

CATALANO & JARVIS, P.C.

1101 30TH STREET, N.W.
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WASHINGTON, D.C. 20007

ALBERT J. CATALANO, ESQ.

TELEPHONE (202) 338-3500
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March 6, 1995

Federal Communications Commission
c/o Mellon Bank
Three Mellon Bank Center
525 William Penn Way
27th Floor, Room 153-2713
Pittsburgh, PA 15259-0001

Attention: Wholesale Lockbox Shift Supervisor

Re: Final Analysis, Inc.
Applications for Experimental Authorization

Dear Sir/Madam:

Submitted herewith on behalf of Final Analysis, Inc. are the following applications for New Station Authorizations:

- one experimental low-earth orbit satellite to be placed in 1,000 km orbit;
- one Master Ground Station, to be located in Logan, Utah; and
- 9,240 Remote Mobile Terminals for use within the United States.

Three fee payments of the appropriate fee of \$45.00 (Fee Type Code EAE) as set forth in the *Fee Filing Guide* for the Office of Engineering and Technology (one for each application), are enclosed in the form of a single check in the amount of \$135.00 made payable to the Federal Communications Commission.

An additional copy of this cover letter, and a self-addressed envelope is included for return as a "stamp and receipt copy." If you should have any questions concerning the foregoing, kindly contact the undersigned directly.

Sincerely,


Albert J. Catalano
Counsel to Final Analysis, Inc.

Encl.: Check for \$135.00

cc: H. Franklin Wright
Office of Engineering and Technology

CATALANO & JARVIS, P.C.

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ALBERT J. CATALANO

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March 6, 1995

Mr. H. Franklin Wright
Chief, Frequency Liaison Branch
Office of Engineering and Technology
Federal Communications Commission
2000 M Street, N.W.
Washington, D.C. 20554

Re: Final Analysis, Inc.
Application for Experimental Authorization

Dear Mr. Wright:

Final Analysis, Inc. ("Final Analysis") hereby makes application for experimental authorization for the following facilities:

1. A single low-earth orbit satellite housing three experimental satellite transmitters. The first two transmitters will operate in the range from 157.5000 to 162.0000 MHz; the remaining transmitter will occupy a 50 KHz-wide channel from 400.595 to 400.645.

All transmissions will have an Effective Radiated Power ("ERP") of 12.8 dBW. The proposed experimental satellite will have an apogee of 1000 km, a perigee of 1000 km, an inclination of 83° and a period of 105 minutes.

2. One experimental fixed/base ground station transmitter to operate in the range of 153.0000 to 157.5000 MHz:

The proposed ground station will have an ERP of 22 dBW, and is to be located in Logan, Utah.

CATALANO & JARVIS, P.C.

Mr. H. Franklin Wright
Federal Communications Commission
March 6, 1995
Page 2

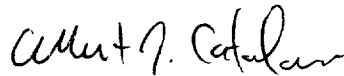
3. 9,240 experimental mobile remote terminal transmitters to operate in the range of 153.0000 to 157.5000 MHz.

Each of the experimental mobile remote terminal transmitters shall have an ERP of 9.8 dBW, and shall operate in the continental United States, Alaska and Hawaii.

The precise details of the satellite and ground terminal authorizations sought are set forth in "Exhibit 1" hereto.

Expedited consideration of this application for experimental authorization is requested in order to meet an August launch deadline. If you should have any questions concerning the foregoing, kindly contact the undersigned directly.

Sincerely,



Albert J. Catalano
Counsel to Final Analysis, Inc.

Attachment

CATALANO & JARVIS, P.C.

