

APPENDIX I.

(CONTENTS OF A PAMPHLET ENCLOSED IN MR. SANDFORD FLEMING'S LETTER OF 4TH NOVEMBER, 1886.)

ORDER IN COUNCIL IN REFERENCE TO THE ESTABLISHMENT OF TELEGRAPHIC CONNECTION BETWEEN THE AUSTRALIAN COLONIES, CANADA, AND GREAT BRITAIN.

Sir,

Privy Council, Canada,
Ottawa, 10th June, 1886.

By direction of the Right Honorable the President of the Council, I forward you a copy of an Order in Council, dated 8th June, 1886, with respect to the subject of the proposed establishment of telegraphic communication by cable from the Australian Colonies, for your action and co-operation as therein expressed.

I have the honour to be, Sir,

Your obedient servant,

The Hon. Sir CHARLES TUPPER, G.C.M.G., C.B.,
High Commissioner for Canada,
9 Victoria Chambers, London, S.W.

JOHN J. MCGEE,
Clerk, Privy Council.

CANADA.

Certified copy of a Report of a Committee of the Honorable the Privy Council, approved by His Excellency the Governor-General in Council, on the 8th June, 1886.

On a memorandum, dated 22nd May, 1886, from the Minister of Public Works, submitting a communication from the High Commissioner for Canada in London, enclosing a copy of a circular addressed by the Colonial Office to the Agents-General of the Australian Colonies, on the subject of the proposed establishment of telegraphic communication by cable from those colonies to San Francisco; the last paragraph of which is as follows:—

"In view of the completion of the Canadian Pacific Railway, it would seem to deserve consideration whether such a cable, if constructed, might not more advantageously have its terminus in British Columbia."

The Minister represents that several communications have been received from Mr. Sandford Fleming, C.E., setting forth the scheme of a company, represented by him, to connect either Queensland or New Zealand with Vancouver, B.C., by way of Fiji and Hawaii, by which it appears that the estimated cost of the cable would exceed £2,000,000 (say 10,000,000 dols.); and that as it is the intention of the company to very greatly reduce the rates at present existing for telegraphic messages between England and Australia, the company would require assistance from the different Governments interested, in the shape of a subsidy, which is roughly estimated at about £70,000 per annum for a period of about 20 years. Mr. Fleming represents that the Governments interested in the project are Canada, Great Britain, India, Victoria, New South Wales, New Zealand, South Australia, Queensland, Tasmania, Western Australia, Hawaii, and Fiji, and states that advances have already been made towards some of the Agents of the Australian Colonies, with a view to having the terminus of the proposed cable in British Columbia instead of San Francisco, which have been favorably received. Mr. Fleming suggests that as Canada is greatly interested in establishing direct telegraphic communication with Australia, India, and the East, it would be advisable that this Government should take the initiative in the matter, and invite a conference of the Agents of the Colonies interested to discuss the subject.

The Minister, agreeing with the suggestions made as to the advantages likely to accrue to Canada from the establishment of direct cable communication between British Columbia and the East, and that it would be advisable that this Government should take the initiative in the matter, recommends that advantage be taken of the Colonial and Indian Exhibition, now being held in London, and the presence in that city of representatives from the colonies interested, to obtain an expression of opinion on the project, and that the High Commissioner for Canada be requested to invite a conference of the Agents-General of all the colonies interested, and ascertain how their respective Governments would be disposed to act in the matter, and what amount of assistance they would be prepared to give; also, that the High Commissioner should ascertain from the Imperial authorities what assistance might be expected from them on behalf of the United Kingdom and India, and that the High Commissioner report the result of his inquiries as speedily as possible.

The committee concur in the report of the Minister of Public Works and the recommendations therein made, and submit the same for your Excellency's approval.

The committee further recommend that the High Commissioner be instructed to put himself in communication with the Secretary of State for the Colonies, and endeavour to secure the co-operation of Her Majesty's Government on the subject.

(Signed)

JOHN J. MCGEE,
Clerk, Privy Council.

DIRECT TELEGRAPHIC COMMUNICATION BETWEEN AUSTRALIA, CANADA, AND GREAT BRITAIN.

Sir,

Batt's Hotel, Dover-street,
London, 10th July, 1886.

Having learned that the Canadian Government has instructed you to confer with the representatives in London of the other Governments interested in the projected telegraph communication between Australia and the United Kingdom, by what may be termed the Canadian route, I beg leave to submit the accompanying documents bearing on this important question.

