

TRATADO ANTARTICO
SEGUNDA REUNION SOBRE TELECOMUNICACIONES

BUENOS AIRES, 1969

INFORME FINAL

DEUXIEME REUNION SUR LES TELECOMMUNICATIONS
DU TRAITE ANTARCTIQUE

BUENOS AIRES, 1969

RAPPORT FINAL

SECOND ANTARCTIC TREATY MEETING
ON TELECOMMUNICATIONS

BUENOS AIRES, 1969

FINAL REPORT

ДОГОВОР ОБ АНТАРКТИКЕ
ВТОРОЕ СОВЕЩАНИЕ ПО ТЕЛЕСВЯЗИ

БУЭНОС АЙРЕС, 1969 г.

ЗАКЛЮЧИТЕЛЬНЫЙ ДОКЛАД



*Gift to the Antarctic
Treaty Secretariat
from the Scott Polar
Research Institute,
April 2006*

SECOND ANTARCTIC TREATY MEETING
ON TELECOMMUNICATIONS
Buenos Aires, 1969

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Original: Spanish

FINAL REPORT

SECOND ANTARCTIC TREATY MEETING
ON TELECOMMUNICATIONS
Buenos Aires, 1969

1. In accordance with Recommendation V-2 adopted by the Fifth Antarctic Treaty Consultative Meeting, the Representatives of Argentina, Australia, Belgium, Chile, France, Japan, Norway, the Republic of South Africa, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America and the observers of the World Meteorological Organisation (WMO), International Telecommunications Union (ITU), Inter-governmental Oceanographic Commission (IOC) and the Scientific Committee on Antarctic Research (SCAR), met in Buenos Aires, on September 1, 1969, for the purpose of discussing the matters included in the Agenda transcribed below.
2. Mr. Aldo Santiago Irrera, engineer, was appointed Provisional Chairman of the Meeting by the Government of the Argentine Republic until the Meeting elected its Chairman.
3. The Meeting was officially inaugurated by H.E. the Secretary of Communications, Brigadier General Julio Argentino Teglia.
4. Mr. Aldo Santiago Irrera, engineer, was formally elected Chairman of the Meeting and Mr. Daniel A. Coria was appointed Secretary.
5. On behalf of the Consultative Parties, Mr. Thomas F. Lawrence acknowledged the welcome given them, and the good wishes expressed by the Secretary of State of Communications for the success of the task to be undertaken.
6. The Meeting then held a private session, unanimously approving the following Agenda:

AGENDA OF THE MEETING

- a. Opening of the meeting.
- b. Election of authorities.
 1. Adoption of the Rules of Procedure (APPENDIX I)
 2. Adoption of the Agenda.
 3. Examination of compliance with Recommendations previously adopted on telecommunications in the Antarctic (Washington, 1963).

4. Telecommunication requests made by the Consultative Parties and International Organizations.
 5. Amendments to present telecommunications procedures.
 6. Procedure for periodic amendment of arrangements concerning telecommunications with a view to adapting them to changing conditions and requirements.
 7. Preparation of a standardized form for exchange of information on telecommunications facilities pursuant to article VII of the Antarctic Treaty.
 8. Estimate of the needs for the near future and far-reaching projections, whenever possible in the light of the new telecommunications techniques that could be introduced in the Antarctic to meet future requirements.
 9. Drawing up of proposals to be sent by the Government of the host country of the Meeting to the Consultative Parties for consideration.
 10. Miscellaneous matters.
 11. Adoption of the Final Report.
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7. The opening and closing sessions were public. The others were private.
 8. The Meeting decided that the Proposals of this Meeting should supersede the Recommendations of the first Antarctic Treaty Meeting on Telecommunications in 1963 and unanimously approved the following proposals:

PROPOSAL 1

DEVELOPMENT OF ANTARCTIC TELECOMMUNICATIONS

The Representatives, noting the principles of the World Weather Watch (WWW) and considering:

1. that an Antarctic telecommunications system serves the administrative, operational, meteorological and other scientific needs of Antarctic stations;
2. that meteorological information for flight, marine and field operational forecasts is an urgent and important requirement at some Antarctic stations;
3. that Antarctic meteorological information is urgently required by adjacent continents for the preparation of weather analyses and prognoses;
4. that the development of the WWW has significantly improved the global transmission of meteorological information since the first Antarctic Treaty Meeting on Telecommunications in 1963 and that evolution of the WWW may be expected to bring about further improvements;
5. that, although all likely means of overcoming difficulties have not yet been exhaustively investigated, it has not so far been found possible to establish with desirable reliability some trans-Antarctic circuits previously recommended for implementation;
6. that there is a continuing need to integrate Antarctic meteorological data in the WWW.

