAL DYNAMICS is seeking FCC authorization to access Intelsat Americas-5 at 97 W.L., Intelsat Americas-6 at 93 W.L., Intelsat Americas 7 at 129 W.L. and Intelsat Americas-8 at 89 W.L., as the points of communication, using Ku-band transmit/receive terminals that are not strictly compliant with the FCC 2-degree spacing requirements for off-axis sidelobe gain.

Intelsat understands that GENERAL DYNAMICS will be deploying 60 cm circular aperture transmit/receive antennas for a two-way digital service communicating with another properly FCC licensed terminal through the IA-5, IA-6, IA-7 and IA-8 satellites. This antenna generally exhibits non-compliance in the region from 1.25 to 2.8 degrees off axis from maximum gain in the transmit band, due to the width of the main lobe. This terminal is installed on a moving terrain-vehicle and the antenna is on a stabilized platform having a tracking accuracy of 0.2 degrees towards the intended satellite. The antenna will operate at a maximum input power density at the antenna waveguide flange of -29.0 dBW/4 kHz.

In order to prevent unacceptable interference into adjacent satellites, Intelsat has been informed and GENERAL DYNAMICS acknowledges that these antennas will be installed in compliance with the technical, operational and performance requirements of Part 25 of the FCC rules and any requirements set forth in the licenses granted by the FCC for the above sub-meter antennas.

Intelsat and GENERAL DYNAMICS acknowledge that this use of the 60-cm non-conforming antennas will not cause unacceptable interference into adjacent satellites in accordance with the FCC's 2-degree spacing policy and will not seek any additional protection compared to the

Page 2
10 June 2005

case of an earth station employing an antenna conforming to the reference patterns defined in § 25.209 of the FCC rules.

Sincerely,



Ram Manohar
Department Manager
Frequency Management Department
Intelsat GSC

06/16/05

Date

Acceptance by GENERAL DYNAMICS:

GENERAL DYNAMICS testifies that the information provided to Intelsat and reflected in this Affidavit letter is true and accurate to best of GENERAL DYNAMICS' knowledge.



GENERAL DYNAMICS

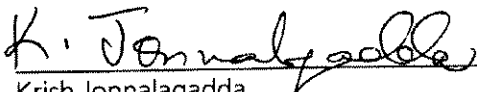
By:

TIMOTHY M. SMYSER

Date

Acceptance by SES Americom:

SES Americom agrees to the use of the 60-cm circular-aperture antenna with the respective azimuth angle alignment tolerances towards the intended satellites and the power density levels into the antenna flange as stated in this letter, with respect to the SES Americom's satellites and the associated networks located within $\pm 6^\circ$ from Intelsat Americas-5 at 97 W.L., Intelsat Americas-6 at 93 W.L., Intelsat Americas 7 at 129 W.L. and Intelsat Americas-8 at 89 W.L.



Krish Jonnalagadda
Manager, Satellite Market Development
SES Americom

6/20/05

Date



9 June 2005

Federal Communications Commission
International Bureau
445 12th Street, S.W.
Washington, D.C. 20554

To whom it may concern:

This letter certifies that Intelsat is aware that GENERAL DYNAMICS is seeking FCC authorization to access Intelsat Americas-7 at 129 W.L. as the point of communication, using Ku-band transmit/receive terminals that are not strictly compliant with the FCC 2-degree spacing requirements for off-axis sidelobe gain.

Intelsat understands that GENERAL DYNAMICS will be deploying 60 cm circular aperture transmit/receive antennas for a two-way digital service communicating with another properly FCC licensed terminal through the IA-7 satellite. This antenna generally exhibits non-compliance in the region from 1.25 to 2.8 degrees off axis from maximum gain in the transmit band, due to the width of the main lobe. This terminal is installed on a moving terrain-vehicle and the antenna is on a stabilized platform having a tracking accuracy of 0.2 degrees towards the intended satellites. The antenna will operate at a maximum input power density at the antenna waveguide flange of -29.0 dBW/4 kHz.

In order to prevent unacceptable interference into adjacent satellites, Intelsat has been informed and GENERAL DYNAMICS acknowledges that these antennas will be installed in compliance with the technical, operational and performance requirements of Part 25 of the FCC rules and any requirements set forth in the licenses granted by the FCC for the above sub-meter antennas.