I desire to direct your attention more particularly to the enclosed memorandum, of date, London, 1st July. In this document I have ventured to explain the views I have formed with respect to the projected telegraphic communication and the principles upon which a company may be organised for carrying out the undertaking.

I have consulted a number of capitalists, as well as experts in ocean telegraphy, and have quite satisfied myself that, with a very moderate Government subsidy, a substantial company can be formed to establish and work the new line of telegraph on the principles laid down in that memorandum.

The whole capital of the Company, to complete an independent telegraphic connection between Great Britain, Canada, New Zealand, and the Australian Colonies, may be placed at £2,500,000.

This capital may be divided into two parts—viz., £1,500,000 to bear a low rate of interest, secured for 25 years by Government subsidies; £1,000,000 to be share capital, apportioned between Australian, Canadian, and English capitalists.

This capital will be ample for the whole undertaking. With regard to the Restoration Sinking Fund, I have consulted some of the best experts on ocean telegraphy on the general question, and I learn that opinions are rapidly changing with respect to the life of modern cables. The first cables laid may be considered to have been, to a large extent, experimental, and advantage may now be taken of the very large experience gained.

It is found that in ordinary cases the breakages are apt to take place within a comparatively few years after the cables are laid, and that, once properly repaired, faults are not likely to recur.

The opinion is gaining ground that the life of a cable, as now made, instead of being ten or twelve years, is more likely to be double that period. As the conductors and insulating materials employed are practically indestructible, it is difficult to conceive that a cable, after lying 20 or 25 years at the bottom of the ocean, performing its functions satisfactorily, will not continue to be serviceable for an indefinite period. I mention these views to show that there does not appear to be any sufficient reason for burdening an enterprise at its inception by providing a large Sinking Fund for restoration at a very early date. Be that as it may, the soundness of the principles I have laid down in the memorandum cannot be gainsaid.

We are aiming to establish a work which will result in all future years in a great saving to each Colony. It is suggested that each Colony, in proportion to the saving effected, should set aside a small portion of the money so saved to keep the work which effects the economy, in an efficient condition. For every hundred pounds saved, ten pounds, or perhaps eventually five pounds or less, is proposed to be funded to cover possible contingencies.

With regard to the probable earnings for revenue purposes, it will be seen, on reference to the memorandum of 6th April, that the foreign business of the Australian Colonies for the year 1889 is estimated to be 85,000 messages, or about 850,000 words. It is not to be expected that the whole traffic will come to the new line, for the existing telegraph company will undoubtedly reduce its charges in order to retain a share of the business.

Let us assume that the business will be equally divided, and that the new Company will only have half of the 850,000 words; this will give 425,000 words, and we may reckon this business at four shillings per word, as the terms made with the Canada Pacific Railway Company will admit of "through" messages being sent at that rate.

425,000 words at 4s.	...	...	...	...	...	£85,000
Less cost of working and land service, say	...	...	...	...	...	40,000
Giving a balance of	...	...	...	...	...	£45,000

Equal to 4½ per cent. on £1,000,000. This estimate is for the first year the line can be in operation. On careful examination it will be seen that the estimate is an exceedingly moderate one, no allowance having been made for the great impulse which will undoubtedly be given to telegraphy and general business by the large reduction in charges.*

There cannot be a doubt that the earnings will go on greatly increasing, while the working expenses will increase but little. It would not be at all a high estimate to double the net earnings in a very few years. This would give 9 per cent. on the whole share capital, and it may be assumed as certain that the increase would continue year by year.

I have explained that a subsidy is needed for the purpose of securing a million and a half of pounds at a low rate of interest. If the Government subsidies be sufficient to provide a sinking fund to pay off the £1,500,000 in twenty-five years, it would be proper to carry all excess of revenue over a given dividend, say over 7 or 8 per cent., to the Restoration Sinking Fund.

It will be noted, as one of the proposed conditions, that not only will the charges on messages be reduced to less than half the present rates, but that messages sent by any Government shall be transmitted free to the full amount of its subsidy. This feature will place it in the power of each contributing Government to receive directly back each and every year its full proportion of the subsidy contributed.

