

REPORT

OF THE

COMMITTEE ON ELECTRIC TELEGRAPH

BETWEEN

NEW ZEALAND AND AUSTRALIA.

BROUGHT UP 12TH AUGUST, 1870, AND ORDERED TO BE PRINTED.

WELLINGTON.

—
1870.

ORDERS OF REFERENCE.

Extracts from the Journals of the House of Representatives.

FRIDAY, THE 17TH DAY OF JUNE, 1870.

Ordered, That a Select Committee be appointed to inquire into the subject of connecting New Zealand by Submarine Electric Cable with other countries, and to report thereon; four to be a quorum; to report on or before the 15th July; the said Committee to consist of Mr. Clark, Mr. Edwards, the Hon. Mr. Hall, Mr. Macandrew, Mr. O'Neill, Mr. Richmond, Mr. Taylor, Mr. Webster, and Mr. Reader Wood.

(On motion of the Hon. Mr. Vogel.)

A true extract,

F. E. CAMPBELL, Clerk, House of Representatives.

FRIDAY, THE 24TH DAY OF JUNE, 1870.

Ordered, That the name of the Hon. the Postmaster-General be added to the Committee appointed to consider the subject of Submarine Telegraphs.

(On motion of Mr. Reader Wood.)

A true extract,

F. E. CAMPBELL, Clerk, House of Representatives.

THURSDAY, THE 21ST DAY OF JULY, 1870.

Ordered, That the Correspondence between the Government and the Telegraph Construction Company, concerning a proposal to lay a Submarine Cable between New Zealand and Tasmania, laid on the table this day, be referred to the Telegraph Cable Committee, with an instruction to print such portions thereof as they may think fit.

(On motion of the Hon. Mr. Vogel.)

A true extract,

F. E. CAMPBELL, Clerk, House of Representatives.

TUESDAY, THE 26TH DAY OF JULY, 1870.

Ordered, That the correspondence between the Hon. the Postmaster-General and J. W. Blackett, Esq., Manager of the Telegraph Construction and Maintenance Company, concerning a proposal to lay a Submarine Cable between New Zealand and Tasmania, laid on the table this day, be referred to the Submarine Cable Committee.

(On motion of the Hon. Mr. Vogel.)

A true extract,

F. E. CAMPBELL, Clerk, House of Representatives.

REPORT OF THE SUBMARINE ELECTRIC CABLE COMMITTEE.

THE Select Committee appointed "to inquire into the subject of connecting New Zealand, by Submarine Electric Cable, with other countries," beg to report,—

That they have taken into consideration the several means by which a Cable connection with Australia might be established; and that they have also considered a special offer made by Mr. Blackett, on behalf of the Telegraph Construction and Maintenance Company, and an offer which was sent out, through the Commissioners, by Messrs. Henley and Co.

The Committee were not able to recommend that the offer submitted by Mr. Blackett should be accepted.

Whilst recognizing that it is most desirable to connect New Zealand with Australia by Electric Cable—especially seeing that Australia is likely soon to be connected with Great Britain—the Committee agree that it is not desirable that an absolute money cost should be imposed upon the Colony, as a consequence of securing that connection, unless the line was entirely in the hands of the Governments of the different countries through which it must pass, between England and New Zealand.

It appears to the Committee that the principle that lines of telegraph should be in the hands of the Government having been recognized in Great Britain and most of the Colonies, the same principle might most advantageously be carried out in respect to submarine lines. The Committee agree, therefore, that the best course which could be adopted would be for the Governments of Great Britain, India, and the Colonies, to combine for the purpose of constructing a through communication; the funds to be raised by Great Britain, and the respective countries to be charged annually for interest and redemption fund, in proportion to the extent to which the line should prove to be used by each.

Failing such an arrangement, the Committee believe that the next best plan would be that a Cable should be laid and worked by a contractor, without guarantee, but upon a concession for a stipulated number of years. It would be necessary, however, that in the event of any such concession, stringent conditions to the following effect should be incorporated with it:—

- (1.) A time to be specified, within which the line must be completed.
- (2.) Penalties to be stated, sufficient in amount to insure that the line shall be kept in working order.
- (3.) If the Cable should prove insufficient for the work to be done, a second Cable to be laid, or the monopoly to terminate.
- (4.) Power, within specified limits, to regulate the rates of charge.
- (5.) Provision insuring a regular order in the transmission of messages, including right of priority for Government messages.
- (6.) Defined terms on which the Government might at any time purchase the Cable, and wholly extinguish the concession.
- (7.) On non-fulfilment of any of the preceding conditions, the Colony to have the right to terminate the monopoly.

Should an arrangement under this concession principle be effected, there would be nothing to prevent such a wording of the purchasing condition as to enable Great Britain to become the purchaser, in the event of its proving possible to carry out the arrangement already stated as that which the Committee believe would be best for the Colony.

The Committee have also had under consideration whether, instead of a monopoly being granted, the Colony should for a given number of years undertake to employ a Cable to an amount yearly, not less than a sum to be specified; that sum to be paid for each year, but the money paid in excess for any year or years to be chargeable with future business.

Whilst the Committee do not recommend the adoption of such a plan, they think it one that might be worthy of further consideration, should there be failure to secure a Cable on either of the plans previously stated.

The Committee draw attention to the appended letter from Messrs. Henley and Co.

The Committee recommend:—(1.) That authority be given to the Government to conclude an arrangement with Great Britain, upon the basis of the Imperial Government finding the necessary funds, &c.; or (2), at its discretion, to agree with responsible contractors, upon the basis of a concession, subject to such restrictions as those already set forth.

JULIUS VOGEL,
Chairman.

A P P E N D I X .

I.—LINE *VIA* GIBRALTAR AND CAPE OF GOOD HOPE.

No. 1.

SIR,—

Downing Street, 27th January, 1868.

I have the honor to transmit to you for your information the enclosed copies of a correspondence with the Governor of the Cape of Good Hope, arising out of a resolution of the House of Assembly of that Colony, suggesting the advantages that would attend the establishment of telegraphic communication with the Australian Colonies by way of Gibraltar, Sierra Leone, St. Helena, and the Cape of Good Hope.

I have, &c.,

BUCKINGHAM AND CHANDOS.

The Officer Administering the Government of New Zealand.

Enclosures.

MY LORD DUKE,—

Government House, Cape Town, 15th July, 1867.

At the request of the House of Assembly of this Colony, I beg leave to submit for your Grace's consideration a resolution drawing the attention of Her Majesty's Government to the expediency of establishing telegraphic communication between Great Britain and the Australian Colonies by way of Gibraltar, St. Helena, and the Cape of Good Hope.

I have, &c.,

P. E. WODEHOUSE.

His Grace the Duke of Buckingham and Chandos.

RESOLVED, That the necessity for telegraphic communication between England and the Australian Colonies having been admitted, and the route suggested being *via* India, Rangoon, Singapore, and across the several straits between, to the Bay of Carpentaria, in the North of New Holland, and thence by land line *via* Moreton Bay to Sydney and Melbourne: it is the opinion of this House that His Excellency the Governor be requested, by respectful address, to draw the attention of the Home Government, and the Colonial Governments interested, to the manifold superiority of the oceanic route by way of Gibraltar, Sierra Leone, St. Helena, the Cape of Good Hope, the Island of St. Paul, thence to Melbourne, Sydney, and New Zealand, in order to ascertain whether, by concerted action with the Home Government and the several Colonies alluded to, it may not be possible to carry out such a work, which would be of incalculable advantage to the British Government, especially in the event of a war, to all interest concerned, and at the same time be re-asserting the important geographical position of the Cape of Good Hope.

SIR,—

Downing Street, 4th September, 1867.

I am directed by the Duke of Buckingham and Chandos to transmit to you, for the consideration of the Lords Commissioners of the Treasury, a copy of a despatch from the Governor of the Cape of Good Hope, forwarding a resolution passed by the House of Assembly drawing the attention of Her Majesty's Government to the expediency of establishing telegraphic communication between Great Britain and the Australian Colonies, by way of Gibraltar, St. Helena, and the Cape of Good Hope.

I am to request that you will move their Lordships to inform His Grace whether the project of any Company for establishing telegraphic communication by the route here proposed by the Assembly has been before their Lordships, and what answer they would consider advisable to this representation from the Assembly.

I have, &c.,

T. F. ELLIOT.

G. A. Hamilton, Esq.

SIR,—

Treasury Chambers, 13th September, 1867.

I am commanded by the Lords Commissioners of Her Majesty's Treasury to request that you will state to the Duke of Buckingham, in reply to Mr. Elliot's letter of the 4th instant, enclosing a copy of a resolution passed by the House of Assembly at the Cape of Good Hope, as to the expediency of establishing telegraphic communication between Great Britain and the Australian colonies by way of Gibraltar, St. Helena, and the Cape of Good Hope, that the only proposal my Lords have had before them for the establishment of telegraphic communication with the Cape of Good Hope was one brought under their notice by a Mr. Overend, in the year 1862, which they did not think it advisable to entertain.

With regard to the resolution passed by the House of Assembly at the Cape, drawing the attention of Her Majesty's Government to the expediency of establishing telegraphic communication with Australia *via* the Cape, &c., I am desired to state that my Lords would not consider themselves justified in proposing to Parliament to incur the very considerable expenditure which the carrying out of so great a project as that submitted would involve; nor, looking to the principles laid down in their minute of the 10th January last, on the subject of the extension of telegraphic communication in the East (copy of which was laid before Parliament), would they be prepared to guarantee the interest on any capital which might be raised by any Company or Companies for the purpose in question.

I have, &c.,

G. A. HAMILTON.

Sir F. Rogers, Bart.

SIR,—

Downing Street, 15th January, 1868.

I have the honor to acknowledge the receipt of your despatch No. 63 of the 15th July last, forwarding a copy of a resolution passed by the House of Assembly at the Cape of Good Hope, drawing the attention of Her Majesty's Government to the expediency of establishing telegraphic communication between Great Britain and the Australian Colonies by way of Gibraltar, St. Helena, and the Cape of Good Hope.

I caused a copy of your despatch and the resolution of the Assembly to be communicated to the Lords Commissioners of the Treasury; and I have the honor to transmit to you, for your information, a copy of the reply which has been returned by their Lordships, together with a copy of the Treasury Minute of the 10th of January, 1867, alluded to in their letter.

I have communicated copies of this correspondence to the Governors of the several colonies named in the resolution of the House of Assembly.

Governor Sir P. E. Wodehouse, K.C.B.

I have, &c.,

BUCKINGHAM AND CHANDOS.

TREASURY MINUTE, dated 10th January, 1867.

THE First Lord of the Treasury and the Chancellor of the Exchequer call the attention of the Board to the important question in regard to the extension of telegraphic communication which is likely to arise in consequence of the success which has attended the submerging of the Atlantic Cable of 1866, and the recovery and completion of that attempted to be laid in 1865.

It has already been intimated to Her Majesty's Government that it is in contemplation to form a Company for the purpose of laying a line of telegraph between this country and Gibraltar, and from thence to Malta. Between Malta and Alexandria there is already telegraphic communication by means of the Malta and Alexandria Telegraph Cable belonging to Her Majesty's Government, which is at present agreed to be leased for a term of 42 years to the Telegraph Construction and Maintenance Company. The lease it is intended should be transferred to the new Company, as well as the land line between Alexandria and Suez, originally belonging to the Red Sea Line, but now the property of the "Telegraph to India Company." From some point on the Red Sea, to which a land line will be laid, it is stated that the new Company will lay a telegraph cable to Aden, and from thence to Kurrachee, where the telegraph will become connected with the land lines of the Indian Government, which extend as far as Rangoon. From Rangoon it is proposed to carry a cable to Singapore, and, from that place, cables to China and Japan *via* Saigon, and Australia *via* Java and Copang.

Two other schemes for the extension of telegraphic communication beyond Rangoon have also been brought under the notice of Her Majesty's Government, namely, one by Mr. F. Gisborne, which involves, however, financial assistance on the part of the Government; and another by Mr. Seymour Clarke, for "a line of telegraph from Rangoon, through the kingdom of Siam to Singapore, from Malacca through Sumatra, Java, &c., to Australia, with a branch from Tavoy through Bangkok to Saigon, and thence, on the approval of France, through Cochin China to China Proper."

As, in the opinion of the Earl of Derby and the Chancellor of the Exchequer, the establishment between this country and India of an alternative line of telegraphic communication with that *via* the Persian Gulf, and the extension of such line to China and Japan on the one hand, and to the Australian Colonies on the other, is of great importance, they submit to the Board whether some encouragement may not be given for the formation of a Company or Companies able and willing to carry out so desirable an object. They are, however, decidedly of opinion that, looking to the great advance that has, within the last few years, been made in the art of manufacturing, laying, and repairing submarine cables, thereby increasing the confidence of the public in the permanence of such undertakings, they would not be justified in proposing that any assistance, either by way of subsidy or guarantee, should be given to any Company which may at the present time be formed for the purpose of establishing lines of telegraphic communication. They would, however, submit whether encouragement may not be afforded to Companies willing to lay lines of which the Government approve, by the Government causing surveys, where none now exist, to be made of the route along which it may be proposed cables should be laid; by rendering assistance to such Companies when laying the cables, by means of any of Her Majesty's vessels, in the same manner as was recently afforded by Her Majesty's ship "Terrible," in the case of the Atlantic cable; and by using the good offices of the British Government with any foreign Government upon whose territories it may be requisite to land cables or to lay land lines.

In any arrangement to be entered into with a Company, it should be distinctly stipulated that, while Her Majesty's Government claim no advantage as regard the rate of charge for Government messages, all messages transmitted by Her Majesty's Government shall have priority; and that, in certain contingencies, Her Majesty's Government should have the power of assuming possession of any telegraphic line upon payment of proper compensation.

