

Before the
Federal Communications Commission
Washington, DC 20554

COPY

RECEIVED

APR 20 2000

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

Telesat Canada

File No.

Petition for Declaratory Ruling For
Inclusion of Anik F1 on the Permitted
Space Station List

ANIK F1 SAT-PDR-20000420-00083
TELESAT CANADA
ANIK F1

Received

Petition for Declaratory Ruling

APR 25 2000

Satellite Policy Branch
International Bureau

Telesat Canada ("Telesat") respectfully petitions the Commission, pursuant to 47 C.F.R. § 25.137 and the *DISCO II Reconsideration Order*,¹ and subject to completion of Canada and Mexico coordination, to include Anik F1 at 107.3° W.L. on the Commission's Permitted Space Station List (the "List"). Grant of Telesat's request will permit all U.S. ALSAT earth stations to provide services covered by the WTO Basic Telecommunications Agreement ("WTO Telecom Agreement") on all routes to, from and within the United States via Anik F1.

I. ANIK F1 SATISFIES FCC REQUIREMENTS FOR INCLUSION ON THE LIST

Anik F1 satisfies the FCC's requirements for U.S. service and thus is eligible to be on the List. In the *DISCO II Reconsideration Order*, the Commission stated that non-U.S. satellites demonstrating compliance with Sections 25.114 and 25.137 of the Commission's Rules, and

¹ *Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, 1999 FCC LEXIS 5448 (rel. Oct. 29, 1999) (First Order on Reconsideration) ("*DISCO II Reconsideration Order*").

raising no other public interest concerns, would be included on the List.² This Petition supplies all the information required for the FCC to determine that Anik F1 meets the requirements of Sections 25.114 and 25.137 of the Commission's Rules and attaches a completed FCC Form 312. It also demonstrates that U.S. ALSAT earth station access to Anik F1 would serve the public interest. Accordingly, the Commission should grant this petition and include Anik F1 on the List.

A. Anik F1 Satisfies the FCC's Legal and Technical Requirements Under Section 25.114

Exhibit 1 supplies the legal and technical information required by Section 25.114 of the Commission's Rules. Notably, this Exhibit includes the technical information specified in §§ 25.114(c)(5 through 11) and (c)(14). Also, since Telesat has now completed the international coordination of Anik F1 with the only potentially affected satellite operator from the United States,³ and since international coordination with Mexico is nearly concluded, this would obviate the need for any additional interference analysis.⁴ Any necessary detailed coordination analysis

² See *DISCO II Reconsideration Order*, ¶¶ 10, 16, 28-30. The FCC's public interest analysis includes issues relating to competition, spectrum availability, eligibility and operating requirements, and national security, law enforcement, foreign policy, and trade concerns. *Id.*, ¶ 11 & n.28.

³ On April 19, 2000, Telesat reached coordination agreement with GE Americom, the only U.S. carrier potentially affected.

⁴ See 47 C.F.R. § 25.137(b) ("If the international coordination process for the non-U.S. licensed space station has been completed, the application need not submit the technical information specified in §§ 25.114 (c) (5 through 11) and (c)(14) . . ."); see also *Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, 12 FCC Rcd 24094, 24175-76 (1997) (Report and Order) ("*DISCO II Order*") ("where the international technical coordination process has been completed between the United States and the foreign satellite, we would not need additional technical information about the foreign satellite. This is because the United States and the relevant foreign administration will have exchanged extensive technical data about their respective systems during the course of the bilateral negotiations that lead up to a coordination agreement. This technical information is sufficient for us to determine whether the foreign satellite complies with Commission technical requirements");

(Continued...)

has already been carried out directly between the affected operators and the results of such analysis have been fully considered and reflected in the coordination agreements. All traffic carried on Anik F1 will be in accordance with these international agreements. Telesat will accept deferred inclusion on the List conditioned on completion of the international coordination process with Mexico.⁵ Telesat files the instant Petition at this time to ensure that once the on-going coordination between Canada and Mexico is complete, the FCC can simultaneously include Anik F1 and Satmex 5 on the List.

Finally, the furnishing of the Part 25.114(c) technical information will permit the Commission to include Anik F1 on the List as a two-degree compliant satellite.⁶

B. The Commission Should Waive The Financial Demonstration Requirement Under Section 25.114 and 25.140

Telesat requests waiver of the requirement to provide the detailed financial information requested by Sections 25.114(c)(13) and (17) and 25.140. In the *DISCO II Order*, the FCC

(...Continued)
DISCO II Reconsideration Order, ¶ 5 n.16.

⁵ Telesat previously requested that the FCC not include Satmex 5 on the List until coordination of that satellite between Mexico and Canada is complete and noted that Satelites Mexicanos S.A. de C.V. (“Satmex”) did not provide the technical information requested under Section 25.114, which, in the absence of international coordination, is required for the FCC to decide whether use of Satmex 5 in the United States would result in unacceptable interference. See Supplemental Comments of Telesat Canada, File No. SAT-PDR-19991214-00131 (filed Feb. 18, 2000); Opposition of Telesat Canada, File No. SAT-PDR-19991214-00131 (filed Jan. 24, 2000); see also *Satellite Policy Branch Information Applications Accepted for Filing*, DA No. 00-71, Report No. SAT-00034 (rel. Jan. 14, 2000) (Public Notice) (accepting for filing Satmex’s Petition for Declaratory Ruling).

⁶ See *Telesat Canada, Request for Declaratory Ruling or Petition for Waiver on U.S. Earth Stations’ Use of ANIK E1 and ANIK E2 Satellite Capacity to Provide Basic Telecommunications Service in the United States*, File No. 116-SAT-STA-98, DA 99-2752, ¶ 15 (rel. Dec. 9, 1999) (Order) (“*Anik E1 and Anik E2 Order*”).

exempted in-orbit, non-U.S. space station systems from the agency's financial qualification requirements.⁷ In doing so, the agency concluded that "where the foreign satellite is already in-orbit, there is no concern about whether the prospective entrant is financially capable of building and launching its system."⁸ Although Anik F1 is not yet in-orbit, Telesat should not be required to make a financial demonstration because the policy supporting the exemption is applicable here. Inclusion on the List prior to launch is critical in the company's marketing efforts in order to secure early capacity commitments.

First, there is no risk that Anik F1 will not be constructed or launched. Telesat has secured a construction contract with Hughes Space and Communications and invested significant funds in the development of Anik F1. Indeed, construction of Anik F1 is almost complete at this time. Telesat has also obtained a launch reservation with Arianespace for July 2000. Moreover, Telesat has successfully concluded all the necessary steps to secure Canadian licensing immediately prior to or upon launch. These steps obviate any concern that Anik F1 will not be constructed or launched.

Second, there is no danger of spectrum warehousing because Telesat's right to use the Canadian C-band and Ku-band registrations at 107.3° W.L. is beyond dispute. Telesat's Anik E2 satellite currently occupies the 107.3° W.L. slot. As a result, even if unforeseen circumstances delay the launch of Anik F1 beyond July 2000, grant of this petition for inclusion on the permitted space station list would have no bearing on other satellite providers, which are already precluded from using the slot.

⁷ *DISCO II Order*, 12 FCC Rcd at 24162, 24175-76.

⁸ *Id.* at 24176.