I respectfully submit that the scheme above outlined is perfectly practicable; it will no doubt find warm and active hostility on the part of those peculiarly connected with the existing telegraph company—those whose policy has been to maintain high rates in order to secure large profits. Such objections as they may offer should have little weight in view of the great Imperial and Colonial advantages which the

* Referring to the recent great reduction in charges between London and New York, the Report of the Directors of the Direct United States Cable Company for the six months ending 30th June last states: "So far the reduction has resulted in more than doubling the volume of traffic, and the Directors are not without hope that with a revival of trade it may be still farther increased." The Report of the Anglo-American Telegraph Company also states that the traffic has increased over 110 per cent. since the rates were reduced.

new undertaking will secure. The better policy for the companies to adopt will be to lower charges on messages and derive profits from the greatly augmented business which will certainly follow.*

The terms and conditions which I have indicated would undoubtedly command the organisation of a substantial and energetic Company to carry out this new and important undertaking in the most satisfactory manner.

I have the honour to be, Sir,

Your obedient servant,

SANDFORD FLEMING.

SIR CHARLES TUPPER, G.C.M.G., C.B.,
HIGH COMMISSIONER FOR CANADA.

TELEGRAPH BETWEEN AUSTRALIA, CANADA, AND GREAT BRITAIN.

Memorandum by Sandford Fleming.

1. It is proposed that a Company be formed for the purpose of establishing telegraphic communication between Australasia and Great Britain by a new and independent line. This new telegraph is projected to traverse lands and seas beyond the control of any Power likely to prove hostile to the British Empire.

2. It is proposed that a chain of electric cables be laid across the Pacific Ocean, to connect the Australian group of Colonies with Vancouver, the western terminus of the Canadian Pacific Railway. The cables to land at such intermediate islands as may be found suitable for mid-stations.

3. Arrangements have already been made with the Canadian Pacific Railway Company for the transmission of all through telegraph business between the Pacific and Atlantic Oceans on extremely favorable terms.

4. It is proposed to acquire complete control of one of the existing Atlantic cables landing on the shores of Canada, or to lay a new cable from Canada to Great Britain.

5. The whole line may be divided into three great Sections, viz.:—

(A.) The Pacific Section.

This section will consist mainly of electric cables, the lengths of which after allowing for slack will approximately be as follows:—

(1) Brisbane or Sydney to North Cape, connecting at the former with the Australian telegraph system, at the latter with the telegraph system of New Zealand	Knots.	1,300
(2) North Cape to one of the Fiji Islands	1,300	
(3) Fiji to Fanning Island	2,270	
(4) Fanning Island to one of the Sandwich Islands	1,260	
(5) Sandwich Island to Barclay Sound or Port San Juan, Vancouver Island	2,730	
(6) Barclay Sound, across Vancouver Island and the Strait of Georgia to Vancouver City, the terminus of the Canadian Pacific Railway	100	
Geographical miles	8,900	

(B.) The Canadian Section.

This section will extend along the Canadian Pacific Railway and the Inter-Colonial Railway to connect with an Atlantic cable. If it be found necessary to lay a new Atlantic cable, the land line will probably terminate at Gaspé in the province of Quebec. Distance from Vancouver to Gaspé Statute miles ... 3,450

(C.) The Atlantic Section.

A new Atlantic cable from Gaspé *via* the Straits of Belle Isle to Ireland Geographical miles ... 2,450

6. These three great sections connected, and the business under one management, it will be possible to reduce permanently the charges on messages to the lowest practicable rates, and thus render the line of the greatest commercial utility. It is believed that the reduction in rates contemplated, and rendered possible by the satisfactory terms agreed upon with the Canadian Pacific Railway Company, will give a great impetus to telegraphy and promote the development of intercolonial intercourse and commerce.

7. The arrangements proposed, and the terms agreed upon, will admit of messages being sent from Australia to Great Britain on the opening of the new line at less than half—eventually, it is believed, at one-third—the charges at present exacted.

8. While the new line, established as set forth, will stimulate commercial activity between the countries to be connected, its political, naval, and military value will be very great indeed. It is well known to naval and military commanders that no reliance can be placed on the permanency of communications by way of the Mediterranean and the Red Sea, and it becomes obvious that the line through Canada may, during any emergency, assume incalculable importance. The cable across the Pacific will always be removed from the theatre of European complications. It will not only be a direct means of communication between the Australian Colonies and the Mother Country, but if an emergency arises to render every wire through Europe and Egypt useless, it will still be possible to communicate with India; indeed, every British station between South Africa and Port Hamilton may continue in telegraphic connection with London.