My Lords entirely coincide in the opinions expressed by the Earl of Derby and the Chancellor of the Exchequer, and they will have them in view in the event of any arrangements being made with any Company or Companies for the purpose of laying telegraphic cables, or erecting land lines of telegraph. In the meanwhile, it appears to my Lords that it will be advisable to designate those lines of communication which they consider are most called for by Imperial and commercial interests, and towards the formation of which they are of opinion that the countenance and encouragement of Her Majesty's Government may properly be afforded in the manner indicated, namely:—

1. A direct line between Falmouth, or some other point on the coast of England, and Gibraltar, without touching anywhere between those two points.
2. A line between Gibraltar and Malta, without touching at any intermediate point.
3. A line between some point on the Egyptian territories, to be hereafter decided, and Aden, and from thence to Kurrachee, touching at the various points which may be thought requisite.

REPORT OF THE SUBMARINE

4. A line from Rangoon to Singapore, touching at Penang and other points, if deemed necessary.
5. A line from either Singapore or Malacca, whichever point may be found most suitable, *via* Java, to some point on the coast of Australia, to be hereafter decided.
6. A line from Singapore to Shanghai, touching at Hong Kong and other points, if deemed advisable, including Saigon, if the French Government concur in such a proceeding.
7. A line from Shanghai to Japan.

With regard to the several proposed lines of telegraphic communication, my Lords are glad to find that, with some slight exceptions, the whole of the routes along which the lines in question would be laid have been examined, and the soundings completed sufficiently for telegraphic purposes, by the Admiralty, and marked in charts, the incomplete portions of the lines being between Java and Australia, of which about one-half has been sounded; between Saigon and Hong Kong, of which about one-half has been sounded, and the remainder is in progress; and between China and Japan, of which about one-third has been sounded.

My Lords have now only to add that (whilst acting on the principles laid down for their guidance in the foregoing Minute,) they will be prepared to give their attentive consideration to any proposals which may be submitted to them for carrying out any of the schemes of telegraphic communication above adverted to, by parties who can adduce satisfactory proof of their possessing the necessary pecuniary means for carrying such undertaking into effect, whether by submarine cables, or, when circumstances will admit, by alternative land lines; and my Lords will make arrangements with the Admiralty so as to afford such parties the opportunity of inspecting the surveys referred to.

Transmit copy of this minute to Sir F. Rogers, and request that, in laying the same before the Earl of Carnarvon, he will state to his Lordship, that my Lords, in laying down principles for their own governance in regard to the amount of encouragement which it may be deemed expedient on the part of the Imperial Government to afford towards the extension of telegraphic communication, have no wish to interfere with any arrangements, whether pecuniary or otherwise, which the Governments of any of the Australian Colonies may be inclined to enter into with any Company or Companies formed for the furtherance of the object in question.

Transmit copy of this minute to Mr. Hammond, for the information of Lord Stanley; to Mr. Romaine, for the information of the Lords Commissioners of the Admiralty; to Mr. Merivale, for the information of the Secretary of State for India in Council; and to Mr. Farrer, for the information of the Board of Trade.

II.—LINE *VIA* QUEENSLAND AND JAVA.

No. 2.

GENTLEMEN,—

Colonial Secretary's Office, Sydney, 10th January, 1870.

With reference to the arrangements which I had the honor to make with yourselves and with Mr. Lilley, the delegate of Queensland, in connection with the proposed establishment of telegraphic communication with Europe *via* Java, I have now the honor to point out that it is quite possible, though not probable, that Mr. Fraser may not succeed in his negotiations with the Netherlands Government, and that that Government may prefer dealing directly with the Australian Colonies. It should, therefore, of course, be understood that it is the line proposed by Mr. Fraser that we are pledged to take up, and not necessarily that we should arrange with Mr. Fraser himself, who, however, it is hoped will not be objected to by the Netherlands Government.

2. So soon as the Cabinets of New Zealand and Queensland shall have intimated their approval of the memorandum already agreed to by the delegates, it will be desirable that this Government should address a letter to the Dutch authorities, to inquire in what position the negotiation between them and Mr. Fraser stands, to inclose for their information a copy of the arrangement made between New South Wales, New Zealand, and Queensland, the papers received from Mr. Fraser, &c., and to intimate that, in the event of any insuperable objection arising on their part to treat with Mr. Fraser, an arrangement might be made so as to admit of an agreement being entered into between the Dutch Government and the Government of three Colonies, without Mr. Fraser's intervention.

The Hon. Julius Vogel and Charles Knight, Esq., M.D.,
Delegates of the Government of New Zealand.

I have, &c.,

JOHN ROBERTSON.

No. 3.

MEMORANDUM concerning Telegraphic Communication between Australia, New Zealand, and Great Britain.

THAT it is desirable that New Zealand should co-operate with New South Wales and Queensland, to promote the establishment of telegraphic communication between Australia and Great Britain, *via* Java, and between New Zealand and Australia.

2. That New Zealand join New South Wales and Queensland in their provisional arrangement for telegraphic communication with Java, bearing date 6th October, 1869, and annexed hereto, each Colony agreeing to bear equal proportions of the guarantee therein mentioned.

3. That the Colonies of New Zealand, New South Wales, and Queensland jointly undertake to guarantee a subsidy of eighteen thousand pounds annually for the construction of a cable between the Colonies of New South Wales and New Zealand, in the proportion of New Zealand five-tenths, New South Wales three-tenths, and Queensland two-tenths.

4. In the event of any of the other Colonies being admitted into these arrangements, that their contributions shall be appropriated in diminution of the liabilities of the three Colonies herein mentioned.

5. That Victoria, South Australia, and Tasmania be invited to join in these proposals, but should they, or any of them, decline to do so, New South Wales, New Zealand, and Queensland pledge themselves to carry them out.

6. The scale of charges over the land lines of the various Colonies not to exceed the present rates. There being no fixed rate from the southern boundary of Queensland to the proposed cable at the Gulf of Carpentaria, it is agreed that the price shall not exceed 10s. for ten words, signature and address free, provided that in any of the Colonies, shall the charge be greater than the current rates for the time being.

7. Each contracting Colony to enjoy, equally with other contracting Colonies, all rights with respect to fixing or altering the tariff, precedence of Government and urgent messages, and all other rights, powers, and privileges enjoyed by the contracting Colonies; and it is hereby expressly stipulated that the interpretations to be put upon any doubtful point in this memorandum shall be in the direction of overcoming all obstacles in the way of bringing the Colonies into close and friendly relations with such other.

8. That copies of this memorandum be transmitted to the Colonies of Victoria, South Australia, and Tasmania, in the hope that they will become parties to it.

9. This memorandum to be considered provisional, and subject to the approval of Parliament in each contracting Colony, and in the event of Parliament not sanctioning it, the arrangement to be null and void.

10. The views embodied in this memorandum, it is agreed by the Hon. John Robertson, of New South Wales, the Hon. Julius Vogel, of New Zealand, and the Hon. Charles Lilley, of Queensland, shall be submitted to their respective Cabinets for approval.

Sydney, 6th January, 1870.

JOHN ROBERTSON.
JULIUS VOGEL.
CHARLES KNIGHT.
For CHARLES LILLEY,
by his authority,
John Robertson.

No. 4.

MEMORANDUM respecting Telegraphic Communication between Great Britain and Australia.

THE Telegraphic Maintenance and Construction Company, having successfully laid three cables across the Atlantic, are now engaged in connecting Suez with Aden and Bombay.

Captain Sherard Osborne has lately been in correspondence with Mr. Verdon, and advocates alternative routes, based upon subsidies to be borne entirely by the Australian Colonies, and varying in amount from £55,000 to £47,000 per annum.

Mr. Fraser, of Batavia, has also addressed the Governments of the Australian Colonies on the same subject, and has furnished them with detailed information in connection with his project. His scheme involves an outlay of half a million, and for the purpose of obtaining this money it is proposed that a guarantee should be granted, to be equally divided between the Dutch Government and the Governments of the Australian Colonies.

Mr. Fraser is at present in London, and anticipates that the Dutch Government will grant him the concession he requires, which has been recommended by the Government of Netherlands-India.

The views entertained by the Governments of the Southern Australian Colonies in reference to the respective merits of the rival schemes, are at present not quite in accordance with those held by the Governments of New South Wales and Queensland; but it is believed that an examination of the conditions attached to both will result in the conviction that the proposed line *via* Java and Queensland recommends itself as at present the most practicable and economical.

To remove, however, any hesitation which may be felt by the Southern Colonies, and as a recognition of the confidence which the Governments of the Colonies of Queensland and New South Wales have in Mr. Fraser's project, it is suggested that these two Colonies should, if necessary, undertake the joint responsibility required, such guarantee not to exceed £17,500 per annum.

This should be done, not for the purpose of receiving any exclusive benefit, but for the purpose of facilitating the arrangements subsequently to be entered into with Victoria, South Australia, and Tasmania, with a view to the establishment of a ratable and proportionate guarantee to be borne by them on a scale graduated in accordance with the business transacted on their behalf.

It is agreed that the Government of Queensland undertake the construction of the land line to Normanton, or some other point on the shores of the Gulf of Carpentaria to be afterwards determined on.

It will, of course, be necessary that the guarantors should have a voice in fixing the scale of charges payable on the section between Australia and Java, to be from time to time subject to revision.

The views embodied in this memorandum it is agreed by Mr. Robertson and Mr. Douglas shall be submitted to their respective Cabinets.

6th October, 1869.

JOHN ROBERTSON.
J. DOUGLAS.

No. 5.

SIR,—

Batavia, 30th April, 1869.

On the 3rd of July, 1866, while visiting your Colony, I had the honor to address a letter to your predecessor in office on the subject of telegraphic communication between the Australian Colonies and Europe, by way of Java, with the view of ascertaining whether, in event of a definite proposal being made to carry out this connection, when the proper time arrived, I might be able to count upon

the joint support of your Government, and that of the neighbouring colonies, in subsidizing by a fixed annual payment, or in guaranteeing interest on the cost of such undertaking.

Since that date the principal difficulties in the way of effecting that communication have been removed, and the time seems now to have arrived for taking action in the matter.

The sea between Java and the North coast of Australia has been minutely surveyed by H.M.S. "Serpent" and "Salamander," with this result, that instead of a deep gorge, which was supposed to exist, the most suitable soundings have been discovered for the submersion of a telegraph cable in that direction.

The telegraphic land lines in Queensland, in connection with the general system of telegraphs in Australia, can at any time, on a few months' notice, be extended to Burke Town, at the head of the Gulf of Carpentaria.

The land lines of the Government of Netherlands-India, in the Island of Sumatra, are slowly progressing towards completion, and can at any time be pushed forward to Siak, which is proposed to be the point of connection with the European system.

You are no doubt aware that it is mainly owing to the enterprise and perseverance of the Telegraph Construction and Maintenance Company (Limited) of London, that the world is indebted for the ultimate success in laying a submarine cable between England and the United States of America, and that this Company is now engaged in laying a second cable to connect France with New York, 3,600 miles long.

Besides these works of magnitude, the same Company has also laid, in connection with the Indian communication, a second cable for the Anglo-Mediterranean Telegraph Company, between Malta and Alexandria, and has further contracted to lay, by Christmas next, another cable of 3,600 miles long, between Suez and Bombay, by which, when once laid, all uncertainty as to the correct and regular transmission of messages from India to England, and *vice versa*, will be at an end.

Between Bombay and Calcutta the telegraph land lines are now said to be in the best working order.

Between Calcutta and Moulmein the working of the land lines has been unsatisfactory, and these will now either be greatly improved or abandoned, and a submarine cable laid in this direction.

Further, from Moulmein the Telegraph Construction and Maintenance Company has undertaken to carry out, under concessions obtained by the Eastern-Asia Telegraph Company, and since made over to them,—

1. A land line to Bangkok (Siam), and a further extension, under subsidy from the French Government, to Saigon (Cochin China), whence to China it is proposed to lay a submarine cable; and—
2. To complete the communication between Moulmein, Penang, Malacca, and Singapore entirely by land, or partly by land and partly with submarine cable.

Both these works will be undertaken almost immediately.

Two links then only remain in the great chain of telegraphic communication between Europe and Australia, which have to be connected by submarine cable, and for the construction of which no arrangements have yet been made—one between Malacca and Siak, a distance of about 100 miles, partly in the Straits of Malacca and partly in the Siak River, which has been thoroughly surveyed by the Java Government for this purpose; the other link between Pampang Bay, about 15 miles from Banjoewangie, on the East coast of Java, and Burke Town, in the Gulf of Carpentaria, a distance of about 2,000 miles, with an intermediate station at Poeloe Semaauw, close to Timor Koepang; and should this be required by the Government of South Australia, another station can be established at a convenient point on their northern territories, in connection with the settlement proposed to be established there.

It is computed by the Telegraph Construction and Maintenance Company that the entire cost of laying these two cables, together about 2,100 miles long, will amount to between £550,000 and £600,000, for which a guaranteed interest of 7 per cent., or a fixed annual subsidy of £34,000 for thirty years, is required to procure the capital above stated; and their assistance and co-operation are pledged to me in obtaining this capital and in laying the cables in question simultaneously with the other extensions before referred to, in event of my being fortunate enough to secure from the Government of Netherlands-India and the Colonial Governments in Australia suitable concessions for the purpose, on the terms above specified.

To the Government of Netherlands-India I have already applied for the necessary provisional concession for laying these cables within their territories, under an annual subsidy, or guaranteed interest of the actual cost, at their option, equal to one-half of the entire amount of subsidy or guaranteed interest before stated; and my intention is, if this application is favourably received, of which I have every hope, to address the several Colonial Governments of South Australia, Victoria, New South Wales, and Queensland, for a joint concession of similar import, and under similar financial engagements.

My object at present is simply to give you notice of these proceedings, and to prepare you for the definite proposal which I hope shortly to be able to make to your and the other Colonial Governments; and, considering the important advantages involved in the project, I have every hope that my proposals, when formally made, may be well received, and lead to the early completion of this great work of international telegraphic communication.