Finally, Telesat's undeniable financial resources and existing satellite fleet moot any need for a financial demonstration. Telesat is an established Canadian satellite provider that already operates two satellites serving the U.S. and Canadian markets. Accordingly, although Anik F1 has not yet been launched, detailed financial information is not required for the agency to determine that Telesat is "financially capable of building and launching its system."⁹

C. Telesat Satisfies Section 25.137 of the Commission's Rules

Pursuant to Section 25.137(a)(1) of the Rules, Telesat affirms that the company received approval in principle from Industry Canada for the Anik F1 satellite and, consistent with Canadian licensing policy, will receive a license under the Radiocommunication Act immediately prior to or upon launch of the satellite.¹⁰ Telesat is not required to make the effective competitive opportunities showing set out in Section 25.137(a)(2) because Telesat will be licensed by Canada, a WTO Member country, and because Telesat seeks to provide only services covered by the WTO Telecom Agreement.¹¹

⁹ *Id.*

¹⁰ Canada's process of deferring satellite licensing until immediately prior to or upon launch differs from the FCC's general policy that non-U.S. satellites be licensed prior to authorizing U.S. earth station access. *See id.* at 24177. The status of Anik F1 under Canadian law, however, is in harmony with the purpose of the FCC's policy. The FCC requires satellite licensing first so that the earth station license need not be revoked in the event the satellite is not licensed or modified to reflect changes in the space station's operating parameters made during the licensing process. *Id.* Even though Telesat does not yet have the "final" license for Anik F1, there is no uncertainty surrounding either Telesat's expectation of licensing or the operating parameters of Anik F1. Indeed, Industry Canada's "approval in principle" for Anik F1 serves the same purpose as a U.S. license; it confirms that the satellite is more than a "paper tiger." *See* Industry Canada, *Conditions of Approval in Principle Applied to the Anik F Fixed Satellite Service* <<http://strategis.ic.gc.ca/pics/sf/anik.pdf>>. Thus, the FCC should consider Anik F1 to be "licensed" for purposes of this petition for inclusion on the List.

¹¹ 47 C.F.R. § 25.137(a)(2) ("This paragraph shall not apply with respect to requests for authority to operate using a non-U.S. licensed satellite that is licensed by or seeking a license from
(Continued...)

As required by Section 25.137(b), the legal and technical information in accordance with Part 25 is provided in the attached Exhibit 1 and FCC Form 312.

Under Section 25.137(c)(3), the FCC may consider this application for Anik F1, a non-U.S. licensed satellite system seeking to serve the United States, contemporaneously with other U.S. satellite systems because Anik F1 “has been submitted for coordination to the International Telecommunication Union.”¹² A summary of the Anik F1 technical parameters required for coordination at 107.3° W.L. is on public record at the ITU.

II. TELESAT HAS A PRESUMPTION IN FAVOR OF ENTRY, AND INCLUSION OF ANIK F1 ON THE PERMITTED SPACE STATION LIST SERVES THE PUBLIC INTEREST

A presumption in favor of entry applies to this application for inclusion of Anik F1 on the List because Anik F1 will be a WTO-licensed satellite and the services provided within the United States will only be those covered by the WTO Agreement.¹³ Furthermore, grant of this application, and the resulting access to Anik F1 by all U.S. earth stations with an ALSAT designation, would produce substantial public interest benefits. U.S. consumers would receive increased fixed satellite service (“FSS”) options stimulating lower rates, improved service quality and technological innovations. These are precisely the public interest goals the FCC sought to achieve when it established its presumption in favor of entry for WTO satellites.¹⁴ Indeed, it is

(...Continued)

a country that is a member of the World Trade Organization for services covered under the World Trade Organization Basic Telecommunications Agreement.”).

¹² 47 C.F.R. § 25.137(c)(3).

¹³ *DISCO II Order*, 12 FCC Rcd at 24112.

¹⁴ *Id.* (noting that the commitments made under the WTO Telecom Agreement “will help ensure the presence and advancement of competition in the satellite services market and yield the
(Continued...)”)

also the conclusion the Commission reached when it included Anik E1 and Anik E2 on the Permitted Space Station List.¹⁵ These competitive benefits will be advanced by processing Telesat's application now. Thus, the public interest weighs heavily in favor of grant of this petition.

III. CONCLUSION

For the reasons set out above, Telesat respectfully requests that the Commission issue a declaratory ruling including Anik F1 on the Permitted Space Station List.

Respectfully submitted,

TELESAT CANADA

By: Bert W Rein

Bert W. Rein
Carl R. Frank
Jennifer D. Wheatley
of
Wiley, Rein & Fielding
1776 K Street, N.W.
Washington, DC 20006-2304
(202) 719-7000
Its Attorneys

April 20, 2000

(...Continued)

benefits of a competitive marketplace to consumers in the United States and other countries. These benefits include greater availability of satellite services from a larger number of providers, more efficient and innovative services, lower prices, higher quality, and, overall more choices for users and consumers in the selection of satellite services. Thus, these benefits will further the Commission's goal of promoting a competitive satellite services market in the United States.").

¹⁵ *Anik E1 and Anik E2 Order*, at ¶ 9.

FCC 312
Main Form

Approved by OMB
3060-0678
Est Avg Burden Hours
Per Response 11 hrs

FCC Use Only
File Number:
Call Sign:
Fee Number

FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SATELLITE SPACE AND EARTH STATION AUTHORIZATIONS

APPLICANT INFORMATION

1. Legal Name of Applicant Telesat Canada	2. Voice Telephone Number (613) 748-0123
3. Other Name Used for Doing Business (if any)	4. Fax Telephone Number (613) 748-8712
5. Mailing Street Address or P.O. Box 1601 Telesat Court	6. City Gloucester
ATTENTION: Laurier J. Boisvert, CEO and President of Telesat Canada	7. State / Country (if not U.S.A.) Ontario
9. Name of Contact Representative (if other than applicant)	8. Zip Code K1B 5P4
11. Firm or Company Name Wiley, Rein & Fielding	10. Voice Telephone Number (202) 719-7000
13. Mailing Street Address or P.O. Box 1776 K Street, N.W.	12. Fax Telephone Number (202) 719-7207
ATTENTION: Bert W. Rein, Esquire	14. City Washington
	15. State / Country (if not U.S.A.) DC
	16. Zip Code 20006-2304

CLASSIFICATION OF FILING

17. Place an "X" in the box next to the classification that applies to this filing for both questions a. and b. Mark only one box for 17a and only one box for 17b.

<input type="checkbox"/> a1. Earth Station	<input type="checkbox"/> b1. Application for License of New Station
<input type="checkbox"/> a2. Space Station	<input type="checkbox"/> b2. Application for Registration of New Domestic Receive-Only Station
	<input type="checkbox"/> b3. Amendment to a Pending Application
	<input type="checkbox"/> b4. Modification of License or Registration
	<input type="checkbox"/> b5. Assignment of License or Registration
	<input type="checkbox"/> b6. Transfer of Control of License or Registration
	<input type="checkbox"/> b7. Notification of Minor Modification
	<input type="checkbox"/> b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite
	<input type="checkbox"/> b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States
	<input checked="" type="checkbox"/> b10. Other (Please Specify): Petition for Declaratory Ruling for inclusion of Anik F1 on the Permitted Space Station List, pursuant to Section 25.137 of the FCC's rules.

18. If this filing is in reference to an existing station, enter:
Call sign of station: N/A
(a) Date pending application was filed: N/A
(b) File number of pending application: N/A

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Place an "X" in the box(es) next to all that apply.

- a. Fixed Satellite
- b. Mobile Satellite
- c. Radiodetermination Satellite
- d. Earth Exploration Satellite
- e. Direct to Home Fixed Satellite
- f. Digital Audio Radio Service
- g. Other (please specify)

21. STATUS: Place an "X" in the box next to the applicable status. Mark only one box.

- a. Common Carrier
- b. Non-Common Carrier
- c. Using U.S. licensed satellites
- d. Using Non-U.S. licensed satellites

22. If earth station applicant, place an "X" in the box(es) next to all that apply.

- a. Using U.S. licensed satellites
- b. Using Non-U.S. licensed satellites
- c. Connected to the Public Switched Network
- d. Not connected to the Public Switched Network

23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Mark only one box. Are these facilities:

N/A

24. FREQUENCY BAND(S): Place an "X" in the box(es) next to all applicable frequency band(s).

- a. C-Band (4/6 GHz)
- b. Ku-Band (12/14 GHz)
- c. Other (Please specify)

TYPE OF STATION

25. CLASS OF STATION: Place an "X" in the box next to the class of station that applies. Mark only one box.

- a. Fixed Earth Station
- b. Temporary-Fixed Earth Station
- c. 12/14 GHz VSAT Network
- d. Mobile Earth Station
- e. Space Station
- f. Other (Specify)

If space station applicant, go to Question 27.