Propose to their Governments for consideration that, taking into account the Antarctic Treaty, the Recommendations of Consultative Meetings and keeping in mind the requirements to transmit Antarctic meteorological information between Antarctic stations, arrangements to facilitate communications relating to administrative, operational and scientific activities in the Antarctic affecting two or more Parties should be made between them. Further, in the future development of their Antarctic Telecommunication systems, they consider:

- i. that meteorological information should be transmitted with minimum delay to those Antarctic stations requiring them for the preparation of operational forecasts and from the Antarctic to the WWW, utilizing in so far as practicable those Telecommunications facilities or systems which have been installed or established for

the purpose of satisfying national as well as Antarctic requirements for the transmission of Antarctic data;

- ii. that to the greatest extent feasible meteorological activities in the Antarctic should be supported by transmissions of processed data to the Antarctic from the WWW;
- iii. that Antarctic Telecommunications systems, which serve administrative, operational and scientific needs should be developed in so far as practicable and whenever it can be done without detriment to those needs, so that the systems provide for increased efficiency in the transmission of Antarctic meteorological information to Antarctic stations which need them for operational forecasts and other purposes, and to the WWW.

PROPOSAL 2

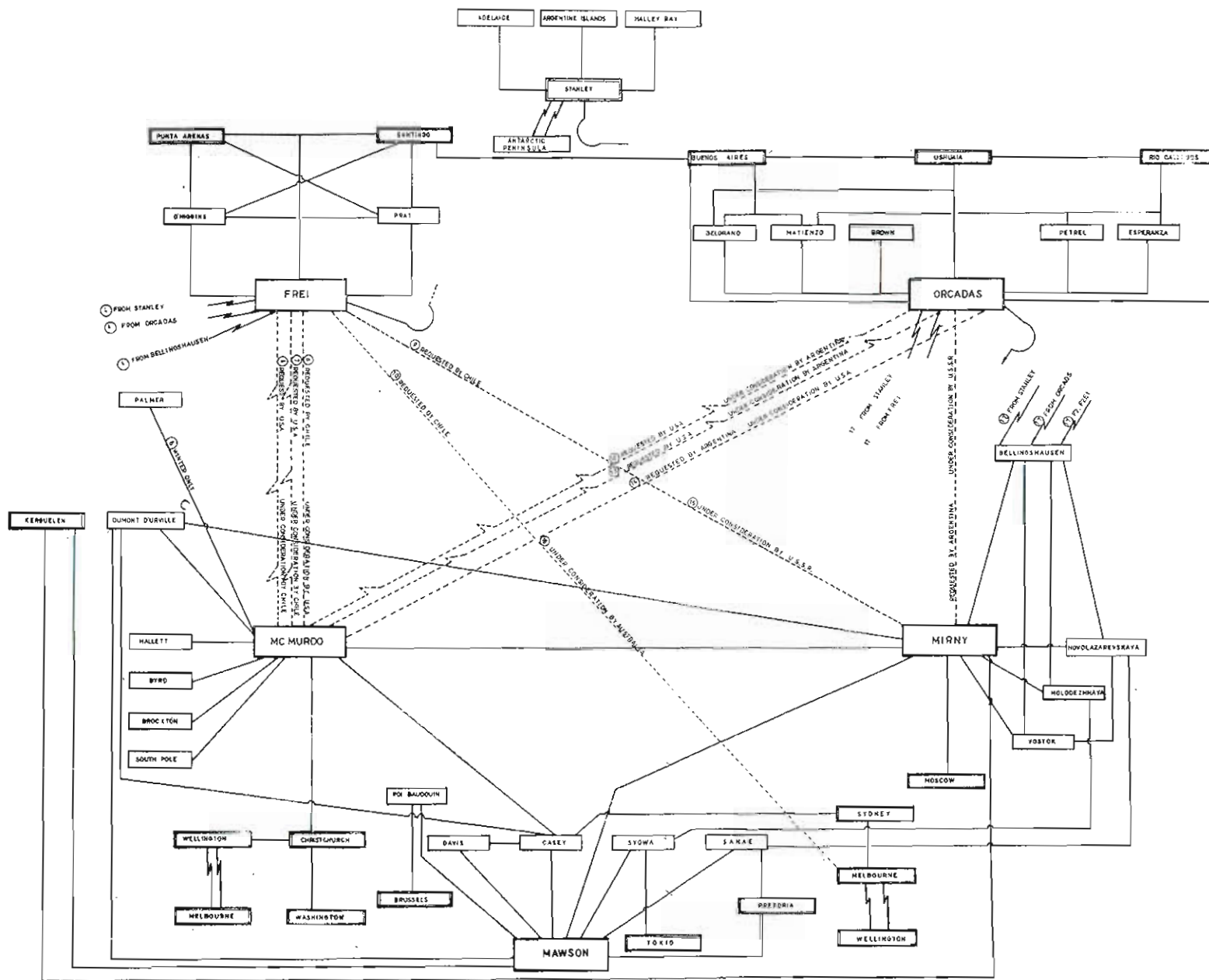
ROUTING OF METEOROLOGICAL INFORMATION

The Representatives, considering:

1. that the routing of Antarctic meteorological information should be so arranged as to enable it to be transmitted to their various destinations as soon as possible;
2. that to ensure the receipt of information at collecting stations in a timely manner, this routing should make provision for the use of alternate routes when they are required;
3. the existing and requested circuits as shown on the diagram at Annex I to this Proposal;
4. that means of improving those circuits shown in Annex I as connecting the stations in the Antarctic Peninsula with McMurdo and Mirny are being actively investigated by the interested Parties;
5. that long links over the auroral zone will, in all probability, make the receipt of information somewhat unreliable.