ATTORNEYS-AT-LAW

1101 30TH STREET, N.W., SUITE 300
WASHINGTON, D.C. 20007

RONALD J. JARVIS

TELEPHONE: (202) 338-3500
FACSIMILE: (202) 333-3585

April 4, 1995

HAND-DELIVERY

Mr. H. Franklin Wright
Chief, Frequency Liaison Branch
Office of Engineering and Technology
Federal Communications Commission
Room 230
2000 M Street, N.W.
Washington, D.C. 20554

Re: *Final Analysis, Inc.*
Applications for Experimental Authorization
Filed March 6, 1995

Dear Mr. Wright:

On behalf of our client, Final Analysis, Inc., and in consideration of our recent discussions with your office concerning the above-captioned Applications for Experimental Authorization, we hereby notify you that the following frequencies will not be utilized in the proposed experiments:

<u>Description</u>	<u>Frequencies</u>	<u>Proposed Designation</u>
Shared Maritime Mobile	156-2475 -- 157.0375 MHz	Uplink
Exclusive Government Maritime	157.0375 -- 157.1875 MHz	Uplink
Shared Maritime Mobile	157.1875 -- 157.4500 MHz	Uplink
Shared Maritime Mobile	161.5750 -- 161.6250 MHz	Downlink
Shared Maritime Mobile	161.7750 -- 162.0125 MHz	Downlink

The implicated uplink frequencies (*viz.*, 156.2475 -- 157.4500 MHz) will be avoided by programming the software in the satellite onboard computer to ensure that the satellite will not command the Ground Station or the Remote Terminals to utilize these frequencies.

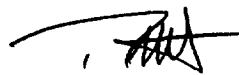
CATALANO & JARVIS, P.C.

H. Franklin Wright
Federal Communications Commission
April 4, 1995
Page 2

The implicated downlink frequencies (*viz.* 161.5750 -- 161.6250 and 161.7750 -- 162.0125 MHz) will be avoided by programming the software in the onboard satellite computer so that it will not command the onboard telemetry to utilize these frequencies.¹

If there are any questions concerning the foregoing, kindly contact the undersigned directly.

Sincerely,



Ronald J. Jarvis

¹ It should be noted for purposes of clarification that Final Analysis did not request the use of any frequency above 162.0000 MHz in its application for experimental authorization; accordingly, the portion of spectrum from 162.0000 to 162.0125 MHz was not intended to be used in any event.



Final Analysis Inc.

7500 Greenway Center • Suite 1240 • Greenbelt, Maryland 20770 • Tel: (301)474-0111 • Fax: (301)474-3228

April 27, 1995

Scott Blake Harris
Chief, International Bureau
Federal Communications Commission
Room 800
2000 M Street, N.W.
Washington, D.C. 20554

Re: Final Analysis, Inc.
Experimental Satellite Program

Dear Mr. Harris:

Final Analysis, Inc. ("Final Analysis") is the corporate parent of Final Analysis Communication Services, Inc., an applicant for commercial license in the second processing round of the Non-Voice, Non-Geostationary Mobile Satellite Service ("NVNG-MSS"). As you are well aware, the pending applicants in this service are very concerned about the availability of suitable frequencies to allow U.S. companies to compete in this newly-conceived global marketplace. From Final Analysis' point of view as a small business, obtaining additional spectrum in WRC-95, or at the latest, WRC-97, is essential to our long-range plan.

Final Analysis and other pending applicants have expended considerable time, effort and financial resources to support the U.S. Government's efforts to secure additional spectrum for the NVNG-MSS at the upcoming WRC-95 meeting. Final Analysis has attended numerous WRC-95 preparatory meetings, contributed to the Final Report to the Commission of the Industry Working Group 2 ("IWG-2") (concerned with non-geostationary mobile satellites), and has participated in the commissioning of an engineering study to review potential spectrum segments that might be considered for sharing with existing authorized users.

As part of the overall effort to move the process forward, Final Analysis proposed in one of the industry strategy meetings that *actual operational data* be obtained, to demonstrate beyond question that the sharing proposals we were examining on paper would work in the real world. Final Analysis, whose business consists in part of conducting experiments and analysis of numerous space/satellite projects, knows only too well that "paper" analysis alone will be subject to theoretical attacks of all types.

Put plainly, in these matters, there is no substitute for the "real thing" -- actual operational data gleaned not from computer databases, not from balloons, not from high-flying airplanes, but an actual low-earth orbiting satellite "talking" to terminals on the ground. After consulting with its suppliers, and with offerors of launch services, Final Analysis concluded that it was in the position of being able to field an experimental satellite in short order that could answer some of the questions *decisively*. Accordingly, Final Analysis scheduled a meeting with Mr. Tom Tycz and his staff to determine whether, if it were technically feasible, the Commission would be supportive of this effort.