26. TYPE OF EARTH STATION FACILITY Mark only one box.

- a. Transmit/Receive
- b. Transmit-Only
- c. Receive-Only

PURPOSE OF MODIFICATION OR AMENDMENT

27. The purpose of this proposed modification or amendment is to: Place an "X" in the box(es) next to all that apply.

- a -- authorization to add new emission designator and related service
- b -- authorization to change emission designator and related service
- c -- authorization to increase EIRP and EIRP density
- d -- authorization to replace antenna
- e -- authorization to add antenna
- f -- authorization to relocate fixed station
- g -- authorization to change assigned frequency(ies)
- h -- authorization to add Points of Communication (satellites & countries)
- i -- authorization to change Points of Communication (satellites & countries)
- j -- authorization for facilities for which environmental assessment and radiation hazard reporting is required
- k -- Other (Please Specify)

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307?

If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. §§ 1.1308 and 1.1311, as an exhibit to this application.

- YES
- NO

A Radiation Hazard Study must accompany all applications as an exhibit for new transmitting facilities, major modifications, or major amendments. Refer to OFET Bulletin 65.

ALIEN OWNERSHIP

29. Is the applicant a foreign government or the representative of any foreign government?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
30. Is the applicant an alien or the representative of an alien?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
31. Is the applicant a corporation organized under the laws of any foreign government?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit, the identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.	See Exhibit 2: Ownership Information	

BASIC QUALIFICATIONS

35. Does the applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	See Petition for Declaratory Ruling.
36. Has the applicant or any party to this application had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of the circumstances.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	
37. Has the applicant, or any party to this application, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of the circumstances.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	
38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawful monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of the circumstances.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	
39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the proceeding two items? If Yes, attach as an exhibit, an explanation of the circumstances.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	
40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, addresses, and citizenship of those stockholders owning or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary (ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.			
41. By checking Yes, the undersigned certifies, that neither the applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	
42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. § 25.137, as appropriate. If no, proceed to question 43.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	See Petition for Declaratory Ruling.
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station? Canada			

FEDERAL COMMUNICATIONS COMMISSION
 SATELLITE EARTH STATION AUTHORIZATIONS
 FCC Form 312 - Schedule B: (Technical and Operational Description)

If VSAT Network, provide the SITE-ID (Item B1b) of the station that B8-B13 are in response to (HUB, REMOTE1, etc.): _____

B8. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurements? If NO, provide as an exhibit, a technical analysis showing compliance with two-degree spacing policy. YES NO

B9. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non-geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements? N/A YES NO

B10. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point. YES NO

Remote Control Point Location:

B10a. Street Address N/A

B10b. City	B10c. County	B10d. State / Country	B10e. Zip Code
B10f. Telephone Number		B10g. Call Sign of Control Station (if appropriate)	

B11. Is frequency coordination required? If YES, attach a frequency coordination report as an exhibit. See Petition for Declaratory Ruling YES NO

B12. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as an exhibit. See Petition for Declaratory Ruling YES NO

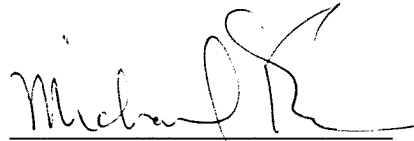
B13. FAA Notification - (See 47 CFR Part 17 and 47 CFR Part 25.113(c))
 Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation?
 N/A YES NO

FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.

**AFFIDAVIT OF COMPLIANCE WITH
TECHNICAL AND OPERATING REQUIREMENTS**

I hereby certify that I am technically qualified to assess the Anik F1 satellite's compliance with the Commission's technical and operating requirements, that I am familiar with Part 25 of the Commission's Rules, that I have reviewed the statements made in this Petition for Declaratory Ruling, including the Exhibit thereto, and that to the best of my knowledge it is complete and accurate.

By:

A handwritten signature in black ink, appearing to read "Michael Razi", written over a horizontal line.

M. Michael Razi, P.Eng.

April 19, 2000

EXHIBIT I:
Compliance with Sections 25.114 and 25.212 of the FCC's Rules
ANIK F1

Information required for Section 25.114 part c)

(1) Name, Address and Telephone Number of Applicant

Telesat Canada
1601 Telesat Court
Gloucester, Ontario
K1B 5P4, CANADA
(613) 748-0123

(2) Name, Address and Telephone Numbers for Correspondence

Inquiries or correspondences to be directed to:

Laurier J. Boisvert, President & Chief Executive Officer
Jennifer Perkins, Secretary & General Counsel
Telesat Canada
1601 Telesat Court
Gloucester, Ontario
K1B 5P4, CANADA
(613) 748-0123

Legal Counsel:

Wiley, Rein & Fielding
1776 K Street, N.W.
Washington, D.C. 20006-2304
Attn. Bert W. Rein, Esquire

(3) Type of Authorization Requested

Telesat Canada seeks to include Anik F1 on the Permitted Satellite List to permit all technically appropriate US earth stations with the "ALSAT" designation in their existing or subsequently issued licenses to use C-band and Ku-band capacity on Anik F1 for the provision of basic telecommunications services on all routes to, from and within the United States of America.

(4) General Description of Overall System Facilities, Operations and Services

Anik F1 is a multi-band satellite which will provide coverage of both North America and South America in several frequency bands. The design of the satellite provides adequate satellite antenna isolation in the C-band and Ku-band so that the uplink and downlink frequency bands are re-used in the beams covering North America and South America. Coverage of North America is provided in both polarizations of the conventional C-band and Ku-band as described below. In addition to this capacity, coverage of South America is provided in one polarization at C-band, using 12 channels, and in one polarization at Ku-band using 16 channels. The Extended Ku-band (13.75-14.0 GHz uplink and 11.45-11.7 GHz downlink) is

used to provide capacity between points in North America and South America. If additional North-South capacity is required, then channels providing C-band and Ku-band service in South America can also be interconnected with those serving North America.

The following is a general description of the satellite facilities providing coverage of the USA and for which inclusion on the Permitted Satellite List is requested. Typical ground segment and services, which may be provided in the USA, are described in subsequent sections. The ground segment facilities will be provided by customers.

The Anik F1 C-band capacity providing North American coverage is channelized into a standard 24 channel frequency plan which is consistent with Section 25.211(a) and also is consistent with the polarization plans of adjacent US satellites. The C-band uplinks to the satellite are in the 6 GHz (5.925 – 6.425 GHz) band and downlinks from the satellite are in the 4 GHz (3.7 – 4.2 GHz) band. Each C-band transponder on the satellite has the capacity to carry one 36 MHz FM analog TV channel. Also, each channel may be used to carry a single wide-band digital data carrier or a Multiple Channel Per Carrier (MCPC) digital television signal, or a number of narrower band digital and/or analog carriers. Each transponder final amplifier comprises a linearized travelling wave tube amplifier with a 40 w output power. The C-band portion of the payload has 12 vertically polarized and 12 horizontally polarized uplinks, where their downlinks are cross-polarized with the uplinks. The coverage patterns are North American beams optimized for coverage of Canada, and include coverage of United States of America including Hawaii and Alaska.

The Anik F1 Ku-band payload providing North American coverage comprises 32 transponders each having a bandwidth of 27 MHz. The Ku-band uplinks to the satellite are in the 14 GHz (14.0 – 14.5 GHz) band and downlinks from the satellite are in the 12 GHz (11.7 – 12.2 GHz) band. Each Ku-band transponder on the satellite has the capacity to carry one 27 MHz FM TV channel. Also, each channel may be used to carry a single wide-band digital data carrier or a Multiple Channel Per Carrier (MCPC) digital television signal, or a number of narrower band digital and/or analog carriers. Each transponder final amplifier comprises a linearized travelling wave tube amplifier with a 115 w output power. The Ku-band portion of the payload has 16 vertically polarized and 16 horizontally polarized uplinks, where their downlinks are cross-polarized with the uplinks. The coverage patterns are North America wide covering Canada and United States of America, including Hawaii, and Mexico.

(5) Satellite RF Characteristics

The Anik F1 satellite is a hybrid satellite with a payload which includes both conventional C-band and Ku-band and has a channel plan as shown in Tables 1 and 2 below.