Propose to their Governments for consideration:

- i. that as the normal route for passing Antarctic meteorological information from the observing stations to those stations which require it for forecasting purposes and to the World Weather Watch, the routing diagram at Annex II for meteorological traffic, and the routing means at Annex III for processed information should be implemented in accordance with the circuits indicated in Annex I, as soon as practicable;
- ii. that the maximum effort should be exerted to provide the possibility for receiving stations to check the information received over long links that cross the auroral zone.



⑫ REFERENCES

- | | | | |
|---|--|---|------------------------------------|
| ⑪ | □ OBSERVING STATION | ⑮ | — EXISTING CIRCUITS |
| ⑫ | ▭ PRIMARY COLLECTING STATION IN THE ANTARCTIC TREATY AREA | ⑯ | - - - REQUESTED CIRCUITS |
| ⑬ | ▭ PRIMARY COLLECTING STATION OUTSIDE THE ANTARCTIC TREATY AREA | ⑰ | ⚡ BEAMED BROADCAST |
| ⑭ | ▭ CIRCUIT TERMINALS OUTSIDE THE ANTARCTIC | ⑱ | ⚡ - - - BEAMED BROADCAST REQUESTED |
| ⑲ | NOTE: MAWSON AND CASEY = PERTH (EMERGENCY LINK) | ⑳ | ⤴ INDIRECTIONAL BROADCAST |