The Colonial Secretary, Queensland.

I have, &c.,
ALEX. FRASER.

MINUTE by the Superintendent of Electric Telegraphs.

I WOULD recommend this Government to enter into an arrangement, in conjunction with the neighbouring Colonies, guaranteeing 7 per cent. interest on the cost of construction, if the Government of Netherlands-India will guarantee 7 per cent. for half the cost of the cable. I cannot recommend an annual subsidy, as, from calculations I have made, I believe the line will more than cover its working expenses and the 7 per cent. guarantee.

The only way to deal with this matter in its present stage, would be to invite the heads of the several telegraph departments to meet in Sydney, during the sitting of the delegates on the Customs Union, to be held in October next, when some uniform plan for dealing with the whole matter could be devised.

21st July, 1869.

E. C. CRACKNELL.

No. 6.

SIR,—

Electric Telegraphs, Chief Office, Sydney, 23rd July, 1869.

The extension of the electric telegraph to connect the several Australian Colonies with India, Europe, and America, having now assumed a more simple form, so that it can be easily dealt with, I would respectfully recommend, for the consideration of the Honorable the Postmaster-General, to meet the difficulty in obtaining the desired co-operation of the several Colonial Governments, that representatives be invited from the Colonies of Victoria, South Australia, and Queensland, to meet in Sydney, at an early date, to discuss the matter in all its bearings, with a view of preparing resolutions for Parliamentary approval.

I consider it desirable that the representatives should consist of the heads of the Telegraph Departments in the above Colonies, as there are urgent matters in connection with the intercolonial telegraphic system which could then be taken into consideration.

I have, &c.,

E. C. CRACKNELL,

Superintendent of Telegraphs.

The Secretary, General Post Office.

No. 7.

SIR,—

Batavia, 15th July, 1869.

With reference to my letter of 30th April last, I have now the honor to hand you a certified extract, with translation annexed, of a resolution of the Governor-General of Netherlands-India, dated 8th July, No. 1, from which you will observe that my petition to the Netherlands-Indian Government for a concession for laying submarine cables between Java and Australia, and between the North-east coast of Sumatra and Malacca, for the purpose of effecting a through telegraphic communication between Europe and the Australian Colonies *via* Java, has been forwarded to the Imperial Government at the Hague, and that negotiations have been entered into with the view of obtaining the sanction of the Legislature in Holland to the terms of subsidy or guarantee specified in the preamble of the resolution.

This mode of procedure has been considered by the Java Government to be more regular than that of granting a provisional concession, as the main question, which is that of the subsidy or guarantee, has in every case to be sanctioned by the Dutch Parliament.

In order that you may be informed of the terms on which the concession in question has been treated for with the Netherlands-Indian authorities, I beg to hand you, as additional enclosures with this letter, copies of the following documents :—

No. 2. My petition to the Java Government, dated 5th April, 1869.

„ 3. Proposed conditions of the concession.

„ 4. Memorandum explanatory of these conditions.

These two last documents having formed enclosures Nos. 1 and 2 of my petition to the Governor-General (here marked No. 2).

Until the question of the subsidy or guarantee has been determined, the other conditions of enclosure No. 3 may, without inconvenience, be left for subsequent mutual arrangement. Articles 2 and 7, having been framed with the view to a fixed annual subsidy, will have to be modified if a fluctuating guarantee is preferred, and articles 11 and 12 will also have to be revised, as the right of purchase, if stipulated for at all by the Netherlands Government, will not extend beyond those portions of the cable within their own possessions,—say between Pampang Bay and Timoor, and between Siak and Bangkalis.

You will observe that the Government of Netherlands-India is bound, by article 8, to maintain in working order the land lines between Pampang Bay and Siak, and a cable or cables across the Straits of Sunda, and to construct a special line to be used exclusively for the transmission of the Australian messages; and an obligation to a similar effect would probably have to be undertaken by the Australian Governments, to insure the prompt transmission of the European and Indian messages.

The uniform transit charge of 3f. or 5s., for the transmission of each message of twenty words through the Netherlands-Indian Telegraph Lines, stipulated for in article 9, will, I believe, be considered moderate.

From the cordial support which my proposals have met with from all departments of the Java Government, and the favourable resolution which has been adopted by the Governor-General on the advice of his Council, I have every reason to anticipate an equally favourable reception in Holland. The only difficulty that is likely to be raised there, in the way of an immediate decision on the proposals, is the uncertainty as to the adhesion of the Australian Colonies to the principle of an equal division of the guarantee of interest, or of bearing an equal share of the entire subsidy, which last, for each of the two subsidizing parties, would be 200,000f. yearly, equal to £16,666 13s. 4d. of our money.

My letter of 30th April did not call for a reply, being merely intended to prepare you for the present communication; but with a view to further negotiations with the Government in Holland, where I propose to proceed by the Suez steamer, leaving this on the 24th instant, it will be of the utmost consequence for me to know, as soon as possible, the views of your Government on the subject of my proposals; and I should feel greatly obliged by your addressing me a few lines to state whether, in event of the subsidy or partial guarantee before referred to being sanctioned by the Dutch Government, the Government of New South Wales is prepared to submit to the Legislature of the Colony proposals for pecuniary aid of the same amount or character, to be granted in concert with the Colonies of South Australia, Victoria, and Queensland, for effecting the telegraphic communication in question.

I trust that the importance of the subject, and my necessarily short stay in Europe, not to exceed two months, may be accepted as my apology for pressing this matter on your immediate attention, particularly as, within the time specified, it will also be necessary for me to make arrangements with the Telegraph Construction and Maintenance Company of London for the manufacture of the cable, and with them and others for the formation of a Company to raise the capital for carrying out the proposed enterprise.

My address while in Europe is No. 17, Mincing Lane, London; but if equally convenient to you, the Honorable Alexander Campbell, M.L.C., of Sydney, will receive and forward any communication which you may be pleased to address for me to his care.

In conclusion, I beg to state that by the present mail I also address letters of similar import to the Colonial Governments of South Australia, Victoria and New South Wales.

The Colonial Secretary, Queensland.

I have, &c.,
ALEX. FRASER.

Enclosure No. 1.

EXTRACT from the Register of Resolutions of the Governor-General of Netherlands-India.

Buitenzorg, 8th July, 1869.

1. The petition of A. Fraser, dated Batavia, 5th April, 1869, for the purpose of obtaining a concession for effecting telegraphic connection by means of submarine cables, so as to join the Netherlands-India Telegraph with Australia and British India, under receipt of a subsidy from the Netherlands-Indian Government of 200,000f. per annum, or of a guarantee of interest of 7 per cent. per annum on the estimated cost of the work to the amount of 7,000,000f., this last to be borne equally between the Governments of Netherlands-India and the Australian Colonies, one or other during a period of thirty years.

2. &c., &c. Heard the Council of Netherlands-India. Is pleased to resolve—

First.—To acquaint the Petitioner that, on the subject of his petition, which has been received by the Government with the greatest interest, negotiations have been entered into with the Imperial Government in Holland.

Secondly, &c., &c.—Extract of this resolution shall be issued to the Petitioner for his information. Agrees with above-named register.

H. T. BOOL,
Secretary to the Government,

THE above is a true translation from the Dutch original.—G. G. BATTEN, Sworn Translator.
Batavia, 20 July, 1869.

Enclosure No. 2.

The PETITION of ALEXANDER FRASER, landed proprietor, residing at Batavia,—
HUMBLY SHEWETH,—

That recent improvements in telegraphic science render the practicability of establishing the means of instantaneous communication between places and countries situated geographically at the greatest distance from each other, no longer a matter of doubt or difficulty.

That the object of your Petitioner is to bring the possessions of Netherlands-India into direct telegraphic communication with Europe on the one hand and Australia on the other, and to make Java, in that connection, the great Asiatic centre of telegraphic communication.

That preliminary measures have already been adopted to insure, within a short space of time, the extension of the European system of telegraphs through British India, Burmah, and the Malay Peninsula, to Malacca and Singapore.

That the telegraphic system of land lines in Netherlands-India will also shortly be completed by extensions at present under construction through Sumatra to Siak.

That the telegraphic system of land lines throughout the Australian Colonies, if not already extended to Burke Town, at the head of the Gulf of Carpentaria, will very soon reach that point.

That recent marine surveys have established the fact that, in the seas lying between the East of Java and the North coast of Australia, the safest and most suitable soundings exist for the submersion of electric telegraph cables.

That, on the extensions before referred to being completed, there remain two links to be constructed of submarine cable which, when connected, will complete the chain of uninterrupted communication between Europe, Java, and Australia; the one link being between Malacca and Siak (about 100 English miles long), and the other between Pampang Bay (Banjoewangie) and Burke Town *via* Poeloe Semaauw (Timor Koepang), a distance of about 2,000 English miles.

That the object of this petition is to obtain from your Excellency the permission necessary for laying, within the possessions of Netherlands-India, submarine electric telegraph cables for completing the connection, above indicated, and also a provisional concession, on such terms of subsidy or guaranteed interest of capital for thirty years, as, with a concession on similar terms from the Australian Colonial Governments, will enable him to obtain at once the capital required to accomplish the proposed undertaking.

That for this purpose he respectfully refers to accompanying enclosures in English, with translations annexed, and marked Nos. 1 and 2, the former of these documents containing, in fourteen articles, the conditions on which he proposes that the Government of N. I. should grant to him a provisional concession, subject to confirmation by the Legislative power in Holland, and the latter, a memorandum explanatory of these conditions and of the motives which have induced him to apply for the concession in question.

Batavia, 5th April, 1869.

And your Petitioner, &c.,

ALEX. FRASER.

Enclosure No. 3.

CONDITIONS of a Provisional Concession, applied for to the Government of Netherlands-India, of an exclusive right, for thirty years, to lay Submarine Electric Telegraph Cables to connect by Telegraph the Netherlands-Indian Possessions, on the one hand, with the system of Telegraphs in Europe, and, on the other hand, with the system of Telegraphs in the Australian Colonies.

Article 1.—The Government of Netherlands-India concedes to Alexander Fraser, landed proprietor in Java, and his heirs and successors, the exclusive right, for a period of thirty years from date of this contract, of laying submarine electric telegraph cables within the territories of Netherlands-India, for the purpose of connecting the Netherlands-India possessions with the system of telegraphs in Europe on the one hand, and with the system of telegraphs in Australia on the other.

Article 2.—The Government of Netherlands-India binds itself to pay to the concessionaire, annually, for the above term of thirty years, a subsidy of 200,000*fl.*, and that by quarterly instalments at Batavia, on 31st March, 30th June, 30th September, and 31st December of each year; the first payment to begin at either of the terms before mentioned happening after the cables specified in Article 4, hereunder, have been successfully laid, and that on the conditions hereafter specified.

Article 3.—The concessionaire binds himself, within three years from date of this contract, that—

- (a.) The present terminus to the system of telegraphs in connection with Europe shall be extended to Malacca and Singapore in the Malay Peninsula.
- (b.) The present terminus of the Australian system of telegraphs shall be extended through Queensland to Burke Town, in the Gulf of Carpentaria.

Article 4.—That, simultaneously with the extension referred to in Article 3, the following submarine cables shall be laid by the concessionaire:—

- (a.) Between Malacca, on the Malay Peninsula, and Siak, on the Island of Sumatra, comprising a distance of about 100 English miles, with a station at Bangkalis, about 40 miles from Malacca, and 60 miles from Siak.
- (b.) Between Pampang Bay, on the East Coast of Java, about 15 miles from Banjoewangie to Poeloe Semaauw, close to Timor Koepang, a distance of about 552 miles, and thence to Burke Town, in the Gulf of Carpentaria, a distance of about 1,448 miles, or some other more convenient point on the North coast of Australia, to be afterwards indicated.

Article 5.—That the submarine cables to be laid shall be of the most improved construction, equal in all respects to those which have been successfully laid by the Telegraph Construction and Maintenance Company, for the transatlantic lines between England and America.

Article 6.—The concessionaire to be at liberty to make any further agreements with the British or Australian Governments for additional subsidy or otherwise, without in any way altering or affecting the terms of this contract.

Article 7.—In event of interruption to the telegraphic communication through the cables above referred to, from *force majeure*, or other causes beyond control of the concessionaire, and not exceeding ten days each time, the subsidy shall not be withdrawn, but the concessionaire shall be bound to repair the cable so broken with all possible dispatch, and to adopt for this purpose the usual precautionary measures; and a period of thirty days shall be allowed to him in every year for repairs, without any deduction from payments in subsidy or otherwise.

Article 8.—The Government of N. I. binds itself that, simultaneously with the laying of the submarine cables specified in Article 4, the land lines at present in course of construction through Sumatra shall be completed to Siak, with the necessary submarine cable connections between Java and Sumatra; and for more effectually meeting the increasing traffic which may be expected in messages between Europe and Australia, the Government further binds itself, simultaneously with the laying of the submarine cables referred to in Article 4, or as soon thereafter as possible, to construct a special line of wires between Siak and Pampang Bay, to be used exclusively for transmission of messages to and from Australia.

Article 9.—The tariff for payment on all messages, whether Government or private, and whether in transit through or for places in N. I., to be regulated by the concessionaire, under approval of the Government. In the event of the net profits of the traffic so regulated by tariff exceeding 20 per cent., and after a reasonable allowance for contribution to renewal fund, the tariff on messages to be reduced in proportion. The charge for the transmission of a through message on the land lines of the N.I. Government not to exceed 3*fl.* for each message containing no more than twenty words.

Article 10.—The messages of the Government of the Netherlands and of N. I. to have the preference for transmission by the cables before referred to over all private messages, and to be transmitted *pari passu* with messages of the British and British-Colonial Governments, and in like manner the messages of the British and British-Colonial Governments shall have the preference for transmission over all private messages through the land-lines in N. I., and shall be transmitted *pari passu* with messages of the Government of the Netherlands and N. I.