Table 1. C-band Frequency and polarization plan for the Anik F1 satellite

Transponder #	Uplink Center Freq.	Downlink Center Freq.	Uplink Polarization	Downlink Polarization	Associated Beams
1A	5945	3720	Vertical	Horizontal	North America
2A	5985	3760	Vertical	Horizontal	North America
3A	6025	3800	Vertical	Horizontal	North America
4A	6065	3840	Vertical	Horizontal	North America
5A	6105	3880	Vertical	Horizontal	North America
6A	6145	3920	Vertical	Horizontal	North America
7A	6185	3960	Vertical	Horizontal	North America
8A	6225	4000	Vertical	Horizontal	North America
9A	6265	4040	Vertical	Horizontal	North America
10A	6305	4080	Vertical	Horizontal	North America

11A	6345	4120	Vertical	Horizontal	North America
12A	6385	4160	Vertical	Horizontal	North America
1B	5965	3740	Horizontal	Vertical	North America
2B	6005	3780	Horizontal	Vertical	North America
3B	6045	3820	Horizontal	Vertical	North America
4B	6085	3860	Horizontal	Vertical	North America
5B	6125	3900	Horizontal	Vertical	North America
6B	6165	3940	Horizontal	Vertical	North America
7B	6205	3980	Horizontal	Vertical	North America
8B	6245	4020	Horizontal	Vertical	North America
9B	6285	4060	Horizontal	Vertical	North America
10B	6325	4100	Horizontal	Vertical	North America
11B	6365	4140	Horizontal	Vertical	North America
12B	6405	4180	Horizontal	Vertical	North America

Table 2. Ku-band frequency and polarization plan for the Anik F1 satellite

Transponder #	Uplink Center Freq.	Downlink Center Freq.	Uplink Polarization	Downlink Polarization	Associated Beams
T1	14014.75	11714.75	Horizontal	Vertical	North America
T2	14045.25	11745.25	Horizontal	Vertical	North America
T3	14075.75	11775.75	Horizontal	Vertical	North America
T4	14106.25	11806.25	Horizontal	Vertical	North America
T5	14136.75	11836.75	Horizontal	Vertical	North America
T6	14167.25	11867.25	Horizontal	Vertical	North America
T7	14197.75	11897.25	Horizontal	Vertical	North America
T8	14228.25	11928.25	Horizontal	Vertical	North America
T9	14258.75	11958.75	Horizontal	Vertical	North America
T10	14289.25	11989.25	Horizontal	Vertical	North America
T11	14319.75	12019.75	Horizontal	Vertical	North America
T12	14350.25	12050.25	Horizontal	Vertical	North America
T13	14380.75	12080.75	Horizontal	Vertical	North America
T14	14411.25	12111.25	Horizontal	Vertical	North America
T15	14441.75	12141.75	Horizontal	Vertical	North America
T16	14472.25	12172.25	Horizontal	Vertical	North America
T17	14027.75	11727.75	Vertical	Horizontal	North America
T18	14058.25	11758.25	Vertical	Horizontal	North America
T19	14088.75	11788.75	Vertical	Horizontal	North America
T20	14119.25	11819.25	Vertical	Horizontal	North America
T21	14149.75	11849.75	Vertical	Horizontal	North America
T22	14180.25	11880.25	Vertical	Horizontal	North America
T23	14210.75	11910.75	Vertical	Horizontal	North America
T24	14241.25	11941.25	Vertical	Horizontal	North America
T25	14271.75	11971.75	Vertical	Horizontal	North America
T26	14302.25	12002.25	Vertical	Horizontal	North America
T27	14332.75	12032.75	Vertical	Horizontal	North America
T28	14363.25	12063.25	Vertical	Horizontal	North America
T29	14393.75	12093.75	Vertical	Horizontal	North America
T30	14424.25	12124.25	Vertical	Horizontal	North America
T31	14454.75	12154.75	Vertical	Horizontal	North America

T32	14485.25	12185.25	Vertical	Horizontal	North America
-----	----------	----------	----------	------------	---------------

The satellite Telemetry and Telecommand frequencies, polarization and beam assignment are shown in Table 3 below.

Table 3. TTAC frequency and polarization plan for the Anik F1

Carrier Type	Uplink Center Freq.	Downlink Center Freq.	Uplink Polarization	Downlink Polarization	Associated Beams
Command	13992.0		Horizontal		KNRH
Command	13992.0		Vertical		KNRV
Command	14499.25		Horizontal		KNRH
Telemetry		11700.25		Horizontal	KNTH
Telemetry		11700.75		Horizontal	KNTH

Table 4 provides the maximum antenna gain for each beam as well as the maximum input power to the antenna and the maximum EIRP for each beam.

Table 4. Maximum EIRP per Beam of Anik F1

Frequency Band	Beam Designation	Beam	Tx Peak Gain (dBi)	Maximum Power Input to Antenna (dBW)	Maximum EIRP (dBW)
C-band	CNTH	North America	32.2	13.9	46.1
C-band	CNTV	North America	31.9	13.9	45.8
Ku-band	KNTH	North America	34.9	17.6	52.5
Ku-band	KNTV	North America	34.6	17.6	52.2

Satellite System Noise Temperature:

Based on pre-launch measurements, the system noise temperature of the satellite C-band receive referred to the antenna output port is less than 655K (5.18 dB NF). The system noise temperature of the satellite Ku-band receive referred to the antenna output port is less than 713K (5.4 dB NF).

Relationship between Satellite Receive gain and G/T and SFD for each beam:

$$G/T \text{ (dB/K)} = \text{Antenna Rx Gain (dBi)} - \text{Noise Temperature (dBK)}$$

$$\text{SFD} = \text{Power-in (dBW)} - \text{Antenna Gain} - 10\text{Log}((300/F)^2/4\pi); F = \text{Freq. in MHz}$$

Power-in = Power at Rx antenna output required to saturate transponder at nominal gain setting

Table 5. below shows the satellite transponder gain between the output of the Rx antenna and the input of the Tx antenna at nominal gain setting.

Table 5. Anik F1 Beam and Transponder Characteristics

Receive Beam Designation	Rx Peak Gain (dBi)	Power-in (dBW)	Transponder Gain (dB)	Noise Temperature (dBK)	Transmit Beam Designation
CNRH	33.8	-91.0	104.9	28.2	CNTV

CNRV	32.5	-91.0	104.9	28.2	CNTH
KNRH	34.6	-96.2	113.8	28.5	KNTV
KNRV	35.3	-96.2	113.8	28.5	KNTH

All beams provide 30 dB or better cross-polarized isolation within the coverage area of interest.

Description of adjustable gain steps:

The Anik F1 C-band and Ku-band channels have the capability of in-orbit gain adjustments of 20 dB in 1 dB steps.

Predicted Receive and Transmit channel filter response characteristics:

FREQUENCY RESPONSE OF Ku BAND TRANSPONDER CHANNEL

i) Input Filter Response

The typical input frequency response of each Ku Band RF channel, as measured between the receive antenna and the power amplifier input, will fall between the limits shown in Table 1. As well, the typical gain slope over the center 14 MHz of the channel will not exceed ± 0.25 dB/MHz.

ii) Overall Frequency Response

The typical overall frequency response of each Ku Band RF channel, as measured between the receive antenna input and the transmit antenna but excluding the effects of adjacent channel multipath, will fall between the limits shown in Table 6. As well, the typical overall gain slope over the center 14 MHz of the channel will not exceed ± 0.5 dB/MHz.

**TABLE 6
Ku Band Channel Gain-Frequency Response**

From Ch. Center Freq.(MHz)	Input Gain Freq. Response (dB)	Overall Gain Freq. Response (dB)
In-Band		
+/- 6.0	-0.5	-1.0
+/- 8.0	-0.6	-1.1
+/- 10.0	-0.9	-1.8
+/- 12.0	-1.3	-3.1
+/- 13.5	-2.3	-5.7
Out of Band		
+/- 17.0	-10	-23
+/- 20.0	-33	-53
+/- 30.5	-38	-60

FREQUENCY RESPONSE OF C BAND TRANSPONDER CHANNEL

i) Input Filter Response

The typical input frequency response of each C Band RF channel, as measured between the receive antenna and the power amplifier input, will fall between the limits shown in Table 2. As well, the typical gain slope over the center 24 MHz of the channel will not exceed ± 0.25 dB/MHz.

ii) Overall Frequency Response

The typical overall frequency response of each C Band RF channel, as measured between the receive antenna input and the transmit antenna but excluding the effects of adjacent channel multipath, will fall between the limits shown in Table 7. As well, the typical overall gain slope over the center 24 MHz of the channel will not exceed ± 0.5 dB/MHz.