From our point of view, the meeting with the Commission went well, and demonstrated the agency's interest in conducting this investigation. Final Analysis therefore quickly prepared and submitted to the Commission an experimental proposal intended to obtain operational data on the frequencies that appeared most promising, based on our own review, meetings held with FCC officials, and the contemporaneous discussions of the IWG-2 participants preparing for WRC-95.

The application was filed, on March 6, 1995. Final Analysis sought authorization for one satellite, one ground station, and 9,240 mobile ground terminals ("Remote Terminals" or "RTs"). The reason so many RTs were requested was to ensure that the results obtained were not open to serious question. If just a handful of RTs were employed, we felt, the data could be criticized for lack of adequate sampling. Accordingly, Final Analysis proposed that, for each major region of the country, one RT per 20,000 population be employed. This number of RTs could provide a more realistic picture of how this new technology, which involves receipt and processing of half-second bursts of energy from thousands of ground terminals, would work in practice on the specified frequencies.

Inexplicably, although the other NVNG-MSS applicants seemed supportive of this effort at first, two applicants have seen fit for their own reasons to oppose the experimental project. I do not intend to argue the relative merits of this dispute in this context.

The Commission should be clear on one fact: the experimental proposal submitted by Final Analysis is not a competitive venture, nor is it a commercial venture. Final Analysis' proposal is intended to benefit the Commission, the U.S. Government, and the other applicants who similarly must have additional spectrum to realize their plans. From the outset, we have encouraged other applicants to participate, we have offered to make available to all interested parties the results of our inquiry, and we have never sought to exclude others from the technical details. In fact, we welcome the advice, assistance and participation of all concerned, before, during and after the launch of the satellite.

Final Analysis is aware that this venture is not without significant financial risk. As an experimental proposal, it can be terminated at any point if interference results. In addition, the authorization is for a relatively short duration. However, from our point of view, it is absolutely essential that additional frequencies are obtained, and this is the best way our company can contribute to this effort.

Final Analysis is standing ready, at its sole expense and risk, to offer actual operational data on targeted frequencies for sharing with NVNG-MSS. To the extent that the frequencies in our experimental application do not match the most current thinking of the Commission, we are more than willing to adjust the proposal to incorporate new or additional frequencies. And, if the Commission considers that our current application requests too many RTs, we would scale back our proposal accordingly. The point is to advance our knowledge in this crucial area of inquiry: we want to do what works for everyone involved.

When the application was originally filed, we looked toward an expedited launch date of August, 1995. This launch timing anticipated a quick response from the Commission. At this point, we will be sorely pressed to meet that schedule, but we believe we can still accomplish our goal of fielding the satellite and commencing tests prior to the WRC-95 meetings in Geneva.

We understand that the data from this test may not be included in the substantive proposals to the WRC-95, which must be submitted prior to that point. However, Final Analysis considers that the data may nevertheless be provided in supplementary materials to help support the U.S. position. In addition, if the necessary frequencies are not obtained as a result of the Government's efforts on our behalf in WRC-95, these data will be an essential part of the WRC-97 effort. Moreover, to the extent that the frequencies examined are allocated to other services in the U.S., the experiment will turn up valuable information for *domestic* purposes apart from the concerns of the U.S. at the WRC.

Moreover, Final Analysis considers that the launching of this experimental satellite to obtain actual operational data to back up the Government's proposal demonstrates to the international community a firm resolve and commitment to the NVNG-MSS that will be a helpful addition to the overall effort in WRC-95, even if the full range of test data cannot be part of the Government's proposal in WRC-95.

In conclusion, Final Analysis requests your support and the support of all interested parties in preparing and conducting this experiment on an expedited basis. The timing of this is such that we must have an answer from the Commission in the very near future; otherwise, we cannot promise that the envisioned Fall, 1995 launch schedule can be met. If what we have proposed is of value to the Commission and to the U.S. Government, I urge you to take action to issue the required authorization as soon as reasonably possible.

Sincerely,



Nader Modanlo
President

cc: See attached service list

SERVICE LIST

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