Article 11.—The Government of N. I. to have the right of purchasing and assuming sole possession of the cables referred to in Article 4, and of everything belonging to the same, inclusive of the reserve fund for renewal of the line, three years after the same shall have been completed, on one year's previous notice being given of its intention of doing so, at a price equivalent to thirty years' purchase of the net average earnings of the three years immediately preceding the date of purchase of the lines, and that whether the earnings arise from subsidy or other sources after payment of all costs of maintenance and working expenses, and of the sums reserved for the renewal fund; but the concessionaire is not to be compelled to sell the line for less than its total cost.

Article 12.—In event of the right of purchase referred to in the article immediately preceding being exercised by the Government of N. I., said Government shall be obliged always to maintain telegraphic communication on the lines so bought up, and to take over all the concessionaire's engagements with Foreign Governments, except in case of war with a European power, and in this case the principle adopted in Articles 9 and 10 for regulating the tariff for transmission of messages shall continue in force.

Article 13.—All stations to be established in N. I. by the concessionaire for working and maintaining the lines referred to in Article 4, when completed, shall be approved by the Governor-General of N. I., and at all times accessible to N. I. telegraph functionaries.

Article 14.—This concession is provisional, and subject to the approval of the Imperial Legislature of the Netherlands. The approval not being obtained, the present provisional agreement to be of no effect or value.

Enclosure No. 4.

MEMORANDUM, explanatory of the conditions of the Provisional Concession for laying Submarine Cables in Netherlands-India, applied for by Petition to His Excellency the Governor-General, dated 5th April, 1869.

THE undersigned having for some years taken a lively interest in the progress of telegraphy, and specially with the view of ultimately providing Europe, India, Australia, and China with the means of instantaneous communication, became, in 1862, a member of the direction of the Anglo-Australian and China Telegraph Company, formed at that time in London for the purpose of obtaining the capital necessary for effecting extensions of the European and Indian telegraph systems, terminating in Rangoon (Burmah), by submarine cables or otherwise, thence *via* Penang to Singapore—and further, for carrying out simultaneously the provisions of a provisional concession granted by the Government of the Netherlands to Mr. F. Gisborne, for laying, in connection therewith, and with the existing system of telegraphs in Java, a submarine cable between Singapore and Batavia.

Owing to want of confidence, at the time, in the endurance of submarine telegraph cables, this Company failed to obtain the capital required for either undertaking, and became virtually defunct, when the provisional concession from the Netherlands Government also lapsed, never having been acted upon.

On his subsequent return to India, at the end of 1865, it became apparent to the undersigned that, to render practicable the construction of land lines of telegraph in the Malay Peninsula, it was necessary to obtain not only the co-operation of the British Indian Government, in so far as those lines had to pass through British territory, but also to obtain the sanction and protection of the King of Siam, the Rajah of Ishore, and the other independent or tributary princes through whose dominions it was proposed to carry those lines. For this purpose he united himself with a few friends at Singapore and Batavia, forming a Company under the title of the Eastern Asia Telegraph Company, by which the necessary concessions were ultimately obtained, and have now been made over to the Telegraph Construction and Maintenance Company of London, which has undertaken to carry the same into effect without loss of time, and further to extend them to Saigon under a special agreement with and subsidy from the French Government, whence a submarine cable is proposed to be laid to Hongkong, in China.

During a visit to Australia, in 1866, the undersigned had further the opportunity of becoming acquainted with the system of telegraphs existing in these Colonies, and with the extensions projected or in course of construction. He was also at the same time enabled to ascertain the views and intentions of the several Colonial Governments regarding a telegraphic communication with Europe when the proper time should arrive for bringing the project forward in a practical shape.

In consequence of the triumphant success with which a submarine cable was ultimately laid between England and the United States in 1867, the public confidence was fully restored, and the Telegraph Construction and Maintenance Company of London, before named, to whose persevering enterprise and energy the success of this important international work is mainly due, has since undertaken the following works of the same kind, some of which are already executed, others in course of construction:—

1. For the Anglo-Mediterranean Telegraph Company, a second submarine cable between Malta and Alexandria, now in operation.
2. For the French Transatlantic Telegraph Company, a cable, 3,600 English miles long, to be laid within the next three or four months, between Brest, in France, and New York.
3. For the Victorian and Tasmanian Government, a cable shipped and now on the way, if not arrived, to be laid between those two Colonies, for which a guarantee of 7 per cent. has been given, extending over thirty years.
4. For the British Indian Submarine Telegraph Company, a cable, also 3,600 miles long, to be laid between Suez and Bombay, by the end of the current year.

It is only necessary to refer to the magnitude of these works, executed within the short period of two years, and of the capital involved, amounting to more than thirty millions of guilders, to show the ability of the Company above-named to undertake and to execute successfully the works of minor magnitude forming the subject of the concession now asked for; and the undersigned begs respectfully to state that he would not have been bold enough to apply for the concession in question but for the assurance of the co-operation of this Company in carrying it out, as communicated to him by private letter from its managing director, Captain Sherard Osborne, R.N., dated 21st January last, and from which letter the following extracts will suffice:—

“Now, of the ultimate extension of telegraphy, submarine or otherwise, to Java and Australia, there is no longer any doubt in this country, and I feel confident that by the fall of the year 1870 we shall not only have put Bombay in direct communication with England *via* Suez, but also have carried a line from Calcutta to Singapore and Saigon. We are at present hard at work completing what must be the first section of this line, namely, a direct communication between this country and India *via* the Red Sea, and we hope, in the course of a few weeks, to have raised the necessary capital for this undertaking. (The whole capital has since been subscribed for.) That done, to connect India with Java, and Java with Australia, becomes an easy task. Mr. Paterson’s concessions (those referred to above as obtained by the Eastern Asia Telegraph Company) are now being licked into shape by the lawyers, and I am very busy collecting data to satisfy us whether it will be better to go down to Singa-

pore from Rangoon by a submarine cable, or to attempt land lines. One or the other of these two modes will unquestionably be carried out before long; and, after careful perusal of your memoranda, I think that such a concession as you propose from the Government of Batavia, with a certain working arrangement, would put us in a fair position for extending the line from Java to Australia. This Company does not buy concessions, but is always ready to find a large amount of capital for carrying out submarine telegraphs, and to assist gentlemen in whose *bonâ fides* they have perfect faith, in bringing forward such undertakings. We are now very busy making a cable 3,600 miles long, to be laid across the Atlantic from Brest, in France, to New York, and I thoroughly believe that by next Christmas we shall be sending out a cable of a similar description to Bombay, for the Red Sea line. I shall only be too glad to work with you in effecting such a communication as you propose, the importance of which, commercially and politically speaking, is very great, both to the Dutch and English colonists."

The survey recently made by H.B.M.S. "Serpent," of the sea between Java and the North coast of Australia, to the South of the Eastern Islands, removes all doubt as to the existence of the best soundings for the immersion of a submarine cable for forming the proposed telegraphic connection.

With regard to the system of telegraphic land lines in Australia, all the Colonies between South Australia on the one hand and Queensland on the other are connected; and in 1867 the terminus of the system in Queensland had been brought as far North as Cardwell, whence to Burke Town, in the Gulf of Carpentaria, there are only 400 miles, which had at that time also been prospected, so that if this extension is not yet completed, there is no doubt that it will be so within the time required.

With reference to the concession applied for, the following remarks are offered:—

The connection of Europe with Australia is quite practicable without passing through the Netherlands-Indian possessions; and a proposal has already been made to lay, for this purpose, a submarine cable from Galle to Perth, in Western Australia, about 3,200 miles long, whence to join the Australian land lines in South Australia is an easy matter. It does not need to be pointed out that, if this proposal were carried out, the Netherlands possessions in the East would be virtually isolated from the world's great net of telegraphic communication, and lose all direct participation in the commercial, political, and financial advantages which this communication must bring with it; whilst, on the other hand, if the connection proposed in the concession now asked for is carried out, Java would at once become the centre of communication between Australia and Europe on the one hand, and all parts of the East, China, and Japan on the other.

The financial advantages arising from the transmission of messages over the Government land lines would in that case alone become a matter of considerable importance, if the calculations of the projectors of the British Indian Submarine Telegraph Company are to be depended upon.

This Company proposes a charge on all messages of twenty words between London and Bombay, of £3, or 36*s*. They estimate, on information from the most competent authorities, that at this rate there will not be less than 150 messages per day, averaging thirty words each, working 330 days in the year, and only twelve and a half hours per day—this estimate not including the additional traffic to be expected on further extensions of the telegraph to Australia, Java, and China.

When it is now considered that the European population in British India does not exceed a few thousands, whilst the population in the several Australian Colonies is almost exclusively European, and still connected with Europe by the closest commercial and family ties, amounting, in 1867, to 1,645,000 souls, with an export trade of upwards of 360, and an import trade of upwards of 400 millions of guilders,—it is hardly to be expected that, on a moderate tariff (say £5 from London to Sydney, which would be in proportion to the proposed charge between London and Bombay), telegraphic communication would be less frequent between these Colonies and Europe than between India and Europe; but, for the sake of a safe calculation, taking the number of messages passing through Java to and from all quarters of the world at only one-half the number expected as a minimum between London and Bombay, or seventy-five messages of thirty words per day each way, working 330 days in the year, and twelve and a half hours each day, the revenue to the Government, at 3*s*. for each message of twenty words, would be annually 222,750*s*., which, after deduction of working expenses, would probably cover the whole amount of the subsidy asked for in Article 2 of the proposed concession.

It is not to be anticipated that the concession now asked for can be otherwise than agreeable to the Imperial Government and the Legislature in Holland, the former having showed its interest in the matter by the concession granted to Mr. F. Gisborne, in 1862, with a subsidy of £8,500 for thirty years, for laying a cable only 525 miles long between Batavia and Singapore; and the latter body, having signified its sense of the importance of a direct communication between Java and Australia, by assenting almost unanimously to a vote of 600,000*s*. per annum for the partial support of a monthly steam communication between Java and Australia, should any such be established. It is, of course, quite unnecessary to draw any comparison as to the relative importance between a monthly steam communication and the constant and instantaneous communication offered in the concession now applied for.

With reference to Articles 2 and 6, the intention is to require from the Australian Government a similar amount of support to that specified in Article 2. Should less favourable terms be obtained, the amount of the Java subsidy will be reduced in proportion. Should the amount obtained from Australia be larger, the Java subsidy will not have to be increased.

The capital required to carry out the proposed connections is estimated at about 7,000,000*s*., to obtain which at once a guaranteed interest of 7 per cent. per annum on this amount would be sufficient; and should the Government prefer this mode of support to that of the subsidy, dividing the guarantee equally with the Australian Colonies, the undersigned is quite prepared to accept of it.

The obligations undertaken by the undersigned in Articles 3, 4, and 5, are based upon the promised support and co-operation of the Telegraph Construction and Maintenance Company of London, before referred to.

The other articles of the concession have been principally borrowed from the provisional concession granted, in 1862, by the Netherlands Government to Mr. F. Gisborne, and before referred to.

No. 8.

REPORT of E. C. Cracknell, Superintendent of Telegraphs, in reference to the establishment of Telegraphic Communication between Australia and Great Britain, as proposed by Mr. Alexander Fraser, of Batavia.

THE information contained in the accompanying letter and enclosures from Mr. Alexander Fraser, of Batavia, places the establishment of telegraphic communication between Australia and Great Britain in so simple and favourable a form to Australia, that there should be as little delay as possible on the part of the several Colonies in entering into negotiations for the speedy completion of so desirable an undertaking.

The matter now stands as follows:—The telegraphs in India are now working as far as Rangoon and Moulmein, leaving a gap to be filled up from either of the above places to Malacca or Singapore (say 1,100 or 1,200 knots), concessions for which were granted to the Eastern Asia Telegraph Company, who have now disposed of their interest to the Telegraph Construction and Maintenance Company, London, which Company has undertaken to carry the same into effect without loss of time, and to extend the line to Saigon under special agreement with and subsidy from the French Government.

The Netherlands-India Government have also granted the exclusive right to Mr. Alexander Fraser, of Batavia, to land submarine cables within the territories of Netherlands-India, for a period of thirty years, for the purpose of connecting with the telegraphs in Europe and Australia, subject to the approval of the Imperial Dutch Government.

The Netherlands-India Government further binds itself to pay to the concessionaire, for thirty years, the annual subsidy of 200,000 florins (equal to £16,666 sterling), provided that within three years the terminus of the lines connecting Europe shall be extended to Malacca and Singapore, and the Australian lines to Burke Town, Gulf of Carpentaria.

Simultaneously with the above, cables must be laid between Malacca and Siak, and between Pampang Bay to Poeloe, close to Timor, from thence to Burke Town, or other more convenient place on the North coast of Australia.

The Netherlands-India Government also binds itself, that, simultaneously with the laying of these submarine cables, the land lines now in course of construction to Siak, with the necessary cable or cables across the Straits of Sunda, shall be completed, and that they will provide a special wire from Siak to Pampang Bay, exclusively for the transmission of Australian messages.

The tariff over the Netherlands-India lines (say, 1,500 miles) is not to exceed 3f. (equal to 5s.) for each message of twenty words.

The Queensland Government have now called for tenders for the completion of their land lines to the Gulf of Carpentaria, to be handed over to the Government by the end of 1870.

This leaves a mere nominal responsibility to be undertaken by the Colonies respectively, amounting in all to about £17,500 per annum, to be contributed only in the event of the line not paying 7 per cent. interest on the capital; this would place the liability of this Colony, if the guarantee be divided on the basis of population, at £4,375 per annum.