TABLE 7
Channel Gain-Frequency Response

From Ch. Center Freq.(MHz)	Input Gain Freq. Response (dB)	Overall Gain Freq. Response (dB)
In-Band		
+/- 10.0	-0.25	-0.6
+/- 12.0	-0.35	-0.9
+/- 14.0	-0.5	-1.2
+/- 16.0	-0.7	-1.5
+/- 18.0	-1.2	-2.7
Out of Band		
+/- 22.0	-14	-19
+/- 30.0	-35	-57
+/- 50.0	-45	-77

(6) Orbital Location and factors supporting such an orbital location

(i)

Anik F1 Orbital Location: 107.3 W.L.

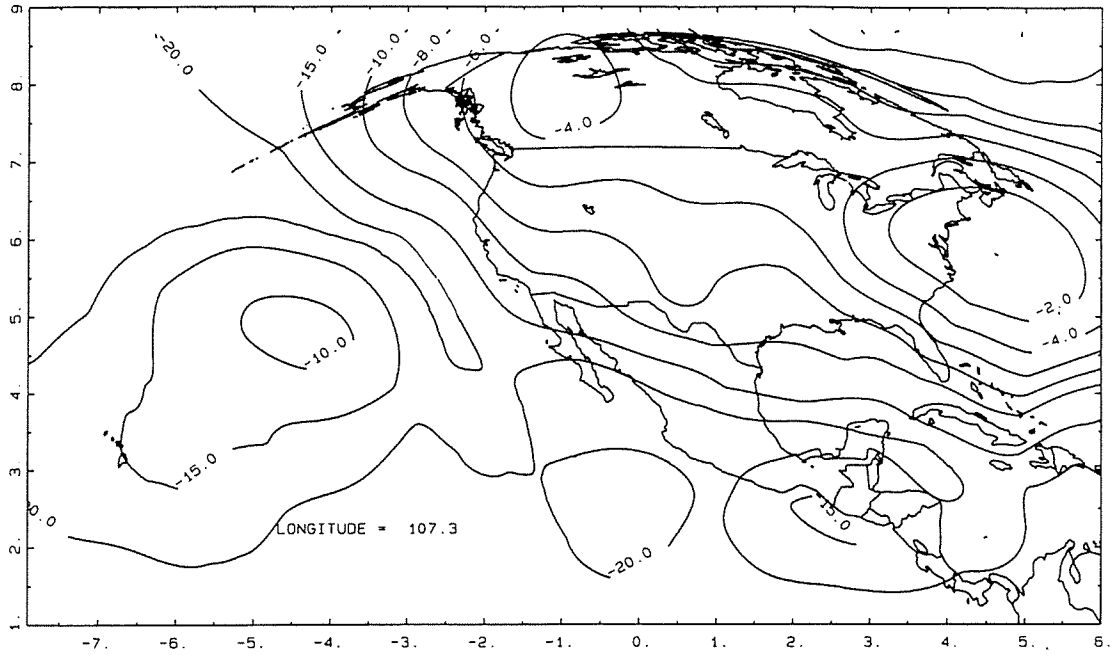
The orbital location is consistent with the Trilateral Agreement reached between Canada, Mexico and the United States of America in 1988.

(ii) and (iii)

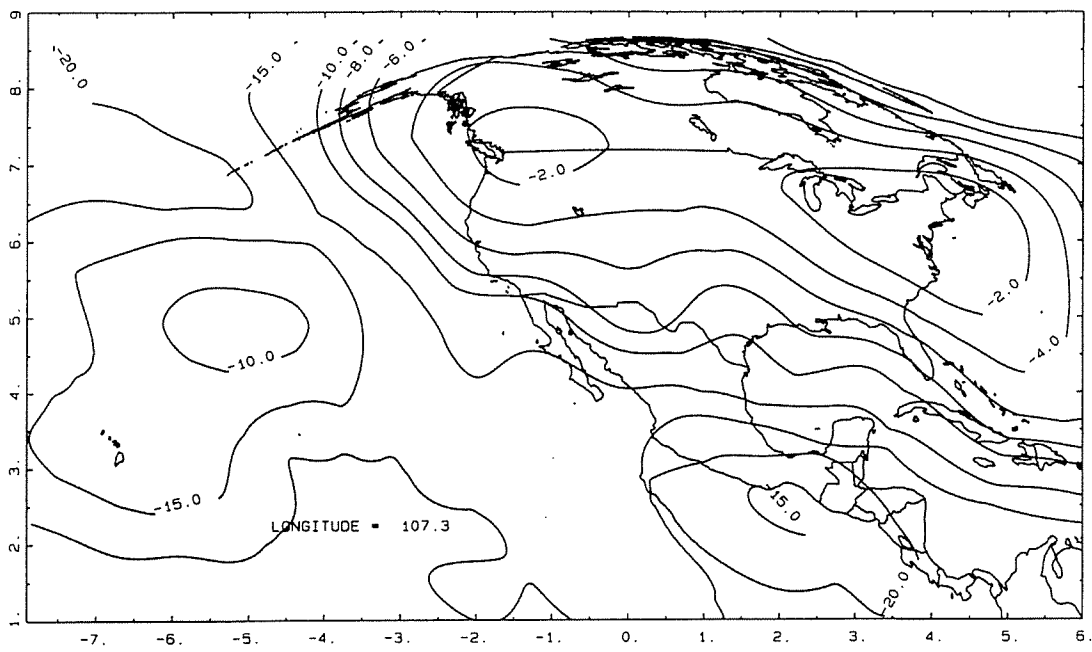
Not applicable.

(7) Predicted Space Station Tx and Rx Antennas Gain Contours

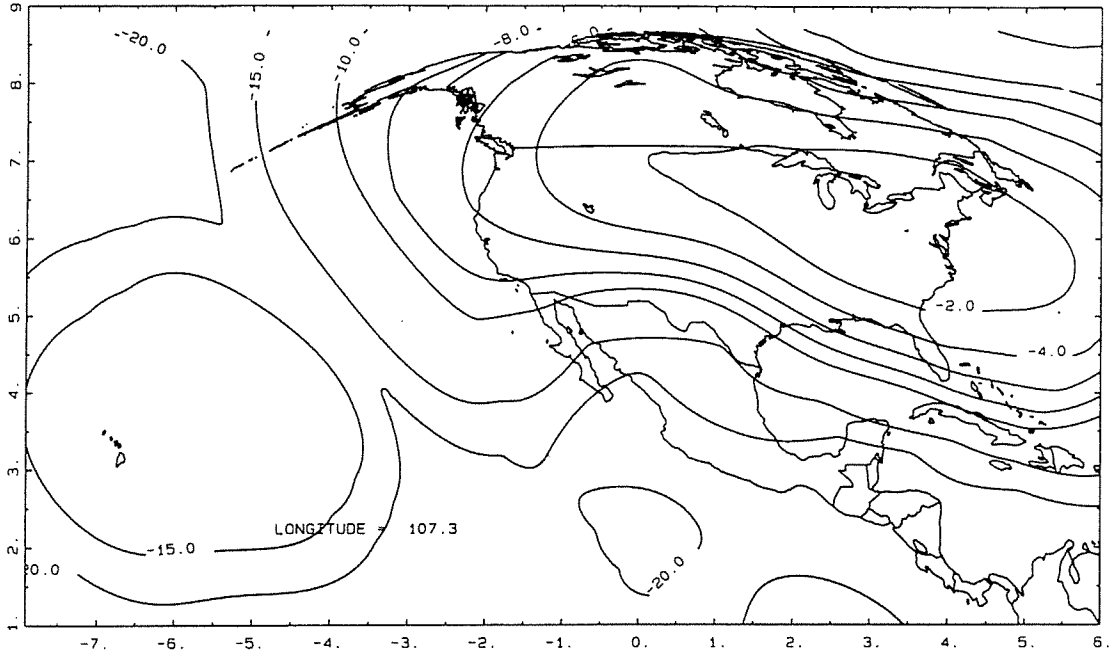
Expected S/C antenna gain contours for all the RX and TX beams at nominal orbit location are provided in the following Figures.