③ INSIDE TREATY AREA

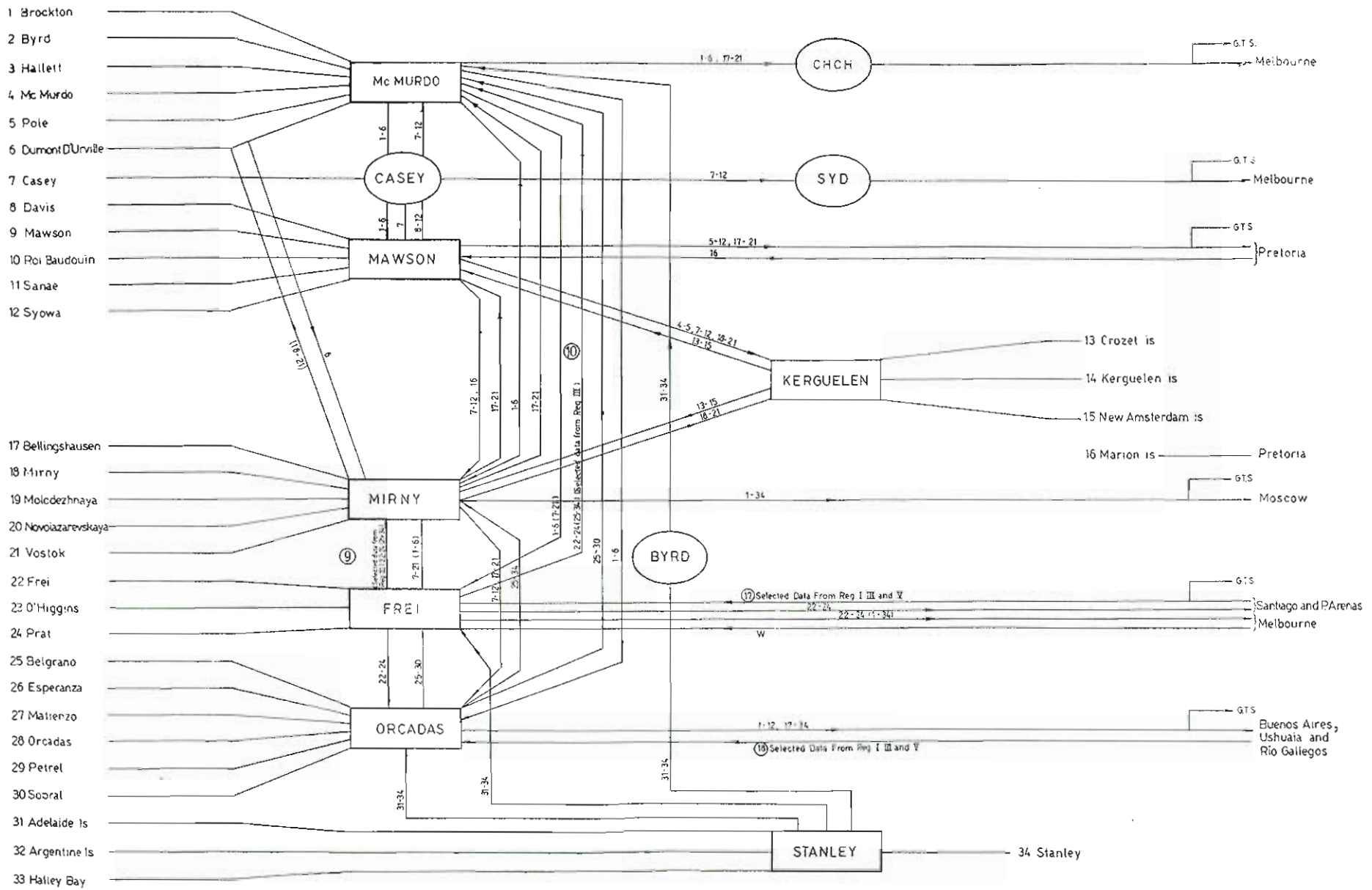
④ OUTSIDE TREATY AREA

⑤ OBSERVING STATIONS

⑥ FIRST TERMINALS OUTSIDE TREATY AREA

⑦ OBSERVING STATIONS

⑧ NATIONAL CENTRES



① LEGEND

- ② The figures are the reference numbers of the observing stations
- ③ () When required
- ④ [] Collecting Centre
- ⑤ ○ Repeater Station
- ⑥ W WMC Processed Data

③ PREFERRED ROUTING DIAGRAM FOR METEOROLOGICAL TRAFFIC

ROUTING OF METEOROLOGICAL INFORMATION

ANNEX III TO PROPOSAL 2

Exchange and Distribution of Processed Meteorological Information

In response to stated requests for receipt of processed meteorological information at Antarctic stations, such information should be exchanged in the following manner:

1. processed information in alpha-numeric form (coded messages) should be exchanged on the circuits shown in Annex I and routed in the same manner as observational data as shown in Annex II;
2. stations which prepare and provide meteorological information in the Antarctic as part of their data processing functions should bear in mind the needs of receiving stations and determine in so far as possible the most effective route of transmission of this information and the most convenient form;
3. processed information in pictorial form should be distributed to Antarctic stations by facsimile broadcasts from the Antarctic as well as by the WWW.

PROPOSAL 3

CO-ORDINATED SCHEDULE FOR
METEOROLOGICAL TRAFFIC

The Representatives, considering:

1. that meteorological data lose much of their value for forecasting purposes if they do not reach the office preparing the forecast within a short time after the standard observation hour;
2. that the first calls on Antarctic meteorological data should be those of the Antarctic stations requiring the data for operational forecasting purposes in the Antarctic;
3. that the WWW also urgently requires Antarctic meteorological data as this is essential for the preparation of weather analyses and prognoses;
4. that Antarctic telecommunications systems are established to handle traffic arising from administrative, operational and scientific activities in the Antarctic, including the handling of meteorological information;
5. that the WMO has made recommendations on the maximum time that may elapse between the standard time of observation (H hour) and the receipt of those data in forecasting offices;
6. that those elapsed times recommended by the WMO include both the times needed by meteorologists for observation, processing and coding, and the times needed by telecommunications systems for setting up the circuit, injection of signals, transmission, receipt and display;
7. that ionospheric soundings are made at H hour + 00 to H + 05 minutes on a co-ordinated, worldwide network, and that at stations where ionospheric observations are made in close proximity to telecommunications equipment, there is harmful interference to both activities if they are carried out simultaneously.

Propose to their Governments for consideration:

- i. that at all times and in all circumstances traffic associated with an emergency in which the safety of life is involved should take absolute priority over all other traffic;
- ii. that the present practice of maintaining radio silence, except for distress calls and in an emergency, between H hour and H hour + 05 minutes should be continued;

- iii. that the following targets should be accepted as the desirable maximum elapsed times between the standard observation time and the filing of coded meteorological data at the telecommunications office at each observing station:
 - for surface observations - 5 minutes
 - for upper air observations - 60 minutes;

- iv. that in arranging schedules in the Antarctic the following targets should be accepted as the desirable maximum elapsed times between the standard observation time and the receipt of the data at the station specified:
 - a) receipt of data at primary collection station:
 - for surface observations at the main synoptic hours - 30 minutes
 - for upper air observations - 90 minutes;
 - b) receipt of data when it is being exchanged between collecting stations inside and outside the Antarctic:
 - for surface observations at the main synoptic hours - 60 minutes
 - for upper air observations - 120 minutes;
 - c) receipt of data at World Meteorological Centres:
 - for surface observations at the main synoptic hours - 90 minutes
 - for upper air observations - 150 minutes;

- v. that surface observations for intermediate synoptic hours should be transmitted with the report for the following main synoptic hour;

- vi. that ship, aircraft and traverse party reports should be transmitted with the surface or upper air reports for the following main synoptic hour.

PROPOSAL 4

SCIENTIFIC AND TECHNICAL MATTERS AFFECTING TELECOMMUNICATIONS

The Representatives, considering:

1. that there has been extensive development in the science and technology of Telecommunications systems since the first Antarctic Treaty Meeting on Telecommunications in 1963;

2. that the continued application of current techniques is likely to bring about further improvement in Antarctic telecommunications, that these improvements will enhance scientific and other activities in the Antarctic, and increase the availability of information about the Antarctic to the rest of the world;

3. that the Scientific Committee on Antarctic Research (SCAR) has established a group to consider scientific and technical problems affecting Telecommunications systems.