Mr. Fraser's proposal appears to me a *bona fide* one, and the concession on the part of the Netherlands-India Government most liberal; and I feel satisfied, from the manner in which Mr. Fraser is spoken of by several highly influential residents in this city, who have known him and transacted business with him for a number of years, that he is in a position to carry out in every particular the proposals set forth in his letters and enclosures, if supported by the Governments of the Australian Colonies, subject, of course, to the approval of the Government at the Hague, where Mr. Fraser is personally urging their favourable consideration.

The other proposals which have been placed before me to report upon are not, in my opinion, to be compared to those of Mr. Fraser's for cheapness either in first cost or the advantages to be derived after completion.

The propositions of Mr. Sherard Osborne, the Managing Director of the Telegraph Construction and Maintenance Company, are too expensive, being for the most part deep-sea lines—that *via* Ceylon to cost £1,100,000, with an annual subsidy of £55,000, which must be defrayed by the Australian Colonies. Another proposal to carry a line *via* King George's Sound is still more objectional, and would necessitate the construction of a land line, by a Company, of 2,560 miles, without a single paying intermediate station, whereas the Northern Queensland line to the Gulf of Carpentaria may now be considered an accomplished fact, leaving only the submarine portion to be provided for; and Mr. Fraser, possessing, as he now does, the exclusive right to land cables in Netherlands-India, will render it necessary for the King George's Sound advocates to find another route, which can only be *via* Keeling's Islands to Ceylon, which I fear will prove too expensive a luxury to be indulged in at present.

As it appears to me desirable to carry the line through Northern Australia as far as practicable by land, which would have the effect of opening up and developing the resources of that portion of the Continent, I would prefer that Port Darwin be made the terminus for the submarine cable from Java. Although the cost of working and maintenance will, by shortening the submarine cable, be increased, it is more than counterbalanced by the saving of interest, which will be seen by the following statement:—

Cost of submarine cable and laying from East Java to Gulf of Carpentaria, varying the construction of the cable according to depth of water and sea bottom, £494,000,	£	£
or in round figures, say ... ..	...	500,000
By terminating the submarine line at Port Darwin, reducing length of the cable to 1,000 miles	266,000	
Land line from Port Darwin to the Gulf, about 900 miles, at £60 per mile	54,000	
		<hr/> 320,000

Reducing the cost of construction in favour of the combined submarine and land line by £180,000.

Working expenses, submarine line, Java to Gulf of Carpentaria, including Port Darwin, 4 stations:—

				<i>Two Terminal Stations.</i>		£	£
2 electricians, at	500	1,000	
2 operators	250	500	
2 do.	200	400	

Two Intermediate Stations.

2 operators, at ...	...	...	...	...	250	500
2 do. ...	...	...	...	...	200	400
Stores, say ...	...	...	...	...	...	1,000

Working expenses, submarine line, terminating at Port Darwin:—

Two Terminal Stations.

2 electricians, at ...	...	...	...	...	500	1,000
2 operators ...	...	...	...	...	250	500
2 do. ...	...	...	...	...	200	400

One Intermediate Station.

1 operator ...	...	...	...	...	...	250
1 do. ...	...	...	...	...	...	200
Stores, say ...	...	...	...	...	...	750

Land line, Port Darwin to Gulf of Carpentaria:—

9 stations—salaries and stores, at £570 each ... £5,130 £8,230

Working expenses of submarine line the entire distance—Java to Gulf of Carpentaria ... £3,800

Showing an annual saving on working expenses, in favour of the through submarine line, of £4,430.

This saving is only apparent, as the interest at 7 per cent. per annum on the cost of land line, say £54,000, will only amount to £3,780, against the interest saved on the cost of the cable from Port Darwin to the Gulf of Carpentaria, 7 per cent. on £234,000 ...	...	...	...	...	£12,600
Deduct interest on land line ...	...	...	...	...	£3,780
Difference on working expenses ...	...	...	...	...	4,430
					8,210

Balance against the through submarine line ... £4,390

Saving of £4,390 per annum by constructing the land line as far as Port Darwin, with the additional advantage of opening up a good pastoral country on the Roper River and other places *en route*.

This arrangement, however, rather complicates the matter, as it will be difficult to arrange how the land line from the Gulf is to be provided for, and by whom maintained. The major portion of it will run through territory under the control of the South Australian Government, who will be naturally jealous of any outside interference in the construction of telegraphs in their province; and I am by no means sanguine that they will undertake the work themselves.

On the whole, I consider that Mr. Fraser's scheme for completing telegraphic communication between Australia and the civilized world is more practicable, and will prove, by far, more advantageous to the interests of the Colonies generally, than any propositions which have been placed before the public; and with the arrangements he has now made with the Netherlands-India Government, will for many years be the cheapest route for the dispatch of telegrams to India, China, Europe, and America.

I must not conclude without again urging the Government to invite co-operation of the neighbouring Colonies, so that a Conference may be arranged for at an early date.

E. C. CRACKNELL,

Superintendent of Telegraphs.

22nd September, 1869.

No. 9.

Colonial Secretary's Office, Brisbane, 26th November, 1869.

SIR,—

At the instance of the Postmaster-General of this Colony, I have the honor to forward to you the enclosed memorandum, drawn up by the late Postmaster-General, Mr. Douglas, and yourself, upon the subject of the proposed telegraphic communication between the Australian Colonies and Europe, by way of Java, and to inform you that such memorandum, amended by the omission of that portion of it relating to the continuance of the land line from the head of the Gulf of Carpentaria to Port Darwin, has received the formal sanction of His Excellency the Governor in Council.

I have, &c.,

CHARLES LILLEY.

The Colonial Secretary, New South Wales.

Enclosure.

MEMORANDUM respecting Telegraph Communication between Australia and Europe.

TELEGRAPHIC communication between Great Britain and Australia must now shortly be accomplished. The Telegraphic Maintenance and Construction Company, having successfully laid three cables across the Atlantic, are now engaged in connecting Suez with Aden and Bombay.

Captain Sherard Osborne has lately been in correspondence with Mr. Verdon, and advocates alternative routes based upon subsidies to be borne entirely by the Australian Colonies, and varying in amount from £55,000 to £47,000 per annum.

Mr. Fraser, of Batavia, has also addressed the Governments of the Australian Colonies on the same subject, and has furnished them with detailed information in connection with his project.

His scheme involves an outlay of half a million, and for the purpose of obtaining this money it is proposed that a guarantee should be granted, to be equally divided between the Dutch Government and the Governments of the Australian Colonies.

Mr. Fraser is at present in London, and anticipates that the Dutch Government will grant him the concession he requires, which has been recommended by the Government of Netherlands-India.

The views entertained by the Governments of the Southern Australian Colonies, in reference to the respective merits of the rival schemes, are at present not quite in accordance with those held by the Governments of New South Wales and Queensland, but it is believed that an examination of the conditions attached to both will result in the conviction that the proposed line *via* Queensland and Java recommends itself as, at present, the most practicable and economical.

To remove, however, any hesitation which may be felt by the Southern Colonies, and as a recognition of the confidence which the Governments of the Colonies of Queensland and New South Wales have in Mr. Fraser's project, it is suggested that these two Colonies should, if necessary, undertake the joint responsibility required, such guarantee not to exceed £17,500 per annum.

This should be done, not for the purpose of securing any exclusive benefit, but for the purpose of facilitating the arrangements subsequently to be entered into with Victoria, South Australia, and Tasmania, with a view to the establishment of a ratable and proportionate guarantee, to be borne by them on a scale graduated in accordance with the business transacted on their behalf.

It is agreed that the Government of Queensland undertake the construction of the land line to Normanton, or some other point on the shores of the Gulf of Carpentaria to be afterwards determined on.

It will, of course, be necessary that the guarantors should have a voice in fixing the scale of charges payable on the section between Australia and Java, to be from time to time subject to revision.

The views embodied in this memorandum, it is agreed by Mr. Robertson and Mr. Douglas, shall be submitted to their respective Cabinets.

JOHN ROBERTSON.
J. DOUGLAS.

Sydney, 6th October, 1869.

No. 10.

SIR,—

Brisbane, Queensland, 16th October, 1869.

Referring to your letter of the 27th ultimo, respecting the Intercolonial Conference proposed to be held at Sydney, and suggesting the 26th proximo as a convenient time for such meeting, I have the honor, in reply, to state that, owing to your communication having unfortunately reached this Colony at a time when nearly the whole of the members of the Executive, including the Vice-President, were absent from Brisbane, no definite decision upon the subject has yet been arrived at. I may, however, state that the latter end of November would be more convenient for the representatives of this Colony than the time fixed by you, and should the meeting be held about the time suggested, delegates from this Colony would probably attend.

In consequence, however, of no definite proposals having been received from you during the sitting of Parliament, this Government did not invite the opinion of the Legislature upon the subject, and consequently any final proposals of the Conference could not be assented to by this Government until the opinion of the Queensland Parliament had been first obtained.

I have, &c.,

F. B. STEPHENS
(for the Colonial Secretary).

No. 11.

PAPER read by Mr. E. C. Cracknell, Superintendent of Electric Telegraphs, "On the Electric Telegraph between England and India, and how to connect the Australian Colonies with the telegraphic systems of Europe and America," before the Royal Society of New South Wales.

THE time having now arrived for the joint and energetic action on the part of the Australian colonists to secure to themselves the benefits to be derived from telegraphic communication with the whole world, I propose to place before you this evening, in as concise a form as possible, the progress already made, and what remains to be done to attain the object we are all more or less interested in.

As you are aware, the telegraph has, for several years, been in operation between England and our East Indian possessions, as far as Rangoon and Moulmein, and, of late, so satisfactorily that telegrams have been despatched from Calcutta and Bombay, arriving in London within a few hours. Now, as the lines in daily work cover more than four-fifths of the distance between England and Australia, but little is required of us, and that little, as I will presently show, can be secured at a mere nominal outlay.

To commence with, there are three distinct means of communication greater part of the way to India. One, which we will call the Submarine Company's circuit, *via* Paris, Turin, down the eastern coast of Italy, Brindisi, or Otranto, across the Adriatic to Valona, and Salonica to Constantinople. Another, the Electric and International route, that Company's messages being transmitted through one of their cables to the Hague; from thence either *via* Berlin or Frankfort to Vienna, Belgrade, and Constantinople. The third route is through Russia, which at present is, I believe, but little patronized. The messages by this circuit find their way to Berlin through one or other of the Russian circuits to Tiflis; and on through the Persian system to Bushire.

But to return to Constantinople, where the telegrams transmitted by the two English Companies converge, they are then taken in hand by the Indo-Ottoman Convention, and are sent on by an

exclusive wire to Diarbekir, Bagdad, and Fao, at the head of the Persian Gulf, or by an alternative land line through Teheran, Ispahan, to Bushire.

The Persian Gulf cable then completes the distance to Kurrachee, from which point the messages are distributed throughout the Indian system; those for Australia being sent to Galle, where they are posted to Adelaide for re-transmission over our intercolonial lines—a most unsatisfactory process, occupying now as many days as will presently be performed in fewer hours.

I have roughly travelled over the existing lines as far as they are available, and will now explain more fully how the telegrams are conveyed from station to station, or circuit to circuit. A telegram handed into the Lothbury Office, in London, to be forwarded over the international route, is first transmitted direct, without a break or stoppage, either to Frankfort or Berlin. Then it is copied, and sent on by hand to Vienna, where it is again repeated by hand to Belgrade, at which place it falls into the hands of the Turkish authorities, who send it to Constantinople.

The Submarine Company's messages undergo a similar process, and are repeated, first in Paris, then Turin, again at Otranto or Valona, to Constantinople.

I may mention there are alternative routes available for the messages of both these Companies as far as Constantinople, but as a rule the lines marked on the diagram are preferred.

The telegrams having reached the Indo-Ottoman administration, it may be interesting to know how they are treated while passing over that section, which will explain how some of the vexatious delays have occurred, to the disgust of all who, for business or other purposes, have been compelled to use the lines.

Major Champain writes the following to the Under Secretary of State for India in 1865:—"The organization of the Turkish lines is defective, and, in my opinion, will continue so unless some decided step, such as an opposition route, be taken." In another paragraph he states:—"In some measure, however, I can account for delays of late in consequence of the cholera panic, which frightened the telegraph clerks from their posts."

Mr. Walton, the director of the Persian Gulf cable, also writes that the messages from Kurrachee to Fao, and *vice versa*, average seventy-four minutes, and that the Bagdad men report seventy or eighty messages on hand, send twelve or fifteen, and then smoke hookahs, or say their prayers for two or three hours, during which time Fao hears nothing of them.

I have reason to believe that this state of things no longer exists, as telegrams between England and India occupy a much less time than formerly; but there is still room for improvement. Neither Turks, Armenians, nor Greeks are fit for telegraphists, being quite unable to understand the necessity for *immediate* action, and the requirements of the telegraph service, to render it perfect. To remedy this evil the Electric and International Company tried the Russian route *via* St. Petersburg and Moscow, with the following result, which I have copied from the evidence of the Hon. Mr. Grimston, the Chairman of the Company, taken before a Committee of the House of Commons in 1866. Mr. Grimston says:—"I am sorry to say we were on one occasion induced to send our messages *via* St. Petersburg when the Turkish lines were broken down. From inquiries we made we found that they went perfectly well through Russia, but when they got to Persia no further trace could be obtained of them, and I suppose that Jonadab, the son of Rechab, lit his pipe with them, as they never reached India at all. Although we paid the Russian and Persian Governments their proportions, we had to refund the whole charges collected to the senders."

The lines throughout India were also at this time in very bad order; they had been very roughly constructed in the first instance, badly insulated, and, after the Indian mutiny, had to be very hurriedly put in temporary working order for military purposes. The lines connecting Kurrachee with the rest of India were not adequate for the European business brought to them when through communication was established; and perhaps the greatest defect in the entire system was the employment of underpaid and uneducated natives as signallers at the several stations where the messages had to be repeated, which rendered them almost useless from the unintelligible and mutilated form in which they were delivered.