ANIK F1 C-band Receive Horizontal polarization Beam - CNRH



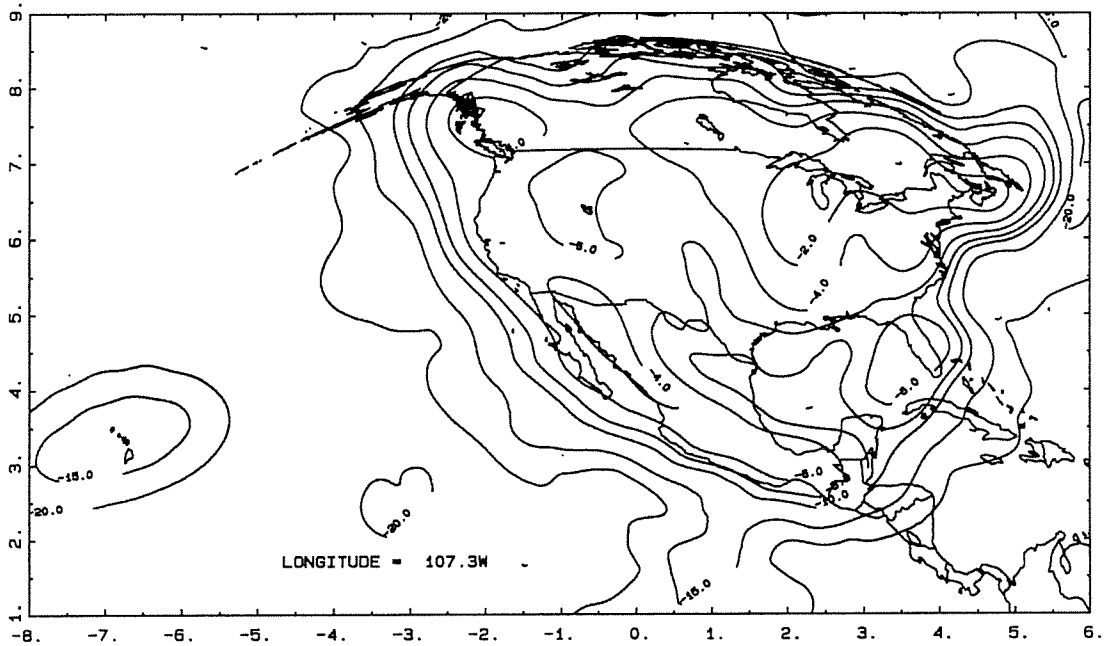
ANIK F1 C-band Receive Vertical polarization Beam - CNRV



ANIK F1 C-band Transmit Horizontal polarization Beam - CNTH

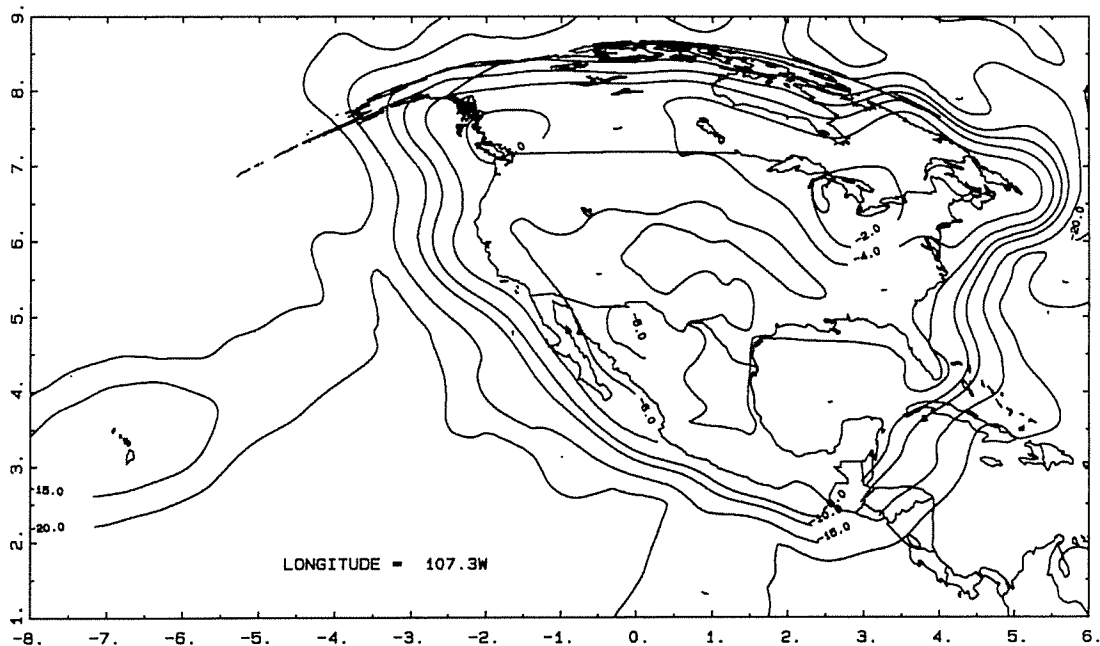


ANIK F1 C-band Transmit Vertical polarization Beam - CNTV



ANIK F1 Ku-band Receive Horizontal polarization Beam - KNRH

ANIK F1 Ku-band Receive Vertical polarization Beam - KNRV



ANIK F1 Ku-band Transmit Horizontal polarization Beam - KNTH

ANIK F1 Ku-band Transmit Vertical polarization Beam - KNTV

(8) Description of Type of Services to be Provided

The C-band and Ku-band payload of ANIK F1 provides coverage of the USA including Hawaii and Alaska, as well as Canada and Mexico.

The types of service proposed at C-band include FM TV, point-to-point and point-to-multipoint wideband and narrowband digital services. The latter could include voice, and data as well as Internet services. Services at Ku-band would be similar to C-band but in addition would include VSAT service to small antennas.

Tables below provide a detailed list of C-band and Ku-band earth stations that may be utilized in the Anik F1 network and their characteristics. Also enclosed in this section are detailed lists of carrier types associated with each receiving and/or transmitting earth station as well as carrier characteristics.

The following tables depict the service characteristics for the intended services on Anik F1 satellite including TTAC carriers:

(a) C-band Service Characteristics:

Table 8. Typical Earth Stations and their characteristics intended for operation in C-band

Antenna Diameter (m)	Tx Peak Gain (dBi)	Rx Peak Gain (dBi)	Tx Beamwidth (degrees)	Rx Beamwidth (degrees)	Rx Noise Temperature (k)	Sidelobe Performance
3.7	-	41.8		1.44	160	REC-580
4.5	47.4	43.5	0.76	1.18	160	REC-580
7.0	51.3	47.4	0.52	0.81	160	REC-580
8.0	52.4	48.5	0.43	0.66	160	REC-580
10.0	54.4	50.5	0.34	0.53	160	REC-580

Table 9. Space Station C-band Beams and Characteristics

Beam Designation	Tx Peak Gain (dBi)	Rx Peak Gain (dBi)	Beam Accuracy (degrees)	Polarization
CNRH	-	33.8	0.07	Horizontal
CNRV	-	32.5	0.07	Vertical
CNTH	32.5	-	0.07	Horizontal
CNTV	31.9	-	0.07	Vertical