Intelsat and GENERAL DYNAMICS acknowledge that the use of the 60-cm non-conforming antennas will not cause unacceptable interference into adjacent satellites in accordance with the FCC's 2-degree spacing policy and will not seek any additional protection compared to the

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9 June 2005

case of an earth station employing an antenna conforming to the reference patterns defined in § 25.209 of the FCC rules.

Sincerely,



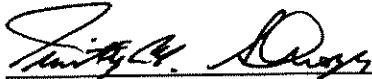
Ram Manohar
Department Manager
Frequency Management Department
Intelsat GSC



Date

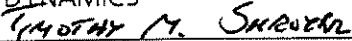
Acceptance by GENERAL DYNAMICS:

GENERAL DYNAMICS testifies that the information provided to Intelsat and reflected in this Affidavit letter is true and accurate to best of GENERAL DYNAMICS' knowledge.

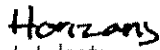


GENERAL DYNAMICS

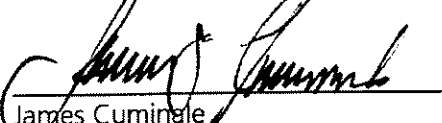
By:



Date


Acceptance by Intelsat:

Horizons Satellite LLC agrees to the use of the 60-cm circular-aperture antenna with the respective azimuth angle alignment tolerances towards the intended satellites and the power density levels into the antenna flange as stated in this letter, with respect to the Horizons Satellite LLC's satellites and the associated networks located within $\pm 6^\circ$ from Intelsat Americas-1 at 129 W.L



James Cumine
Horizons Satellite LLC



Date



9 June, 2005

Federal Communications Commission
International Bureau
445 12th Street, S.W.
Washington, D.C. 20554

To whom it may concern:

This letter certifies that Intelsat is aware that GENERAL DYNAMICS is seeking FCC authorization to access Intelsat Americas-5 at 97 W.L., Intelsat Americas-6 at 93 W.L., Intelsat Americas-7 at 129 W.L. and Intelsat Americas-8 at 89 W.L., as the points of communication, using Ku-band transmit/receive terminals that are not strictly compliant with the FCC 2-degree spacing requirements for off-axis sidelobe gain.

Intelsat understands that GENERAL DYNAMICS will be deploying 60 cm circular aperture transmit/receive antennas for a two-way digital service communicating with another properly FCC licensed terminal through the IA-5, IA-6, IA-7 and IA-8 satellites. This antenna generally exhibits non-compliance in the region from 1.25 to 2.8 degrees off axis from maximum gain in the transmit band, due to the width of the main lobe. This terminal is installed on a moving terrain-vehicle and the antenna is on a stabilized platform having a tracking accuracy of 0.2 degrees towards the intended satellite. The antenna will operate at a maximum input power density at the antenna waveguide flange of -29.0 dBW/4 kHz.

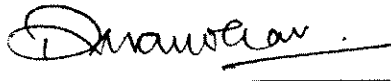
In order to prevent unacceptable interference into adjacent satellites, Intelsat has been informed and GENERAL DYNAMICS acknowledges that these antennas will be installed in compliance with the technical, operational and performance requirements of Part 25 of the FCC rules and any requirements set forth in the licenses granted by the FCC for the above sub-meter antennas.

Intelsat and GENERAL DYNAMICS acknowledge that this use of the 60-cm non-conforming antennas will not cause unacceptable interference into adjacent satellites in accordance with the FCC's 2-degree spacing policy and will not seek any additional protection compared to the

Page 2
9 June 2005

case of an earth station employing an antenna conforming to the reference patterns defined in § 25.209 of the FCC rules.

Sincerely,

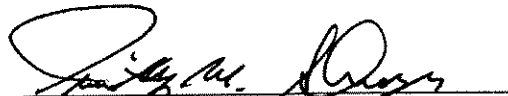


Ram Manohar
Department Manager
Frequency Management Department
Intelsat GSC

06/10/05
Date

Acceptance by GENERAL DYNAMICS:

GENERAL DYNAMICS testifies that the information provided to Intelsat and reflected in this Affidavit letter is true and accurate to best of GENERAL DYNAMICS' knowledge.