It soon became obvious that this unsatisfactory state of affairs could not be allowed very much longer to exist, so, in 1866, a Select Committee of the House of Commons was appointed to take evidence, with a view to the improvement of East India communications, from which report I have received considerable assistance in the preparation of this paper. The evidence taken before the Committee, showing, as it did, the necessity for improved telegraphic communication with India which would be as much as possible under one administration, two proposals soon presented themselves to the public, one chiefly a submarine Company, to work through Italy and Sicily, under a concession already granted by the Italian Government, thence to the African coast, joining the Malta and Alexandria cable at Benghazi, from whence a duplicate cable has been already laid to Alexandria, and by land line to Suez. An additional wire to be placed on the Viceroy of Egypt's line, from Cairo to Suakin, or Massawah, when a new cable will be laid to Aden, Macullah, Kooria, Mooraa Islands, calling at Muscat and Kurrachee, and on to Bombay, or as an alternative route by the Syrian line, *via* Jerusalem, Damascus, to Diarbekir, where it will join the present Asiatic-Turkish system already referred to. By the last mail I was informed that the prospectus of this Company has been withdrawn from the present.

The other proposal is that of Messrs. Siemens, Brothers, the well known telegraphic material manufacturers and contractors, of London and Berlin. The Russian and Persian Governments have allowed the above firm or Company to construct a line through their separate territories, and the Prussian Government have constructed a two-wire line from Norderney to Thorn, on the Russian boundary, leaving Messrs. Siemens' Company to provide the instruments and electricians. This will establish a line, exclusively under one management, worked by English operators, from London to Teheran, in Persia, passing through Thorn, Warsaw, Odessa, Kertch, Poti, Tiflis, and Teheran; then through the Persian line to Bushire.

The cable between Kertch and Poti will contain three wires, one of which will be set apart exclusively for Russian messages. This work is now drawing towards completion. On this line a considerable reduction will be made in the tariff from London to India, it being proposed to charge

only £2 for ten words, and £3 10s. for twenty words, which is a very great reduction on the Indian rates *via* the Persian Gulf, where, until lately, a minimum charge of £5 1s. has been demanded.

Before alluding in any way to the proposals for completing the telegraph to Australia, I may, perhaps, still further illustrate the great difficulties which have presented themselves in working the lines through foreign States, where they have insisted on employing their own operators and clerks, and how the works now under construction will effectually remove these difficulties.

I will take, by way of example, the Malta and Alexandria line. When this line was first laid, many of the messages occupied fourteen days from London to Malta and Alexandria, and when received were perfectly useless. These delays were caused chiefly on the Italian circuits, through the apathy of the operators employed by the Italian Government. A concession was then granted to the late firm of Messrs. Glass, Elliott, and Company, who were lessees of the cable, allowing them to employ English telegraphists for working through the business brought by the Alexandria and Malta line. A great improvement in speed and accuracy was soon evident, and answers were received in Alexandria from London in forty-eight hours, the revenue at the same time increasing from £200 to nearly £3,000 per week. This improvement, however, lasted but for a comparatively short period—the Italian Government getting jealous of the English clerks, the Company had to remove them, when the usual delay and mistakes again occurred, and the receipts fell again to £700 weekly.

The cause for this unsatisfactory state of affairs can only be traced to a bad system of management. Mr. Glass says that on one occasion a message from Sir Charles Wood was sent from Alexandria to Malta in five minutes, but although a message of great importance on business of the State, it took the whole day to send it from Malta to the first Italian station. The only satisfaction that could be obtained was that it must wait, as they had their own State messages to dispatch, which in many cases may have been some clerk asking another clerk, at another station, some unimportant question.

Then again, the through messages are often delayed a whole day or more, being considered subordinate to local business. With the Turks and Egyptians matters are still worse, as they are known to retard the despatches entirely through willfulness or idleness. A clerk will perhaps watch the instrument, smoke his cigarette, and say "Let them call," if he is not too lazy even to make that remark; and to show to what extent this is carried in Egypt, the Viceroy, although he has the whole thing in his own hands, and his own clerks, prefers paying the Malta and Alexandria Company some £200 to £300 a year for his private messages, rather than send them by the State lines. Now, with such material, is it to be wondered at that the telegraph system between India and Europe has been the laughing-stock of the world? In spite of this, between Constantinople and Fao, a distance of 1,950 miles, there was, in 1866, only two English and two French inspectors—the rest of the staff, including instrument clerks, were Greeks and Armenians.

Happily, however, this wretched apology for a telegraphic organization is nearly at an end, the lines alluded to being in a forward state, and, when open for traffic, will be worked under one management, and entirely by English electricians and operators. An improved system of automaton repeating will also be adopted, so that the transmitting clerk in London, at one operation, will be able to forward the message direct, either to Calcutta or Sydney.

This ingenious arrangement, although by no means new, I will explain more fully presently. I do not wish you to understand that the direct signalling will always be made use of, nor would it be always expedient to do so, as in that case the entire line would, in some instances, be occupied with a message, perhaps between two intermediate stations, when, by dividing it into sections, several local or short distance messages could be going at the same time. It is also necessary for long circuits, or where a system consisting of many circuits is worked as one, to transmit much slower and firmer than when working over a few hundred miles of line.

Not only will the new lines in progress be the means of augmenting the speed of telegraphic communication between India and England, but they will stimulate the representatives of the several administrations at present in operation to increased vigour, and will, I have no doubt, cause the French and Austrian Governments to give additional facilities and, perhaps, special wires for the through business, rather than lose the tolls now charged for messages passing over their lines. The charges have already been considerably reduced, and, as competition is sure to follow, a further reduction may be anticipated.

There is also an additional reason why English messages should, if possible, be confined entirely to lines under British control and worked by English operators. It is pretty well known that all telegrams passing through France are liable to inspection, and, if considered of sufficient importance, copies are retained, which are placed before the Director-General of Telegraphs, and not sent forward until he gives his consent. This is a matter of very serious moment, where State telegrams of the utmost consequence are concerned, perhaps referring to the very Government through whose hands they have to pass. It may be said they could send their messages in cipher, but cipher messages are anything but safe, as the alteration of a single letter may alter the sense and meaning of the whole despatch.

The working of the lines through India has been by no means satisfactory, as may be gathered from the official reports of the Director-General of Telegraphs in Calcutta. The average time occupied in the transmission of messages between Bombay and Calcutta was forty-eight hours. Now, this, to me, appears perfectly incomprehensible, unless the operators try all they can to retard the business instead of facilitating it.

In these Colonies—take the Northern circuit for instance, from Sydney to Townsville, nearly the same distance—I have seen replies to messages received in Sydney within the hour by hand-repeating at Tenterfield; and this may be considered a busy circuit, there being only one wire for the whole of the business between this Colony and Queensland, and the intermediate messages for thirty-four stations.

There is certainly one very great difficulty which presents itself, even on well-conducted lines, that is, in bad weather, or during atmospheric disturbances, the impossibility of making the instruments record the signals correctly. The atmospheric wave, when a thunderstorm is near, will com-

pletely neutralize the battery current, causing the letters, every now and then, to be jumbled up in a most grotesque manner, turning A's into T's, M's into L's, 9's into 5's, &c. ; so that, unless the instrument clerk is assisted a little by the context, the messages would be sent out very similar to those which have passed over the Indo-European lines.

If this difficulty exists with highly-trained English telegraphists, what must it be with badly educated foreigners, who do not understand a word of our language? Then, the lines are not sufficiently insulated, the line men not understanding the circuits, or the difference between conductors and non-conductors, so that you will frequently see the main wire tied on to an iron bracket, or, perhaps, an iron post, with a piece of galvanised binding wire, which, being a good conductor, renders the line utterly useless, all the messages being at once conveyed down the post to earth. In the early days in this Colony similar stupidity was practised, the line sometimes being tied up to a post with rope, which in wet weather would become a conductor and carry off the current to earth.

The line from Calcutta to Rangoon and Moulmein, where the Indian telegraphs at present terminate, has been liable to many interruptions, more particularly during the S.W. monsoons, the line, in my opinion, having been carried too near the coast; but I was informed by Major Murray, the Deputy Director-General of Telegraphs in India, that the Government intended making very considerable repairs to the land line, or perhaps lay a submarine cable direct from Rangoon to Calcutta, which latter would, perhaps, better meet the difficulty.

This now brings us to the first gap to be filled up, from Rangoon or Moulmein to Malacca, a distance of about 1,000 miles. This section I never considered the Australian Colonies should have anything to do with, the cost of which should be chargeable partly to the Indian Government and partly to the proposed line to China and Japan. It is a circuit we are completely shut out from by the intervening Netherlands-India telegraphs, and a work over which we can have no control.

There are two proposals, however, for this section—one by Mr. Gisborne, for a submarine cable, touching at King's Island and Penang to Singapore, forming a portion of the line to connect Saigon, Hainan, Hong Kong, Amoy, Foochoo Foo, Shanghai, and Japan (this cable will be about 1,200 knots in length, and is estimated to cost about £500,000); the other by the Telegraph Construction and Maintenance Company, who have undertaken to carry out concessions obtained by the Eastern Asia Telegraph Company, which have since been made over to them, to complete the communication between Moulmein to Penang, Malacca, and Singapore, entirely by land line, or partly by land and submarine cable, also a land line from Moulmein to Bangkok, in Siam, and a further extension to Saigon—both lines to be undertaken immediately; so that all doubts as to this section not being filled up may now be set at rest.

This leaves only a short length of cable of about 100 miles from Malacca to Siak to connect the lines in Sumatra and Java with the line down the Malay Peninsula. A provisional concession has been applied for from the Government of Netherlands-India, by Mr. Alexander Fraser, of Batavia, which, if granted, will give unbroken communication from London to Banjoewangie, on the East coast of Java.

There now remains the portion, which may be styled the Australian section, to be dealt with, and I think I shall be able to show that with a little combined action how very inexpensively this great work can be completed.

The telegraph in Queensland will, at the end of this year, be in operation to Cardwell, Rockingham Bay. The Government of that Colony, to whom great credit is due, have cautiously but persistently pushed their works northward, almost before the requisite population for its support had formed the track. The Gilbert Gold Fields will, I have no doubt, give the construction of the line towards the Gulf of Carpentaria additional impetus, and we may expect to be able to speak the Gulf of Carpentaria before the end of 1870.

The cable, which forms the last link in our chain, if taken from Nonmanton, will be about 1,900 miles in length, and will cost, when laid, about £500,000; and I do not think a good cable, suitable in every way for the sea in which it is to be deposited, could be successfully laid for less. The soundings, except in a few places, are good, and the coral reefs can be avoided.

From a letter received from Mr. Alexander Fraser, dated Batavia, 10th April, 1869, it appears application has been made by that gentleman to the Government of Netherlands-India, for a concession to land a cable on the East coast of Java, to connect Australia, at the head of the Gulf of Carpentaria, under a subsidy or guarantee, at the option of that Government. If this is granted, which he has every reason to believe it will be, he proposes to ask a similar guarantee, at 7 per cent. per annum, from the several Australian Governments, on the cost of construction, which, I think, may be set down at £500,000, instead of £550,000 to £600,000, as proposed by Mr. Fraser—one-half of the guarantee to fall on the Java Government, and the other half on the Colonies jointly. This would leave for the Colonies a mere nominal sum of £17,500 to be subscribed annually, which might for the first year be taken ratably on the basis of population, or in accordance with the proportions paid by each Colony for postal communication *via* Suez, until it could be ascertained to what extent the line was availed of by each community. The proportion for this Colony would be the small sum of £4,375 per annum, which I feel sure we should never be called upon to pay, as the traffic will more than cover the 7 per cent. after paying working expenses; so that we simply have to run the risk of being called upon to pay £4,375 per annum, to obtain those inestimable benefits which we have already secured to ourselves on a small scale, by our intercolonial system of telegraphs, but which will be of ten-fold importance when we are within a few hours' speaking distance with the civilized world.

We shall find, by going back a few years, that we have already promised to do even more than this. When Mr. Gisborne visited Australia, in 1860, the Legislature of this Colony and that of Victoria passed resolutions with a view of providing an annual subsidy of £22,625 for the purpose of connecting Moreton Bay with Java by a telegraph cable; but the Home Government having refused all encouragement to the scheme the proposal fell through, and owing principally to the small prospect, until lately, of the Rangoon and Singapore section being undertaken, the entire matter has been in abeyance.

Mr. Gisborne's line from Brisbane to Java was not well supported either in Victoria or South Australia, Mr. M'Gowan, the General-Superintendent of Telegraphs in the former Colony, having been

in favour of a line *via* King George's Sound, and Mr. Todd, holding a similar position in South Australia, having favoured a line from Adelaide, following Stuart's track, through the centre of the Continent to Northern Australia. Neither of these routes appeared at the time feasible, nor do I think, even at this date, lines of telegraph could be cheaply constructed or maintained over an uninhabited country. A new aspirant has lately advocated the King George's Sound route, with the view of forming a Company for a line to Western Australia and on to Java, but his calculations and distances are so absurd that he has met with little or no support, and I think both the gentlemen above alluded to have now arrived at the conclusion that the Queensland route is the best.

As regards the burden to be borne by the several Colonies, even supposing they are called upon to pay, it will be so insignificant that it will scarcely be felt; but as all main trunk cable lines have proved more than self-supporting, and in nearly every instance returned very high rates of interest, I am of opinion that no portion of the annual guarantee will be required, in support of which I will quote the three large cable undertakings now working, and show their gross earnings:—

Name of Cable.	Length in knots.	Cost.	Annual Revenue.	Interest on Capital.	Weight in Tons per knot.
Malta and Alexandria	1,330	£480,000	*£96,200	per cent. 20	2.13
Persian Gulf	1,176	400,000	96,000	24	3.06
Atlantic Cable	3,748	1,200,000	400,000	33½	{ 1.75 { 1865 and 1.50 { 1866

The working expenses are a mere trifle to be paid out of these sums, except when the cables are injured, when a considerable outlay is required; but even then the maintenance expenses are not very much felt, as they are generally paid out of reserve funds for renewals, the same as adopted by large ship companies.

