

**COMMUNICATION BETWEEN ERITREA
AND
THE OUTSIDE WORLD
VIA
TELETRANSMISSION**

Study

License

Procurement

Shipment

Installation

Operation

Prepared
By
Emnetu Tesfay

June 1987

Stavanger, Norway

ABOUT THE REPORT

This inquiry report is prepared for and under the request of the Eritrean Public Health Department. The report is simply a systematic collection of information from individual telecommunication engineers and sales engineers of companies marketing the relevant products. The compiler unequivocally reiterates his limited knowledge about this particular field and the conclusions and Recommendations made in this report are simply based on the information gathered during the inquiry period.

Emnetu Tesfay

Document Grading

The importance of controlling the flow of information regarding this matter is apparent. Therefore this report should be graded as **STRICKTLY CONFIDENTIAL**. At present there are only four copies and the holders are listed below. Any further copy made or transfer of information to another party should be registered. All correspondences on this matter, from this stage on, should be labelled confidential and duly acknowledge on the exterior of the post.

Holders of report are:

1. Emnetu Tesfay, Stavanger, Norway
2. Dr. Nerayo T. Michael, London, England
3. Bandera Teame, Milano, Italy
4. Dr. Frank Bakke, Reykjavik, Iceland

REPORT OF INQUIRY

Options of direct communication between Eritrea and the outside world via teletransmission.
Technical, commercial, legal and operational analysis of options.

- 1. Telephone / Telefax via microwave networks
(Kesela as a point of connection to the outside world)**
- 2. Radio / Telephone**
- 3. A High Frequency Tranceiver for Telex communication**
- 4. Satellite Equipment for Voice, Image and Data transmission**
- 6. Others**

A STANDARD FORM FOR ALL THE OPTIONS

(For the details of each option see the ring binder)

Components:
Function:
Ranges:
Equipment cost:
Operational cost:

Legal matters/license:

Technical evaluation: (weight, dimension, installation, including mobility, maintainability
serviciability, spare parts availability, etc.)

General remarks:

Conclusion:

For direct link between Eritrea and the various EPLF offices in Europe two alternatives exist:

1. Procure and install radio transcievers. To use radio communication for long distances the HF band has to be used. On both ends high power transmitters and large antennas have to be used. Investigation has to be made if authorities in the various countries where EPLF offices are located can permit the use of radio communication.
2. Procure and install satellite communication equipment and thus gain access to the international telecommunications network. The problem of obtaining license have to be solved first.

Recommendation:

- A All efforts should be made to procure a satellite communication equipment Saturn-3.
- B A telex machine procured, installed and connected to the Kenwood HF transciever already in the field could without much technical or legal problems provide a two way telex communication between Eritrea and Norway. This means all communication will be transmitted via Norway.

R.E. Karlsen
Elektrisk Bureau
Bergerveien 12

1360 Nesbru

21.04.87

Placement of Order for one Complete Unit of Saturn T

Reference is made to our numerous telephone conversations which culminated in the visit to EB plant by Dr. Nerayo T. Michael in February 1987. On behalf of the Eritrean Relief Association, U.K. I hereby confirm in writing, subject only to INMARSAT approval, the association's placement of order for the fabrication and delivery of a complete unit of the land based satellite communications equipment known as Saturn T. The agreed amount payable to the vendor is 250.000 NOK (two hundred and fifty thousand Norwegian kroner) with the requested modifications made without extra charge. The modifications are:-

1. Aluminium boxes to be improved in shape and strength.
2. Colour of antenna to be changed from white to green or grey.
3. Suitable telefax to be fitted and tested before shipment.
(procurement of telefax to be born by client.)

Name of purchaser as stated in the INMARSAT application is ERA, U.K. Invoicing address is the same as that of the purchaser i.e. :-

Eritrean Relief Association U.K.
BCM BOX 865
London WCIV 6XX
U.K.

Best regards,

For and on behalf of ERA,
U.K.

Emnetu Tesfay
Digranesv. 15
4000 Stavanger
Norway

R.E. Karlsen
Elektrisk Bureau
Bergerveien 12

1360 Nesbru

05.05.87

Placement of Order for a Second Saturn T

It is to be remembered that an order was placed to Elektrisk Bureau to supply a complete unit of a Saturn T communication equipment on the 21st of april 1987. The Eritrean Relief Association (ERA) leadership has evaluated the services a second Saturn T unit can provide to reach the inaccessible parts of the long stretched country and have made a decision to procure a second complete unit of Saturn T.

I therefore confirm in writing, subject only to INMARSAT approval, the association's placement of order for a second complete unit of Saturn T. As to the cost of the second order, considering the limited resources of this non-profit making humanitarian organization, any amount Elektrisk Bureau can deduct from the 250.000 kroner tag on the equipment would be considered as a great contribution to the drought stricken people of Eritrea. Otherwise all conditions remain the same.

To achieve a cost effective transportation arrangement, the wish of the buyer is to make one shipment of the whole consignment in the period may/june of this year.

Best regards,

For and on behalf of ERA,
U.K.

Emnetu Tesfay
Digranesv. 15
4000 Stavanger
Norway

Enclosure: A completed commissioning application form for signature and forwarding to INMARSAT

Consignment shipment address

DD
Ministry of Defence
Democratic Republic of Somalia
Mogadisho

AIRCONTACT CARGO
Flyspeditørenes Hus
GL. Snarøyv. 5
N-1330 Oslo Airport

Attention Emnetu Tesfay:

STATEMENT OF AGREEMENT

On behalf of A/S Elektrisk Bureau, Nesbru - Norway we have sent 3 coll. Saturn satellite communication system BTO 272 KG Airway bill No. 220-6628 5763 Flight LH1337 Oslo-Frankfurt July 24, 1987 and flight HH501 Frankfurt-Mogadishu ETA 06:40 July 27, 1987.

The cargo has been insured by EB A/S Aircontact Cargo.

Best regards, Mia Larsen, A/S Aircontact Cargo

VERY URGENT MESSAGE. Please hand carry to destinator.

EPLF Office
Economy Department
Telex No. 623259 I ERICON
Attention Stefanos Afwerki
(Bruno):

On sunday I had a telephone conversation with Habtemariam to whom I transmitted the scheduled arrival of the boxes in Mogadisho. I have been informed by the air cargo company transporting the equipment that the flight is delayed and the new schedule of arrival in Mogadisho is tuesday the

28th of July at 6.40 early in the morning.

In addition to this change of schedule I would like to bring to your attention that the representative in Mogadisho has to report back to us immediately the condition of the consignment on arrival and confirm the actual delivery of the equipment. The need for report and confirmation is paramount because we have insured the consignment and we need to claim to the insurance company if there is any damage or partial or total loss of the consignment. Since I am leaving to Bologna on Tuesday afternoon the person to whom report / confirmation to be made is:-

<p>Dr. Frank Bakke Oslo 02-201295 Home Oslo 02-356020 Ext. 213 Office</p>

Besides, the aluminium boxes, although they are tight enough to protect water spray or light shower, water can penetrate and destroy this sensitive equipment if the boxes are left to submerge into 10 CM or higher level of fluid. Therefore the contact person in Mogadisho should be informed to take extra precaution, like covering the boxes with plastic bags, during the transportation to Eritrea and within Eritrea.

The insurance coverage of the equipment terminates in Mogadisho airport.

Best regards,
Emnetu Tesfay