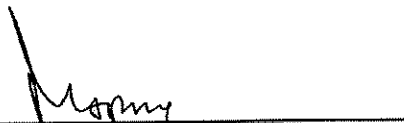


GENERAL DYNAMICS
By: TIMOTHY H. SMECKER

9 JUNE 2005
Date

Acceptance by PanAmSat:

PanAmSat agrees to the use of the 60-cm circular-aperture antenna with the respective azimuth angle alignment tolerances towards the intended satellites and the power density levels into the antenna flange as stated in this letter, with respect to the PanAmSat's satellites and the associated networks located within $\pm 6^\circ$ from Intelsat Americas-5 at 97 W.L, Intelsat Americas-6 at 93 W.L., Intelsat Americas-7 at 129 W.L. and Intelsat Americas-8 at 89 W.L.



Mohammad Marashi
Vice President, Customer Support Engineering
PanAmSat Corporation

6/21/05
Date



June 9, 2005

Federal Communications Commission
International Bureau
445 12th Street, S.W.
Washington, D.C. 20554

To whom it may concern:

This letter certifies that Horizon Satellite LLC is aware that GENERAL DYNAMICS (GD) is seeking FCC authorization to access Horizons 1 at 127WL, as the point of communication, using Ku-band transmit/receive terminals that are not strictly compliant with the FCC 2-degree spacing requirements for off-axis sidelobe gain.¹

Horizons Satellite LLC (Horizons) owns and operates the Horizons 1 satellite at 127 degrees WL, which is licensed by MPHPT of Japan. The Horizons 1 satellite has been placed on the Permitted Space Station List by FCC on November 21, 2003 and, hence, can serve as the point of communication for FCC licensed earth stations, provided that the use of the earth station is consistent with the technical parameters contained in the earth station authorization.

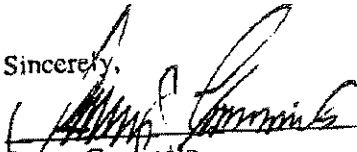
Horizons understands that GENERAL DYNAMICS will be deploying 60 cm circular aperture transmit/receive antennas for a two-way digital service communicating with another properly FCC licensed terminal through the Horizons 1 satellite. This antenna generally exhibits its non-compliance in the region from 1.25 to 2.8 degrees off axis from maximum gain in the transmit band, due to the width of the main gain lobe. This terminal is installed on a moving terrain-vehicle and the antenna is on a stabilized platform having a tracking accuracy of 0.2 degrees towards the intended satellite. The antenna will operate at a maximum input power density at the antenna waveguide flange of -29.0 dBW/4 kHz.

In order to prevent unacceptable interference into adjacent satellites, Horizons has been informed and GENERAL DYNAMICS acknowledges that these antennas will be installed in compliance with the technical, operational and performance requirements of Part 25 of the FCC rules and any requirements set forth in the licenses granted by the FCC for the above sub-meter antennas.

¹ 47 CFR §25.209.

Horizons and GENERAL DYNAMICS acknowledge that the use of the 60-cm non-conforming antennas will not cause unacceptable interference into adjacent satellites in accordance with the FCC's 2-degree spacing policy and will not seek any additional protection compared to the case of an earth station employing an antenna conforming to the reference patterns defined in § 25.209 of the FCC rules.

Sincerely,


James Cuminale
Horizons LLC

Acceptance by GENERAL DYNAMICS:

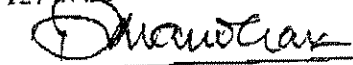
GENERAL DYNAMICS testifies that the information provided to Horizons and reflected in this Affidavit letter is true and accurate to best of GENERAL DYNAMICS' knowledge.

 16 JUNE 2005
GENERAL DYNAMICS Date

By: TIMOTHY M. SIROVER

Acceptance by Intelsat:

Intelsat agrees to the use of the 60-cm circular-aperture antenna with the respective azimuth angle alignment tolerances towards the intended satellite and the power density levels into the antenna flange as stated in this letter, with respect to with respect to Intelsat's satellites and the associated networks located within $\pm 6^\circ$ from Horizons 1 at 127 W.L.


Ram Manohar
Department Manager
Frequency Management Department
Intelsat GSC