Propose to their Governments for consideration:

- i. that they continue to examine ways of improving Antarctic telecommunications taking into account new scientific and technological developments in Telecommunication systems;
- ii. that, through their National Committees, they encourage SCAR to foster and make known advances in science and technology which in their opinion have application to the improvement of Antarctic Telecommunication systems;
- iii. that, through their National Committees, they invite SCAR to continue to make known further Telecommunications needs, the satisfaction of which would enhance scientific activities in the Antarctic.

PROPOSAL 5

SYSTEM DESIGN PRINCIPLES

The Representatives, considering:

1. that the restraints imposed by the physical characteristics of the terrain, the propagation paths, the electrical power available and other logistics considerations in the Antarctic affect the design of Telecommunications systems to a degree not normally experienced in lower latitudes;

2. that, although in practice in the Antarctic it is difficult to overcome these restraints there is a need to co-ordinate some of the procedures which will be used to reduce their adverse effects.

Propose to their Governments for consideration:

- i. that the relevant International Radio Consultative Committee (C.C.I.R.) and International Telephone and Telegraph Consultative Committee (C.C.I.T.T.) recommendations current at any time, particularly those mentioned in the attached annex, be applied wherever practicable in all Antarctic Telecommunications systems used for International traffic.

SYSTEM DESIGN PRINCIPLES

ANNEX TO PROPOSAL 5

Engineering of Centres and Circuits in the Antarctic

1. Introductory Note

This material is intended to provide information and guidance relating to the establishment of radio point-to-point telegraphy and telephony circuits in the Antarctic in accordance with good engineering practice.

2. General Engineering Principles

2.1 Signal to noise ratio

The signal to noise ratio should be not less than specified in the CCIR recommendation 339^X, for the mode of operation under consideration.

2.2 Frequencies

Transmitter and receiver facilities must have adequate frequencies to provide communications throughout diurnal, seasonal and solar variations.

2.3 Siting

The receiving stations should be located where possible in an area relatively free from local radio and electrical interference so that a signal of reasonable field strength will provide the desired signal to noise ratio.

2.4 Antennas

The most economical method of using the power available in the transmitting antenna to obtain the desired signal to noise ratio at the receiving antenna, is to direct the beam to the receiving station. The more efficient directional type antenna for the frequency bands used, should be employed both at the transmitting and receiving stations, where practicable.

2.5 Adequate transmitting power

The power output of the transmitter should be adequate to meet the requirements of the circuits it serves.

2.6 Diversity Systems

To improve the quality of reception, diversity systems should be used. Of the various systems, space diversity offers the greatest economy of spectrum and should be employed wherever possible. If space is limited, however, frequency diversity (as agreed to between Parties) or polarized diversity should be employed.

3. Specific Proposals for Antarctic Circuits

The following guidelines were agreed to as appropriate in considering the planning of the Antarctic communication system.

3.1 Transmission

- (a) At the present stage of development low speed data should be transmitted by teleprinter using International alphabet № 2 (5 unit code) start-stop working. At a later stage, other alphabets and codes may be appropriate.
- (b) The 50 baud rate should be used initially. For the use of other modulation rates, agreement should be reached between Parties.
- (c) For single channel operation, direct frequency shift keying should be used and the mode of operation should be F1 in accordance with CCIR recommendation 246^x.
- (d) For multi-channel data operation, voice frequency telegraph (VFT) systems employed should be in accordance with CCIR recommendation 436^x.
- (e) Radio-teleprinter signal distortion should be less than 10 %.

3.1.2 Reception

Receivers suitable for the appropriate mode of operation should be used. New receivers installed should be capable of S.S.B. or I.S.B. operation with or without VFT systems as required.

3.1.3 Error detection/correction systems

Error detection/correction systems on point-to-point circuits may be employed as agreed between Parties.

x As amended from time to time.

PROPOSAL 6

EXCHANGE OF INFORMATION ON TELECOMMUNICATIONS FACILITIES

The Representatives, considering:

1. that there is a need to continue the annual exchange of information on Telecommunications facilities;
2. that this information should be made as useful as possible to radio operators at all Antarctic stations.

Propose to their Governments for consideration that they use for the purposes of the annual exchange of information on Telecommunications facilities under Article VII (5) of the Antarctic Treaty and Recommendation I-VI (8) of the First Consultative Meeting, the standard tabular format attached hereto as Annex I.