Table 10. Typical Carriers (Earth-to-Space) intended for operation in C-band

Beam Designation	Antenna Diameter (m)	Emission Designation	Allocated BW (kHz)	Uplink Direction				Total Link Margin (dB)
				Power input to antenna (dBW)	Maximum EIRP (dBW)	Total C/N (dB)	Power Density into Ant. (dBW/4kHz)	
CNRH and CNRV								
	4.5	160KG7D	160	-1.2	46.0	7.8	-17.2	5.0
		3M05G7W	3050	14.8	62.0	10.4	-14.0	4.0
		4M33G7D	4330	16.3	63.5	10.6	-14.0	4.2
	7.0	24K0G7D	24	-9.8	41.5	5.9	-17.6	3.1
		26K7G7D	26.7	-4.8	46.5	12.4	-13.0	4.1
		80K0G7D	80	1.0	52.3	10.9	-12.0	3.9
		640KG7D	640	2.6	53.9	4.7	-19.4	1.9
		6M10G7W	6100	17.8	69.1	10.2	-14.0	3.8
	8.0	106KG7D	106	-4.9	47.5	8.5	-19.1	5.7
		160KG7D	160	-3.4	49.0	8.5	-19.4	5.7
		8M00G7D	8000	19.6	72.0	13.3	-13.4	3.5
		30M0G7W	30000	22.0	74.4	11.8	-16.8	5.7
		33M0G7D	33000	26.5	78.9	13.3	-12.7	3.5
		36M0F9F	36000	26.5	78.9	17.0	N/A	4.0
	10.0	33M3G7D	33300	25.4	79.8	13.3	-13.8	3.5

Analog TV transmissions compliant with Section 25.211(d)

Table 11. Typical Carriers (Space-to-Earth) intended for operation in C-band

Beam Designation	Antenna Diameter (m)	Emission Designation	Allocated BW (kHz)	Downlink Direction			Total Link Margin (dB)
				Power input to antenna (dBW)	Maximum EIRP (dBW) COB	Total C/N (dB)	
CNTH and CNTV							
	3.7	36M0F9F	36000	13.8	46.3	16.5	3.5
	4.5	160KG7D	160	-14.2	18.3	7.8	5.0
		3M05G7W	3050	1.3	33.8	10.6	4.2
		4M33G7D	1290	2.8	35.3	10.6	4.2
		6M10G7W	6100	5.8	38.3	11.0	4.6
		30M0G7W	30000	13.8	46.3	12.7	6.6
		36M0F9F	36000	13.8	46.3	17.6	4.6
	7.0	6M10G7W	6100	5.8	38.3	11.3	4.9
		8M00G7D	8000	6.8	39.3	13.3	3.5
		33M0G7W	33000	13.8	46.3	17.1	7.3
		36M0F9F	36000	13.8	46.3	17.0	4.0
	8.0	6M10G7W	6100	5.8	38.3	11.4	5.0
		33M0G7W	33000	13.8	46.3	17.2	7.4
	10.0	5M48G7D	5480	1.8	34.3	9.9	3.8
		8M00G7D	8000	6.8	39.3	13.4	3.6
		33M0G7W	33000	13.8	46.3	17.3	7.5

(b) Ku-band Service Characteristics

Table 12. Typical Earth Stations and their characteristics intended for operation in Ku-band

Antenna Diameter (m)	Tx Peak Gain (dBi)	Rx Peak Gain (dBi)	Tx Beamwidth (degrees)	Rx Beamwidth (degrees)	Rx Noise Temperature	Sidelobe Performance
1.2	43.2	41.7	1.2	1.46	160	REC-465
1.8	46.7	45.2	0.82	0.98	160	REC-465
2.4	49.2	47.7	0.61	0.73	160	REC-580
3.7	53.0	51.5	0.40	0.47	160	REC-580
4.5	54.7	53.2	0.33	0.39	160	REC-580
5.6	56.6	55.1	0.26	0.31	160	REC-580
8.0	59.7	58.2	0.18	0.22	160	REC-580

Table 13. Space Station Ku-band beams and characteristics

Beam Designation	Tx Peak Gain (dBi)	Rx Peak Gain (dBi)	Beam Accuracy (degrees)	Polarization
KNRH	-	34.6	0.07	Horizontal
KNRV	-	35.3	0.07	Vertical
KNTH	34.9	-	0.07	Horizontal
KNTV	34.6	-	0.07	Vertical

Table 14. Typical Carriers (Earth-to-Space) intended for operation in Ku-band

Beam Designation	Antenna Diameter (m)	Emission Designation	Allocated BW (kHz)	Uplink Direction				Total Link Margin (dB)
				Power input to antenna (dBW)	Maximum EIRP (dBW)	Total C/N (dB)	Power Density into Ant. (dBW/4kHz)	
KNRH and KNRV								
	1.2	26K7G1E	26.7	-7.9	35.3	8.1	-16.1	2.8
		32K0G7D	32	-6.9	36.3	6.7	-15.9	1.4
		80K0G7D	80	-1.4	41.8	7.6	-14.4	0.6
		160KG7D	160	-2.4	40.8	4.6	-18.4	1.8
		320KG7D	320	0.6	43.8	6.3	-18.4	3.5
	1.8	26K7G1E	26.7	-10.2	36.5	11.1	-18.4	5.8
		80K0G7D	80	-3.3	43.4	11.1	-16.3	4.1
		160KG7D	160	-4.3	42.4	8.1	-20.3	5.3
		320KG7D	320	-2.3	44.4	8.8	-21.3	6.0
		640KG7D	640	1.7	48.4	4.7	-20.3	1.9
	2.4	160KG7D	160	-3.7	45.5	7.4	-19.7	4.6
		320KG7D	320	-0.7	48.5	6.8	-19.7	4.0
		640KG7D	640	2.3	51.5	7.1	-19.7	4.3
		1M28G7D	1280	3.6	52.8	5.8	-21.5	3.0
		20M0G7D	20000	21.0	70.2	11.2	-15.9	4.5
		27M0F9F	27000	27.0	76.2	14.2		1.2
	3.7	160KG7D	160	-7.2	45.8	7.1	-23.2	4.3
		640KG7D	640	-1.2	51.8	7.2	-23.2	4.4
		1M28G7D	1280	1.8	54.8	7.6	-23.3	4.8
		1M85G7D	1850	5.3	58.3	8.9	-21.4	3.0
		5M48G7D	5480	10.3	63.3	8.9	-21.1	2.8
		6M10G7W	6100	10.8	63.8	8.9	-21.0	2.5
		27M0F9F	27000	27.0	80.0	14.5		1.5
	4.5	1M28G7D	1280	-1.2	53.5	8.7	-26.3	5.9
		1M40G7D	1400	2.4	57.1	9.1	-23.0	3.2
		1M85G7D	1850	3.3	58.0	9.1	-23.4	3.2
		6M10G7W	6100	9.3	64.0	9.1	-22.5	2.7
		27M0F9F	27000	27.0	81.7	16.9		3.9
	5.6	320KG7D	320	-8.7	47.9	6.3	-27.7	3.5
		1M28G7D	1280	-2.7	53.9	8.7	-27.8	5.9
		1M85G7D	1850	1.8	58.4	9.1	-24.9	3.2
		5M48G7D	5480	6.8	63.4	9.1	-24.6	3.0
		6M10G7D	6100	7.8	64.4	9.1	-24.0	2.7
		27M0F9F	27000	24.8	81.4	15.0		2.0
	8.0	5M48G7D	5480	17.3	77.0	9.2	-14.1	3.1
TTAC								
	9.0	1M30GXD	1300	28.3	89.0	13.0		

Analog TV transmissions compliant with Section 25.211(d). The frequency assignments are included in the Coordination Agreements with adjacent satellite operators.