The imports and exports to and from Australia are also so extensive as to warrant our guaranteeing the whole 7 per cent., even without the contemplated assistance from Java. The Australian imports and exports amount annually in value to nearly forty million pounds sterling, with a gross tonnage of 1,121,424 tons. The commercial transactions induced by this enormous sum annually, would be sufficient to pay an ample dividend without falling back on the guarantee.

Thirty thousand messages per annum through the cable would more than pay the working expenses and the 7 per cent. interest; that would be proportioning 30s. as a fair charge for the submarine line.

The charge for messages of ten words to England, I think, might be approximately calculated at £4 19s., to be divided in the following manner:—

	£	s.	d.
†United Kingdom to India	2	0	0
India to Siak	0	10	0
Java and Sumatra lines	0	5	0
Java and Australian cable	1	10	0
Sydney to Gulf of Carpentaria	0	14	0
Total	4	19	0

This cannot be considered too high a charge for a distance of 13,676 miles, as under—

London to Berlin	591 miles
Berlin to Vienna	530 "
Vienna to Constantinople	919 "
Constantinople to Fao	1,950 "
Fao to Kurrachee	1,176 knots, or 1,372 "
Kurrachee to Rangoon	1,500 "
Rangoon to Malacca	1,000 knots, or 1,166 "
Java lines, say	1,500 "
Banjoewangie to Normanton, Gulf of Carpentaria	1,900 knots, or 2,216 "
Normanton to Cardwell	360 "
Cardwell to Sydney	1,572 "
Total number of miles	13,676 "

The Government of South Australia will, I have no doubt, negotiate for a station at Port Darwin, in their northern territory, and may be induced to construct a land line to the Queensland boundary. This would shorten the submarine portion very considerably, but the annual charge for working expenses and maintenance of the land line would perhaps cost more than the 7 per cent. on the outlay for the cable.

It is curious to take a glance at the nature of the business transacted by the telegraph, and how large consignments are disposed of, in some cases, before the vessels have left the port of departure. Take for instance a shipment of cotton from India, say 500 bales, consigned from Madras to a firm in London or Liverpool. The shipper telegraphs to the consignee, "I have shipped 500 bales of a certain class of cotton," and authorizes his agent to sell at once on the water. This is done, and a reply is sent to the Madras shipper, who, instead of waiting weeks and months for the return of post, repeats

* The receipts vary so much on this line, and the revenue therefore can only be taken as an approximation.

† Telegraphic communication with India, by F. Gisborne, 1866.

the operation, knowing the fate of the first consignment. Therefore, he can do a much larger and safer business with less funds. So that a manufacturer in England could order his cotton or silk from India or China, and could be advised of the purchase and shipment, and have the satisfaction of knowing he had been drawn upon for the amount, all within a few days.

The banking business between India and Europe is now very largely conducted by telegraph. Advices are received of remittances and drafts to be provided for very often several weeks in advance of the arrival of the mails.

I could multiply examples of the uses of the telegraph *ad infinitum*, but think it would scarcely come within the province of this paper, so I will now conclude with a short description of the kind of cable I would recommend for the Australian section. I have here a very good sample as to general manufacture and strength, but would prefer that the copper conductor should be not less than 250 lbs. to the nautical mile; the gutta-percha and Chatterton's compound for the insulation, 300 lbs. to the mile; the outer coating-wires could be increased or diminished in thickness, according to the depth of water, which in some places varies considerably. (*Vide* soundings taken by H.M.S. "Salamander.")

The outside covering consists of two layers of a bituminous compound, composed of mineral pitch, silica, and Stockholm tar, with two servings of hemp or jute, the whole passed under heavy rollers when in a plastic state.

No. 12

SIR,—

H.M.S. "Serpent," Point de Galle, Ceylon, 9th March, 1869.

I have the honor to forward herewith, for the information of the Lords Commissioners of the Admiralty, the results of my investigations on the sea-bed between Java and Timor, obtained under the following circumstances:—

2. I was ordered, in May, 1868, by Vice-Admiral the Hon. Sir H. Keppel, K.C.B., Commander-in-Chief of the China station, to proceed from Japan, *via* Hong Kong, to the Eastern Archipelago, for the purpose of taking deep-sea soundings eastward of Java, as a preliminary to the extension of the electric telegraph by a submarine cable, if practicable, to Australia.

At the same time I received instructions for my guidance from the Hydrographer of the Admiralty, by command of their Lordships, together with charts on which were denoted the routes which were deemed most desirable to be examined.

3. I left Hong Kong accordingly on the 27th June, and, arriving on the ground about the time the S.E. monsoon had abated, found no difficulty in performing successfully the service required, which was completed in November last.

4. I have now the honor to transmit a report thereon, with plans and sections, exhibiting the depths, nature, and gradients of the sea-bed between Java and Timor (by the South), as follows:—

Plan 1. Chart showing depths and section.

Plan 2. Chart of Baly Strait, Java.

Plan 3. Plans of Pampang Bay, Baly Strait.

5. I have also made a collection of specimens of the bottom from all depths, which I have retained on board until my arrival in England.

6. In conclusion, I am desirous of recording my high appreciation of the assistance rendered me by Senior Lieutenant Charles Vernon Anson and Navigating Lieutenant Edward Scobell Clapp.

The proximity of the land necessitated our taking soundings at average intervals of twenty miles. This entailed considerable labour, both by night and day; but the spirit with which these officers entered on their task, their untiring energy, and intelligent zeal, command my thanks and approbation.

I have, &c.,

The Secretary of the Admiralty.

CHAS. BULLOCK, Commander.

REPORT on the Extension of the Telegraph by a Submarine Cable from Java towards Australia.

Introductory.

1. The growing national importance, both politically and commercially, of connecting Australia with Great Britain by means of the electric telegraph, having been recognized, and the time arrived for taking the first steps towards that end, Her Majesty's ship "Serpent," under my command, was ordered by the Lords Commissioners of the Admiralty to be detached from the China squadron for the purpose of taking deep-sea soundings eastward of Java, as a measure preliminary to the laying of a submarine cable, if practicable, between that island and Australia.

Routes proposed.

2. For this purpose their Lordships' Hydrographer furnished me with instructions concerning the routes proposed to be examined, which included (1) a line direct from the S.E. point of Java to Rotti Island, off Timor; and (2) an alternative line from Java to Celebes, and thence to the N.E. point of Timor, which latter was only to be examined in the event of the depths over the direct line being found so great as to be unsuitable for laying a cable, or of circumstances occurring to prevent their being satisfactorily obtained.

Route adopted.

3. The result of the examination of the direct line was unexpectedly favourable. The depths were found moderate, instead of being, as was apprehended, excessive. In consequence, any consideration of the alternative routes was rendered unnecessary.

Report and Plans.

4. This report, therefore, refers exclusively to the direct line through the Indian Ocean from Java to Timor, and is illustrated by the accompanying plans:—

Plan 1. Chart of the route, showing the deep-sea soundings, with sections.

Plan 2. Chart of Baly Strait.

Plan 3. Plan of Pampang Bay, the landing-place of the shore end of the cable.

Method of Examination.

5. Unlike ordinary oceanic routes, where a single continuous line of soundings, taken at regular intervals, satisfies the conditions of examination, the route in question passes along a chain of islands, at some parts almost touching its prominences, at others receding considerable distances from the land. It appeared to me, therefore, that the ordinary system of sounding would not furnish sufficient reliable data from which to deduce the best course for laying a cable, but that it would be necessary so to conduct the sounding as to obtain sections of the dip of the coast at the various points that the cable approached somewhat closely.

Objections to a more extended Examination.

6. The weather being highly favourable, I studied to carry out this object, deviating as little as possible from the route laid down in my instructions. Lest, however, it should be advanced that the examination might with advantage have been of a more elaborate and complete character, it behoves me to say it would not have been expedient, nor did the terms in which my orders were expressed point to any extended examination of the bed of these seas; on the contrary, they rather implied that a limited number of soundings was all that could be expected, and would be deemed satisfactory.

Further, if the western part of the route had proved unsuitable, (and the very deep, though now known to be erroneous, soundings on the chart gave reason to apprehend that it would,) the loss of time would have been both vexatious and unprofitable.

Connection with previous Explorations.

7. As this work was commenced from the East I shall here follow the whole order of description from East to West. Rotti Strait was first examined, also Semaó Strait, leading to Timor Koepang. In both the bottom proved suitable for a cable. I then extended the soundings eastward, within a moderate distance of the western soundings obtained by H.M.S. "Salamander," and imagined there was a satisfactory connection; but a new chart recently published by the Admiralty places a sounding of seventy-five fathoms coral midway between our terminal soundings. This utterly breaks the continuity, and moreover, raises a doubt as to whether the north-western extension of the Sabul Bank be not connected with the coast of Timor.

Before any cable can be laid, I am of opinion that this point should be cleared up; for if it passes over a bank of choral knolls there would be great probability of failure.

Conjecture as to Depth of no Value.

8. The great depth (1,120 fathoms) found near the South coast of Rotti, countenances the presumption that there does exist a deep channel between Timor and the Sahul Bank, and I should incline to that view, had not experience decisively taught that conjecture is always at fault, and an opinion so formed valueless.

Timor to Australia.

9. Referring to the route from Timor to Australia, a careful study of the chart, combined with long experience, leads me to the opinion that the laying of a cable through the Arafura Sea is a precarious undertaking, for the shallow sea-bed appears to be strewn with coral knolls, to avoid which it would be necessary that another vessel should precede the paying-out vessel, keeping her lead continually going, to ascertain the nature of the bottom, and give warning of coral, if encountered.

With this precaution, with a cable better protected than that used West of Timor, and choosing the fine months of the year to lay it, the conditions of success will be raised to a maximum.

Seasons for Laying the Cable.

10. The favourable season in autumn for laying the cable is March and April, at the end of the N.W. monsoon; in spring, October, November, and half December, at the close of the S.E. monsoon. Of the latter season only have I had experience: the weather was then fine, with a light S.E. monsoon, and the swell in the Indian Ocean only slight.

Difficulty of Repair.

11. The extreme difficulty and attendant expense of effecting the repair of a cable at so remote a part of the world would justify, as a measure of prudence, any additional first outlay which would tend to guarantee certainty in result by security against possible injury. The lamentable failure of the Singapore and Batavia and of the Red Sea lines are traceable to the neglect of precautions.

Rotti Strait.

12. The cable may, if considered advisable, to save distance, be carried through Rotti Strait.

The depths are sufficient (seventy to ninety fathoms) to obviate possible injury from the heavy ground swell caused by the S.E. monsoon or trades, and a mud bottom may be in all probability insured, but I should advise the same precaution as mentioned in par. 9.

Intermediate Station at Timor Koepang.

13. If it be resolved to have an intermediate station between Java and Australia, Timor Koepang should be the place selected. The cable would then enter Rotti Strait by the West, and pass up Semaó Strait, the shore end being landed at a suitable place on the eastern (Timor) shore of the latter strait, equally protected from S.E. and N.W. winds, which blow with great violence in their alternate seasons. In Koepang Bay the only practicable place for landing the shore end is the head of the bay, Koepang Roads being exposed to the gales of the N.W. monsoon, which render the anchorage precarious during that season, during which vessels are compelled to anchor over at Boerong, the coal depôt, on the North side of the bay.

Cable Route near Rotti.

14. If Koepang be adopted as an intermediate station it would probably be laid between Savu and Rotti, arriving at Koepang direct from the westward. Thence it would pass down Semao Strait, and leave Rotti Strait by its eastern entrance. If the cable be laid direct it will be a question for the projectors of the line whether they will lay it through Rotti Strait, or to the southward of Rotti.

15. The Islands Savu, Banjoar, and Hocky, are situated on a bank. The section (on G. H. I., plan 1) shows Hocky, which is an upheaved coral reef, to rise from an inclined plane at the depth of 700 fathoms sand. I would, therefore, recommend the cable being laid outside Hocky in a depth exceeding 800 fathoms. The island is surrounded by a sea-bottom composed of coarse coral sand, coral debris, and corallines, which become finer in character as the distance from the island is increased.

Direct line.

16. South of Sumba the cable should pursue the course indicated on plan 1 by the double red line. The single red line is perfectly direct, and four miles shorter, but impracticable on account of its close proximity to the island of Hocky.

17. It crosses the deepest water South of Sumbawa in 1,850 fathoms, but the slight deviation proposed reduces the depths 200 or 300 fathoms.

The contours of the sea-bottom appear here to be remarkably regular, and to run nearly parallel to the general line of coast.

18. The charts show, near this locality, depths not obtained with 2,000 and 2,980 fathoms of line, but they are imaginary, and probably the results of circumstances which were unfavourable. There can be no question of the accuracy of the present soundings, all of which were taken from a boat; indeed the probability is in favour of their being always less than is indicated on the plan.

19. Baly Strait, through which the cable must be taken to sea, required almost a re-survey, on account of the difficulty experienced in ascertaining the ship's position—a matter of importance in laying the cable in the narrow, serpentine, deep water channel of the strait, where alone an ooze bottom can be found.

The variation of the compass proved to have been the chief impediment, as it was subsequently observed to be a degree more easterly than shown on the charts. Some care will be necessary in following the proposed cable route out of the strait, and I should recommend that advantage be taken of the period of neap tides. The tides and currents are most complex and irregular, and not to be learned readily by a stranger.

20. This deep water channel is contracted to two miles width near the entrance of the strait, by rocky ground on either side, which may be seen by reference to plan No. 2.