(For clarity a sample is attached as Annex II)

INFORMATION ON TELECOMMUNICATIONS EQUIPMENT AND SCHEDULES FOR THE YEAR

COUNTRY ADDRESS FOR CORRESPOND-
ENCE ON THIS INFORMATION

STATION LAT LONG

CALLSIGN

TRANSMITTERS				RECEIVERS				REMARKS
Type	Frequency bands	Types of transmission and power	Frequency selection (Crystal VFO, etc.)	Type	Frequency bands	Types of reception available	Frequency selection (Crystal VFO, etc.)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

INFORMATION ON TELECOMMUNICATIONS EQUIPMENT AND SCHEDULES FOR THE YEAR

COUNTRY ADDRESS FOR CORRESPOND-
 ENCE ON THIS INFORMATION

STATION LAT LONG

CALLSIGN

DETAILS OF REGULAR CIRCUITS

	GMT		FREQUENCIES USED		CIRCUIT CONDUCT				REMARKS	
	Open	Close	Trans- mitting	Receiv- ing	Type of emission (See CCIR 432) (x)	Type of traffic	SX or DX	Side Band		
Station worked	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)

(x) If error correcting used, specify details

INFORMATION ON TELECOMMUNICATIONS EQUIPMENT AND SCHEDULES FOR THE YEAR 1969

COUNTRY: United Kingdom

ADDRESS FOR CORRESPONDENCE ON THIS INFORMATION:

The Director
British Antarctic Survey
30 Gillingham St.
LONDON, S.W. 1

STATION: Halley Bay

LAT: 75° 31' S

LONG: 26° 38' W

CALLSIGN: VSD

TRANSMITTERS				RECEIVERS				REMARKS
Type	Frequency bands	Types of transmission and power	Frequency selection (Crystal VFO, etc.)	Type	Frequency bands	Types of reception available	Frequency selection (Crystal VFO, etc.)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
R.C.A. et 4336	1.5-20 MHZ	A1A-360 W A3 V-250 W	VFO or crystal	RACAL RA 17L	.5-30 MHZ	101 A1A 111 302 W1A 111 602 A3V 32 112 F1B 1212 302 J3V 32	VFO with crystal calibration points	

INFORMATION ON TELECOMMUNICATIONS EQUIPMENT AND SCHEDULES FOR THE YEAR 1969

COUNTRY: United Kingdom

ADDRESS FOR CORRESPOND-
ENCE ON THIS INFORMATION:The Director
British Antarctic Survey
30 Gillingham St.
LONDON, S.W. 1

STATION: Halley Bay

LAT: 75° 31' S LONG: 26° 38' W

CALLSIGN: VSD

ANTENNA		FACSIMILE		TELEPRINTER		REMARKS	LIST OF AVAILABLE FREQUENCIES
Type	Azimuth (in degrees or omni)	Index of co-operation	Drum speed	Type	Speed (bauds)		
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Rhombic	315°	576	120	Creed 54	50	Creed 54 Teleprinter can be converted to speed 75 Bauds if necessary	1625, 2040, 2400, 3700, 5100, 7435, 8150, 9100, 9800, 11425, 12300, 14800, 17400, 18745, 19800.

INFORMATION ON TELECOMMUNICATIONS EQUIPMENT AND SCHEDULES FOR THE YEAR 1969

COUNTRY: United Kingdom

ADDRESS FOR CORRESPOND-
ENCE ON THIS INFORMATION:The Director
British Antarctic Survey
30 Gillingham St.
LONDON, S.W. 1

STATION: Halley Bay

LAT: 75° 31' S

LONG: 26° 38' W

CALLSIGN: VSD

DETAILS OF REGULAR CIRCUITS

Station worked	GMT		FREQUENCIES USED		CIRCUIT CONDUCT				REMARKS
	Open	Close	Trans- mitting	Receiv- ing	Type of emission (See CCIR 432)	Type of traffic	SX or DX	Side- band	
(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
Stanley	0105Z	0120Z	3700	3923	302 A3J 32	MET	Dx	Lower	HALLEY BAY Mobile Callsigns are C.W.=VSD SA (To SZ) Voice="HALLEY BAY SLEDGE ALPHA" (To Zulu)

PROPOSAL 7

CORRESPONDENCE ON COMMUNICATIONS SYSTEMS

The Representatives, considering:

that, in addition to there being a need for the exchange of information on their Antarctic telecommunications equipment and schedules, there is a need for a procedure for exchanging views on other matters pertinent to their respective telecommunications systems, but not affecting all parties.

Propose to their Governments for consideration that the addressees entered by each Consultative Party on the standard tabular format annexed to Proposal 6 may also correspond with other addressees on matters affecting their respective telecommunications systems, on the use of those systems and on the coordination of communications necessary for co-operative activities.

PROPOSAL 8

SEARCH AND RESCUE PROCEDURES

The Representatives, considering:

1. that Recommendation I - X of the First Consultative Meeting re-affirmed the traditional Antarctic principle that expeditions render all assistance feasible in the event of an emergency request for help;

2. that in such emergencies agreed standard operating procedures are most important.

Propose to their Governments for consideration that the following standard radio operating procedures for Antarctic telecommunications systems during search and rescue operations following an emergency request for help, be continued:

- i. distress traffic shall have absolute priority over all other traffic;
- ii. radio operating procedures shall be those specified for mobile services in Chapter VIII, Article 36 (as amended from time to time) of the Radio Regulations, Geneva, 1959, of the International Telecommunications Union;
- iii. after passing the initial request for assistance the station or stations providing that assistance shall maintain continuous communication during the search and rescue operation with the station requesting assistance until the station requesting assistance indicates that the assistance is no longer required.