Table 15. Typical Carriers (Space-to-Earth) intended for operation in Ku-band

Beam Designation	Antenna Diameter (m)	Emission Designation	Allocated BW (kHz)	Downlink Direction				
				Power input to antenna (dBW)	Maximum EIRP (dBW)	Total C/N (dB)	EIRP Density (dBW/4kHz)	Total Link Margin (dB)
KNTH and KNTV								
	2.4	26K7G1E	26.7	-20.9	14.0	14.2	5.8	8.9
		80K0G7D	80	-16.1	18.8	11.1	5.8	4.1
		160KG7D	160	-13.1	21.8	11.1	5.8	8.3
		320KG7D	320	-10.4	24.5	8.1	5.5	5.3
		640KG7D	640	-7.1	27.8	6.8	5.8	4.0
		1M28G7D	1280	-4.6	30.3	7.6	5.2	4.8
		27M0F9F	27000	9.2	44.1	15.0		2.0
	3.7	1M85G7D	1850	-2.4	32.5	8.9	5.8	3.0
		5M48G7D	5480	2.3	37.2	8.9	5.8	2.8
		6M10G7W	6100	2.7	37.6	8.9	5.8	2.5
	4.5	26K7G1E	26.7	-20.9	14.0	8.1	5.8	2.8
		32K0G7D	32.0	-20.1	14.8	6.7	5.8	1.4
		80K0G7D	80	-16.1	18.8	7.4	5.8	0.4
		160KG7D	160	-13.1	21.8	4.6	5.8	1.8
		320KG7D	320	-10.9	24.0	6.3	5.0	3.5
		640KG7D	640	-7.9	27.0	6.3	5.0	3.5
		1M28G7D	1280	-4.9	30.0	8.7	4.9	5.9
		1M40G7D	1400	-3.7	31.2	9.1	5.8	3.2
		1M85G7D	1850	-2.4	32.5	9.1	5.8	3.2
		5M48G7D	5480	2.3	37.2	9.1	5.8	3.0
		6M10G7W	6100	2.7	37.6	9.1	5.8	2.7
		27M0F9F	27000	9.2	44.1	16.9		3.9
	5.6	26K7G1E	26.7	-20.9	14.0	7.0	5.8	1.7
		32K0G7D	32.0	-20.1	14.8	5.3	5.8	2.5
		1M28G7D	1280	-5.6	29.3	5.8	4.2	3.0
		20M0G7D	20000	7.9	42.8	11.2	5.8	4.5
TTAC								
	9.0	300KFXD	300	-19.9	15.0	9.8		

Analog TV transmissions compliant with Section 25.211(d). The frequency assignments are included in the Coordination agreements with adjacent satellite operators. Carriers intended for operation involving US earth stations would be compliant with 25.212(c).

(9) Orbit Station Keeping Accuracy

Longitudinal Tolerance: +/- 0.05 degrees

Inclination Excursion: 0.05 degrees

Antenna pointing Accuracy: +/- 0.07 degrees for both C and Ku-band antennas

(10) Calculation of PFD levels within each coverage area and Energy Dispersal, if applicable.

The maximum PFD levels for typical Carriers intended for operation in C-band frequencies in the space-to-Earth direction in the coverage area of interest are provided in Table below.

Table 16. PFD Levels for Typical C-band Carriers

Beam Designation	Ant. Dia. (m)	Emission Designation	Max EIRP density (dBW/4 kHz) COB	PFD at 5° dBW/4kHz/m ²	PFD at 10° dBW/4kHz/m ²	PFD over 25° dBW/4kHz/m ²
EIRP adjustment from COB (dB)				-8.2	-5.8	0.0
CNTH and CNTV						
	3.7	36M0F9F	19.3	-152.2	-149.7	-143.5
	4.5	160KG7D	2.3	-169.3	-166.7	-160.6
		3M05G7W	5.0	-166.6	-164.0	-157.9
		4M33G7D	10.2	-161.3	-158.8	-152.6
		6M10G7W	6.5	-165.1	-162.5	-156.4
		30M0G7W	7.5	-164.0	-161.5	-155.3
		36M0F9F	19.3	-152.2	-149.7	-143.5
	7.0	6M10G7W	6.5	-165.1	-162.5	-156.4
		8M00G7D	6.3	-165.2	-162.7	-156.6
		33M0G7W	7.1	-164.4	-161.9	-155.7
		36M0F9F	19.3	-152.2	-149.7	-143.5
	8.0	6M10G7W	6.5	-165.1	-162.5	-156.4
		33M0G7W	7.1	-164.4	-161.9	-155.7
	10.0	5M48G7D	2.9	-168.6	-166.1	-159.9
		8M00G7D	6.3	-165.2	-162.7	-156.6
		33M0G7W	7.1	-164.4	-161.9	-155.7

The PFD levels calculated are based on the beam gain at the elevation angle of interest. Carriers designated as 36M0F9F have 2 MHz wide Energy Dispersal.

(11) Arrangements for Tracking, Telemetry and Control

Telesat Canada performs its own satellite station-keeping from its satellite control centers in Ottawa and Allan Park in Ontario, Canada.

(12) Physical Characteristics of Space Station

Physical Characteristics of the Space Station

Dimensions	Height	40.4 m (132.5 ft) solar arrays deployed
	Body Width	9.0 m (29.5 ft) reflectors deployed
Mass		5200 kg (on ground) 2950 kg (in-orbit)
Solar Array Capacity		17.5 (at beginning of life) 15.5 kW (at end of life)

Service Life 15 years

Reliability of Space Station: The contracted reliability is 0.75 at the end of the 15 year service life for 48 (32 North American/16 South American) 27 MHz Ku-band channels and 36 (24 North American/12 South American) 36 MHz channels.

(13) Detailed Financial Information

N/A-See attached waiver request.

(14) Operation as Non-Common Carrier

The space station is to be operated on a non-common carrier basis.

(15) Construction, Launch and Service Dates

The space station is under construction and is to be launched in July 2000 by Arianespace from Kourou in French Guiana. It is planned to bring the satellite into service in September 2000.

(16) Public Interest Considerations

Anik F1 is licensed in Canada, a member of the WTO. It will replace the Anik E2 satellite, located at 107.3 W, currently listed in the Permitted Satellite List. Telesat seeks to offer services in the U.S. in accordance with the Commission's *International Satellite Service Order*, in which the competitive benefits for consumers are presumed to be in the public interest.

(17) Information Specified in 25.140

N/A -See attached Waiver Request.

(18 to 21)

Anik F1 is a geostationary Fixed Satellite Service (FSS) satellite. These sections are not applicable to Anik F1.

Information required for Section 25.212

c) Ku-Band

The Ku-band portion of the Anik F1 space station provides coverage of North America via its beams in either polarization. Table 14 of the Section 25.114 part (c) depicts the maximum Power Spectral Density (PSD) for typical carriers and confirms that they meet the limits specified in Section 25.212 (c) of the Commission's Rules. The maximum power density into the antenna as per 25.212(c) for narrowband analog service is -8.0 dBW/4 kHz. The maximum power density into the antenna as per 25.212(c) for narrowband/wideband digital service is -14.0 dBW/4 kHz.

Similarly, Table 15 of the Section 25.114 part (c) depicts the maximum satellite EIRP Density for typical carriers and confirms that they meet the limits specified in Section 25.212 (c) of the Commission's Rules. The calculated satellite EIRP density anywhere within the United States of America for the typical carriers is expected to be less than 13.0 dBW/4 kHz for the narrowband analog carrier case and less than 6.0 dBW/4 kHz for the digital carrier case, then the Anik F1 EIRP density limits are in compliance with the specified levels in Section 25.212 (c) of the Commission's Rules.

d) C-Band

The C-band portion of the Anik F1 space station provides coverage of North America via its beams in either polarization. Table 10 of the Section 25.114 part (c) depicts the maximum Power Spectral Density (PSD) for the carriers presented and confirms that they meet the limits specified in Section 25.212 (d) of the Commission's Rules. The maximum power density into the antenna as per 25.212(d) for narrowband analog service is +0.5 dBW/4 kHz. The maximum power density into the antenna as per 25.212(d) for narrowband/wideband digital service is -2.7 dBW/4 kHz.

EXHIBIT 2 to FCC Form 312

In questions 30, 31, 32, and 33 Telesat Canada (“Telesat”) identifies itself as a corporation organized under the laws of a foreign government. However, this Petition for Declaratory Ruling seeks only to permit U.S.-licensed ALSAT earth stations to access Anik F1, a non-U.S. satellite, consistent with the *DISCO II Reconsideration Order*.¹ Thus, Telesat’s foreign ownership poses no U.S. licensing concerns.

In any event, in the *DISCO II Order*, the Commission essentially created a blanket waiver of alien ownership restrictions by adopting “a rebuttable presumption that applications by investors from WTO Member countries to exceed the 25 percent foreign ownership limitation under Section 310(b)(4) will promote competition.”² Accordingly, Telesat’s request for declaratory ruling or petition for waiver raises no foreign ownership concerns, and should be granted.

¹ *Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, 1999 FCC LEXIS 5448 (rel. Oct. 29, 1999) (First Order on Reconsideration) (“*DISCO II Reconsideration Order*”).

² *Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, 12 FCC Rcd 24094, 24159 (1997) (Report and Order) (“*DISCO II Order*”).