The Baly ledge on the East side appears to be an extension of the Baly shore; it is of coral, and may have less water than shown on the chart, as it was not examined. The same remark may apply to the Java ledge, which is of rock, and is evidently a plateau extending from the shore, over which was found a uniform depth of 218 fathoms. Higher up the strait, the Prince of Orange coral bank divides the channel into two, the northern of which is to be preferred, as the wider and more direct.

Serpent Bank.

21. It will also be seen, by reference to plan No. 2, that the bed of the strait rises suddenly, forming a plateau having a slight incline and steep declivity.

The character of the bottom is one highly injurious to the proper preservation of a cable (and appears to be of rock overlaid with sand, mud, gravel, corallines, and hard black angular stones, resembling lava), especially at the edge of the plateau. After several days' search one spot was found at which the bottom was of a less unfavourable nature; and here, at 10 miles East of Mount Ikan, the proposed line has been drawn on the plan.

Towards the entrance of Pampang Bay the ground is chiefly sand and mud, varied by a little coarse sand and stones.

Pampang Bay.

22. The western shore of Pampang Bay has been selected for landing the shore end of the cable; the reasons for its selection being, that it is the only place protected from the heavy swell which the S.E. monsoon rolls into the strait, and that the shore is soft mud, overlaid here and there by fine black sand, admirably adapted for the purpose, as also is its approach. The coast between Pampang and Banyu-Wangie, the present terminus of the electric telegraph, is, in addition to being thus exposed, exceedingly rocky, whilst the distance between the two places is only $14\frac{1}{2}$ miles, or about 17 by the road, which is gained from Pampang Bay by a bridle-path along the shore. Pampang is a small Javanese or Malay village, and has the character of being very unhealthy, especially at the changes of the monsoons.

23. Plan No. 3 illustrates how the cable should be laid. Starting from the creek South of the village, it is carried directly across the wide mud-flat fronting the shore as far as low-water mark, which leads sufficiently wide of the usual anchorage of small craft off the village. Thence it crosses the bay diagonally, on a line marked by two white beacons, until the western extreme of Mount Ikan bears South, whence it advances westward in a long sweep across the "Serpent" Bank. The beacons should be large and conspicuous, to indicate where it would be illegal for a ship to anchor.

24. All the sand is black, and contains iron, which is also found in all specimens of the bottom in the vicinity of Baly and Lomboek and Java.

Specimens of the bottom.

25. A collection of specimens has been made from all depths, especially from the "Serpent" Bank in Baly Strait. They will be retained on board till the "Serpent's" arrival in England.

CHAS. BULLOCK, Commander, R.N.

Her Majesty's Ship, "Serpent," Point de Galle, 10th March, 1869.

REPORT OF THE SUBMARINE

III.—CORRESPONDENCE BETWEEN THE NEW ZEALAND COMMISSIONERS AND MESSRS. HENLEY, &c.
For this correspondence, *vide* Parliamentary Paper, E. No. 6, 1870.

IV.—CORRESPONDENCE BETWEEN THE GOVERNOR OF NEW ZEALAND AND COMMODORE LAMBERT.

No. 13.

SIR,—

Government House, Auckland, 14th March, 1870.

At the request of my responsible advisers, I have the honor to transmit to you a memorandum presented to me by them, on the subject of a proposed submarine line of telegraph between New Zealand and New South Wales, towards the surveying of which they ask for such assistance as it may be within your power to afford them.

Commodore Lambert, C.B., &c.,
H.M.S. "Challenger," Wellington.

I have, &c.,
G. F. BOWEN.

P.S.—I have told the Colonial Treasurer (Mr. Vogel), who is about to proceed to Wellington, that I have no doubt you will be ready to give him every advice, but that I apprehend that the ships under your command are already too few for the services required of them.—G. F. B.

Enclosure.

MEMORANDUM by MINISTERS.

MINISTERS respectfully represent to His Excellency the desirability of moving the Commodore to give what assistance he can towards a survey for a submarine line of telegraph between New Zealand and New South Wales. If necessary, a representation might be made to the Admiralty, to the effect that the work is one of Imperial moment.

Auckland, 14th March, 1870.

JULIUS VOGEL,
Postmaster-General.

No. 14.

SIR,—

H.M.S. "Challenger," at Wellington, 22nd March, 1870.

I have the honor to acknowledge the receipt of your Excellency's letter of the 14th instant, forwarding a memorandum on the subject of a proposed submarine line of telegraph between New Zealand and New South Wales, towards the surveying of which assistance is asked, such as it may be within my power to afford; and, in reply, I have to acquaint your Excellency that I shall forward your letter, and its enclosure, for the consideration of the Lords Commissioners of the Admiralty.

I am sorry to inform you that, at present, owing to the small number of ships under my command, and the numerous duties they have to perform on so large a station as this is, I am unable to afford that assistance I should otherwise have been pleased to render.

I have, &c.,

His Excellency Sir G. F. Bowen, G.C.M.G.,
Auckland.

ROWLEY LAMBERT,
Commodore and Senior Officer,

V.—EASTERN OCEANIC COMPANY.

No. 15.

SIR,—

41, King William Street, Adelaide, South Australia, 25th May, 1870.

I have the honor to lay before your Excellency, for the consideration of your Government, the enclosed proposals from the promoters of the Eastern Oceanic Telegraph Company, London, as a basis for carrying out an entire scheme of telegraphic communication between Australia and Ceylon.

It is not requisite for me to say anything in favour of telegraphic communication with Europe, the necessity for which is universally recognized, and has become more than ever urgent since the regular working of the cable joining Europe with America.

As arrangements have already been made for the establishment of one line of telegraph *via* Brisbane, the North coast, and Port Darwin, the promoters are of opinion that their proposed line *via* the South and West coasts should be protected from any other competing line, by that route, for a certain number of years, because they feel assured, if there were more than two lines to Australia, the business would be so divided that, for many years, none of the lines would be likely to pay.

I have the honor, furthermore, to inform your Excellency that arrangements have been actually made for the construction of the cable, conditional on the concessions being obtained, and that the Company will be prepared to carry out their scheme, as set forth in the said proposals, at the cost of £840,000.

I would further state that I am empowered by the Company to enter into negotiations with your Government relative to any alterations or modifications of such proposals; and I have also authority for saying that it is almost certain that the Government of Western Australia will join in the scheme, and give their guarantee to the extent of 1 per cent.; and, furthermore, that in the event of the South Australian Government interest in the northern territory preventing that Colony joining in this scheme, arrangements can be made to take the cable from King George's Sound direct to Cape Otway, Victoria, and that the Company would be prepared to lay a cable from Victoria to New Zealand on the same terms.

Feeling assured that these proposals will receive prompt and favourable consideration at the hands of your Government,

I have, &c.,

W. B. TOWLER,

Electrical Engineer, E.O.T.C.,

Late Chief Line Inspector, Telegraph Department, S.A.

His Excellency Sir George Bowen, Governor of New Zealand.

Enclosure.

London, 97, Cannon Street, E.C., 23rd February, 1870.

EASTERN OCEANIC TELEGRAPHIC COMPANY (LIMITED).

THE undersigned beg to submit the following conditions for concession for telegraphic communication between New South Wales, Victoria, South Australia, Tasmania, and Western Australia, with Ceylon:—

1. The Australian Governments to grant an exclusive concession for thirty years, terminable on terms hereafter expressed.

2. To guarantee to supplement the net profits, to the amount of $6\frac{1}{2}$ per cent. per annum, on total cost of cables and land lines, $5\frac{1}{2}$ per cent. to be paid in dividends to shareholders, and 1 per cent. to be invested to form a reserve fund, to be used only for new cable if required, otherwise to belong to the Company; the guarantee not to commence until the cables are laid and in working order; thirty days in each year being allowed for repairs and interruptions over which the concessionaires have no control. If stoppage does not exceed ten consecutive days such stoppage not to count, but beyond that period a proportion of the guarantee to be deducted.

3. In the event of the Company working and maintaining the line, and communication being interrupted for two years continuously, the guarantee and concession to be terminated at the option of the Governments, subject to six months' notice.

4. The traffic rates to be fixed by the Australian Governments.

5. One moiety of the profits over 10 per cent. to be added to the reserve fund, in addition to the 1 per cent. of the guarantee, for accumulation, and the other moiety to be divided equally between the Australian Governments and the Company. The guarantee not to be claimed except the profits are less than $6\frac{1}{2}$ per cent.

6. The guarantee to be paid half-yearly, and the 1 per cent. for reserve fund, together with the moiety over 10 per cent. profits, and all interest thereon, to be invested from time to time in Government securities, until the reserve fund is 56 per cent. of cost of cables, and then the above moiety to be divided between the Australian Government and the Company.

7. The Company to work and maintain all lines, and keep a creditor and debtor account, duplicates of which to be furnished to the Governments half-yearly, duly certified; but, should it be desired, the Governments are to work and maintain all lines, and keep a creditor and debtor account, duplicates of which shall be furnished to the Company half-yearly, duly certified.

8. The working expenses shall not exceed 25 per cent. of the net income of the Company. All repairs to be charged to working expenses.

9. The Company undertake to construct land lines from Port Augusta to Fowler's Bay, and from King George's Sound to Perth; and to construct and lay cables from Fowler's Bay to King George's Sound, from Perth to Java Head, and from thence to Ceylon; and to construct any additional lines, within the first ten years, desired by the Australian Governments, on the above terms.

10. The Company shall form the connection with Adelaide and Ceylon in three sections, as follows:—

	Description of cable.
1st section—From Adelaide to Perth	3 wires.
2nd section—From Perth to Java Head	1 wire.
3rd section—From Java Head to Ceylon	1 wire.

The whole to be completed in three years from date of concession.

11. The guarantee shall commence to be in operation on the completion of each section, in proportion to the cost of such cable.

12. Special through wires to be constructed from New South Wales, Victoria, and Adelaide to Perth, and connected with the three wires of the first section cable.

13. The Government to grant 500 acres of land free, for each station, situated on or near waste lands of the Crown, and the right to cut timber and use other materials.

14. The Australian Governments to have the option of purchasing the property of the Company, after the expiration of each ten years, at the original cost, on their giving twelve months' previous notice of their intention so to do.

15. The Company propose that the tariff shall be—

	£	s.	d.
From Perth to Ceylon	1	0	0
From Adelaide to Ceylon	1	5	0
From Melbourne to Ceylon	1	10	0
From New South Wales to Ceylon	1	15	0
From Tasmania to Ceylon	1	15	0

For messages of twenty words, exclusive of address.

CHARLES CURTOIS, } Promotors of the
W. B. TROMP, } Company, and proposed
H. B. RICHARDSON, } Concessionaires.

REPORT OF SUBMARINE CABLE COMMITTEE.

VI.—PROPOSAL ON BEHALF OF THE TELEGRAPH CONSTRUCTION AND MAINTENANCE COMPANY.

No. 16.

EXTRACT FROM ORDER PAPER.

Petitions and Papers presented, 26th July, 1870.

CORRESPONDENCE between the Hon. the Postmaster-General and J. W. Blackett, Esq., Manager of the Telegraph Construction and Maintenance Company, concerning a Proposal to lay a Submarine Cable between New Zealand and Tasmania.—(By Command.)

VII.—PREPAYMENT OF TELEGRAMS.

No. 17.

MEMORANDUM for His Excellency the GOVERNOR.

THE Commissioner of Telegraphs respectfully requests His Excellency to move the Secretary of State for the Colonies to communicate with the Post Office and Telegraph authorities at Home, with the view of ascertaining whether some facilities cannot be afforded for the receipt and transmission of telegrams to or from the Mother Country.

The Commissioner believes that very extensive use would be made of the telegraph if persons could feel assured that, without the necessity for writing to a special or other correspondent, in each case telegrams would be conveyed to the nearest port in Great Britain or in a Colony, and be thence at once forwarded to their respective destinations.

Such an arrangement would be especially valuable to New Zealand, which may be entered at so many different ports from so many different points.

It has been the object of the New Zealand Government to enable residents in other countries to forward telegrams to the Colony through the nearest station, to be thence transmitted to their destinations. To effect this purpose three things are necessary:—

1. That the rates of charge should be generally known.
2. That a convenient means of paying for the telegrams should be afforded.
3. That separate post bags, containing such telegrams, should be made up and be forwarded to the nearest telegraph station in New Zealand, for transmission to their destinations.

On the other hand, it would doubtless be a great convenience to residents in the Colonies, if bags of telegrams could, in a similar manner, be sent to Great Britain, under an arrangement for their delivery to the telegraphist at the nearest station, and for their being duly transmitted thence. The Commissioner for Telegraphs suggests that the rates of charge for telegraphic messages within Great Britain should be made known in New Zealand, and that New Zealand stamps should be declared receivable as payment of telegraphic charges, such stamps, uncanceled, to be returned to the Colony, and payment to the amount of the same to be made by the Colonial Government. In the same way, the Colonial Government would be willing that telegrams from Great Britain, for any part of the Colony, should be paid for in English stamps, if the English authorities would agree to refund to the Colony the amount of such stamps on their being forwarded home uncanceled. The English Post Office authorities should also agree to make up a special bag of telegrams as already described.

The Commissioner ventures to suggest that it would be a very great boon, and very greatly calculated to promote interchange of communication throughout the world, if the Imperial authorities would endeavour to arrange with all countries possessing interior lines of telegraph for the affording of such facilities as are herein proposed; and the Commissioner thinks that the matter would be a simple one as regards any country in which postal or other stamps are used.

The Commissioner encloses herewith copies of the rates of charge adopted in New Zealand, together with forms for the transmission of messages. It would not, however, be necessary that those forms should be used or adhered to in carrying out the plan proposed. It would be well that the authorities at home should be asked to state whether they would make it a condition of entering into an arrangement, that the authorized English forms should be adopted, and if so, the authorities should be requested to send out to the Colony a considerable supply of such forms.

JULIUS VOGEL, Commissioner of Telegraphs.