PROPOSAL 9

RADIO AIDS TO AIR NAVIGATION

The Representatives, considering:

1. That aircraft operations in the Antarctic have become more frequent;
2. That provision of basic radio aids to air navigation at certain stations is essential to improve the safety of aircraft operating in the Antarctic;
3. That these aids should be provided to compatible standards and that such standards are available from ICAO.

Propose to their Governments for consideration:

- i. That omni-directional beacons of sufficient power to provide an adequate service for air navigation be provided as soon as practicable at each station offering aircraft landing facilities;
- ii. that the details of type, frequency and power of installed air navigational aids be listed each year in the information exchanged under the terms of Recommendation III-I of the Third Consultative Meeting, so that parties wishing to equip their aircraft to use the ground aids may do so;
- iii. That when standards for air navigation are required and the ICAO standards are applicable and appropriate, they should be used in the Antarctic.

9. The references in the Final Report and Documents of the Meeting to points located outside the Antarctic Treaty Area do not affect the position regarding the rights which the respective Consultative Parties may sustain.
10. This Final Report was unanimously agreed on 12 September 1969 by the Representatives of the Consultative Parties present at the Meeting.
11. The Chairman then declared the Meeting closed.

Appendix I

RULES OF PROCEDURE

1. This meeting, held pursuant to Article IX of the Antarctic Treaty and Recommendation V-2 of the Fifth Antarctic Treaty Consultative Meeting, shall be known as the ~~Second Antarctic Treaty Meeting~~ on Telecommunications.

Representation

2. Each participating government shall be represented by a delegation composed of a Representative and such Alternative Representatives, Advisers and other persons as each state may deem necessary. Their names shall be communicated to the host government prior to the opening of the Meeting.
3. The order of precedence of the delegations shall be in accordance with the alphabet in the language of the host government.

Officers

4. A representative of the host government shall be the Temporary Chairman of the Meeting and shall preside until the Meeting elects a Chairman.
5. At its inaugural session, a Chairman shall be elected. The other representatives shall serve as Vice-Chairmen of the Meeting in order of precedence. The Chairman normally shall preside at all plenary sessions. If he is absent from any session or part thereof, the Vice-Chairman rotating on the basis of the order of precedence as established by Rule 3, shall preside during each such session.

Secretariat

6. The Secretary shall be appointed by the Meeting on the proposal of the Chairman. The Secretary shall be responsible for providing secretarial services, and shall carry out such other tasks as the Meeting may require or direct.

Sessions

7. The opening plenary session shall be held in public; other sessions shall be held in private, unless the Meeting shall determine otherwise.

Committees and Working Groups

8. The Meeting, to facilitate its work, may establish such committees as it may deem necessary for the performance of its functions, defining their terms of reference.
9. The committees shall operate under the Rules of Procedure of the Meeting, except where they are inapplicable.
10. Working groups may be established by the Meeting or its committees.

Observers

11. Persons attending the Meeting as Observers from International Organizations invited, may submit documents and make statements with the permission of the Chairman. They may not vote.

Conduct of Business

12. A quorum shall be constituted by two-thirds of the representatives participating in the Meeting.
13. The Chairman shall exercise the powers of his office in accordance with customary practice. He shall see to the observance of the rules of procedure and the maintenance of proper order. The Chairman, in the exercise of his functions, remains under the authority of the Meeting.
14. No representative may address the Meeting without having previously obtained the permission of the Chairman. The Chairman shall call upon speakers in the order in which they signify their desire to speak. The Chairman may call a speaker to order if his remarks are not relevant to the subject under discussion.
15. During the discussion of any matter, a representative may rise to a point of order and the point of order shall be decided immediately by the Chairman in accordance with the rules of procedure. A representative may appeal against the ruling of the Chairman. The appeal shall be put to a vote immediately, and the Chairman's ruling shall stand unless over-ruled by a majority of the representatives present and voting. A representative rising to a point of order shall not speak on the substance of the matter under discussion.

16. The Meeting may limit the time to be allotted to each speaker, and the number of times he may speak on any subject. When debate is thus limited and a representative has spoken his allotted time, the Chairman shall call him to order without delay.
17. During the discussion of any matter, a representative may move the adjournment of the debate on the item under discussion. In addition to the proposer of the motion, two representatives may speak in favour of, and two against, the motion, after which the motion shall be put to the vote immediately. The Chairman may limit the time to be allowed to speakers under this rule.
18. A representative may at any time move the closure of the debate on the item under discussion, whether or not any other representative has signified his wish to speak. Permission to speak on the closure of the debate shall be accorded only to two speakers opposing the closure, after which the motion shall be put to the vote immediately. If the Meeting is in favor of the closure, the Chairman shall declare the closure of the debate. The Chairman may limit the time to be allowed to speakers under this rule. (This rule shall not apply to debate in committees).
19. During the discussion of any matter, a representative may move the suspension of the adjournment of the Meeting. Such motions shall not be debated, but shall be put to the vote immediately. The Chairman may limit the time to be allowed to the speaker moving the suspension or adjournment of the Meeting.
20. Subject to rule 15, the following motions shall have precedence in the following order over all other proposals or motions before the Meeting:
 - a) to suspend the Meeting;
 - b) to adjourn the Meeting;
 - c) to adjourn the debate on the item under discussion;
 - d) for the closure of the debate on the item under discussion.
21. Decisions of the Meeting on all matters of procedure shall be taken by a majority of the representatives participating in the Meeting, each of whom shall have one vote.

Languages

22. English, French, Russian and Spanish shall be the official languages of the Meeting.
23. Any representative may speak in a language other than the official languages. However, in such cases he shall provide for interpretation into one of the official languages.

Proposals and Final Report

24. The results of the Meeting should take the form of proposals in telecommunications which shall be approved by all of the representatives participating in the Meeting.
25. These proposals will constitute the report of the Meeting and will be circulated by the host government to all governments entitled to participate in the Meeting for their consideration. Other conference documents may be appended for information as annexes to the report with the consent of all delegations present. The proposals would not become measures under Article IX of the Antarctic Treaty but any Consultative Parties may submit any matter arising from this Meeting to a subsequent Consultative Meeting.

Amendments

26. These Rules of Procedure may be amended by a two-thirds vote of the representatives participating at the Meeting. This rule shall not apply to Rules 24 and 25, amendments of which shall require the approval of all the representatives present at the Meeting.

LIST OF PARTICIPANTS

Chairman of the Meeting: Eng. Aldo Santiago IRRERA

ARGENTINA

Representative:

Eng. Aldo Santiago IRRERA
General Director of the Telecommunications Department
Secretariat of State for Communications

Alternate Representatives:

Eng. Luis J. CASSINELLI
Secretariat of State for Communications

Lt. Cdr. Jorge F. BUSICO
Chief Command of the Navy

Major (R) Victor ORDOÑEZ
Chief Command of the Air Force

Advisers:

First Secretary Mario IZAGUIRRE
Ministry of Foreign Affairs and Worship

Professor Isaac MESTERMAN
Chief Command of the Navy

AUSTRALIA

Representative:

Mr. Thomas F.C. LAWRENCE
Deputy Secretary, Department of Supply, Canberra

Alternate Representative:

Mr. Donald F. STYLES
Director, Antarctic Division
Department of Supply, Melbourne

Advisers:

Mr. Thomas V. HOLLAND
First Secretary, Australian Embassy, Buenos Aires

Mr. Ralph A.E. HOLMES
Meteorologist, Bureau of Meteorology
Department of the Interior, Melbourne

BELGIUM

Representative:

Counselor Charles WINTERBEECK
Embassy of Belgium

Adviser:

Attaché André BRUNEE
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ARGENTINE STATEMENT TO BE INCLUDED
IN THE FINAL REPORT OF THE MEETING

For the purpose of cooperating with the experts attending this meeting, the Argentine Republic has submitted a new method of planning Antarctic decametric wave Telecommunications systems, prepared by the Ionospheric Laboratory of the Navy (Publication L.I.A.R.A. C-18.)

The research work which led to this contribution will be increased in the near future as new geophysical information and data on sun-earth relationships is accumulated.

Since it is expected that this will provide better solutions to the specific problems posed by telecommunications in the Antarctic the Consultative Parties are hereby invited to intensify their upper air observations and studies on sun-earth relationships in the Antarctic and take action to provide a rapid exchange of information between specialized institutes.

The L.I.A.R.A. would also like to be sent information on the results obtained through application of the above-mentioned planning method "

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Appendix IV

STATEMENT BY CHILE TO BE INCLUDED IN THE
FINAL REPORT OF THE MEETING

Chile has constructed Presidente Frei Meteorological Centre in the Antarctic peninsula to replace the Presidente Aguirre Cerdá (P.A.C.) Meteorological Centre after the natural disaster which occurred on Deception Island. Chilean planning with respect to this centre is based on the fulfillment of the responsibility assumed by Chile at the constituent meeting of the Antarctic Meteorological Group of the WMO held in Melbourne between 23 February and 3 March 1966. On that occasion, among other matters, an analysis was made of Recommendations on telecommunications in the area of the Antarctic Treaty that were adopted at the Washington Meeting of 1963.

As was then agreed upon, Presidente Frei Meteorological Centre was to be responsible for collection of information from the Antarctic peninsula, processing such data and the preparation of regional forecasts. It was also expected to establish a direct link to McMurdo and Mirny. Information from Presidente Frei Centre was also to be transmitted to the Southern Hemisphere Analysis Centre (Melbourne) which, in turn, would send analyses on a global scale to the Chilean centre.

At the present time, Presidente Frei is ready for operation and it is expected that by the end of next year it will be in a position to comply with all its responsibilities. The foregoing is in accordance with the planning and working programmes for the next Antarctic expedition.

During the operation of the P.A.C. base, propagation research work was carried out to establish a better link with McMurdo and Mirny. These studies were intensified when planning the facilities of Presidente Frei Meteorological Centre.

Chile takes pleasure in bringing to the knowledge of the Antarctic community that in the course of the next season the installation will be completed at Presidente Frei Base of a meteorological satellite receiving station which Chile gladly places at the disposal of the members of this community, for the purpose of providing all possible additional information.