9. To secure advantages so great—and it is difficult to say whether in a commercial, political, naval, or military aspect the advantages would be greatest—Government aid and co-operation is necessary; but as there are twelve Governments more or less interested in the undertaking, moderate assistance from each will suffice.

* Since the date of this letter the Reports of the Associated Atlantic Cable Companies for the past half-year have been published. They generally favour this new policy. The low tariff introduced has resulted in a very much larger augmentation of traffic than was anticipated as a first result. "The unexpected increase in the volume of traffic immediately upon the introduction of the Sixpenny Tariff has induced the Directors to consider the expediency of adopting permanently a system of low rates. . . . It is obviously their interest to encourage a very large traffic at low rates."—*Report A. A. Tel. Company.*

10. The following Governments are interested in the new line of telegraph:—

1. The Government of Great Britain.	7. The Government of Queensland.
2. " " Canada.	8. " " Victoria.
3. " " Hawaii.	9. " " South Australia.
4. " " Fiji.	10. " " Western Australia.
5. " " New Zealand.	11. " " Tasmania.
6. " " New South Wales.	12. " " India.

Of these Hawaii has offered twenty thousand dollars a year (say £4,000) for fifteen years to be connected telegraphically with San Francisco, and it may be assumed that that subsidy will be available to the proposed company. The principal assistance, however, will require to be furnished by Great Britain and her Colonies.

11. It is proposed that Government aid should be directed to two main objects, viz. :—(1) To secure the establishment of the cables across the Pacific Ocean; (2) To provide for their permanent efficiency.

The first main object—the establishment of the cables across the Pacific—can be effected if the Government assistance takes the form of an annual subsidy sufficient in amount to pay a low rate of interest and provide for amortisation on a large portion of the capital required for this section of the undertaking. The remaining capital may be share capital, and will have to depend for dividends on earnings.

12. The perpetual efficiency of the cables can be maintained in another way. It has been customary to make provision for this purpose out of earnings, but this course necessarily has a tendency to keep rates for the transmission of messages high. The policy recommended is to reduce traffic rates to a minimum, and, in order to do so, earnings should be charged with as little as possible beyond working expenses. It is therefore suggested that the renewal and duplication of the cables may be effected by a special provision. In the memorandum attached hereto (6th April, 1886), it is clearly shown that the establishment of this new line in the manner set forth will result in a very large saving in the gross foreign telegraph business of all the Colonies it will serve. A comparatively small percentage of the savings so effected would provide for renewing, duplicating, and maintaining the cables in perpetual efficiency. It is proposed, therefore, that a restoration fund be provided from this source. Taking as a basis for computation the difference between present charges and reduced charges, probably five per cent. or less will eventually be found sufficient; but it is suggested that at first ten per cent. of the savings accruing to each colony should annually be funded for the purpose set forth. If after a period of ten or more years it be found that less than ten per cent. will effect the desired purpose, a smaller percentage of the savings may be carried to the restoration fund. The object in view is to provide sufficient, but no more than sufficient, to restore the cables whenever they may become unserviceable, and to maintain the line of communication in the highest condition of efficiency for the business to be transacted.

13. These provisions assented to it will be possible, immediately on the cables being laid, to adopt a scale of charges for ordinary messages between the Australian Colonies and Great Britain of four shillings per word, press messages at half or considerably lower rates. It is proposed that Government messages be transmitted free of charge to the full amount of the subsidy and to take precedence of all other business.

Bati's Hotel, Dover-street,
London, 1st July, 1886.

(Appended to Letter dated London, 10th July, 1886.)

CANADIAN AND AUSTRALIAN CABLE.

Memorandum submitted to the Canadian Government by Sanford Fleming.

Ottawa, 6th April, 1886.

A few years back attention was directed by the undersigned to the importance and practicability of connecting Great Britain telegraphically with China, India, Japan, and the Australian Colonies, by a line passing through Canada, and by one or more cables laid in the Pacific Ocean.

The subject was reverted to last year in a letter dated 20th October, 1885, addressed to the Premier, the Right Honourable Sir John A. McDonald.

Since these dates the Canadian Pacific Railway Company has completed a line of telegraph from the Atlantic to the Pacific, thus establishing an important section of the original scheme, leaving to be completed only the cable across the Pacific.

The Australian Colonies are already connected telegraphically with England by way of Port Darwin, Singapore, Penang, Madras, Bombay, Aden, Alexandria, and through the Mediterranean Sea. The charges for messages are, however, very high, and there is always danger of interruption to business when political events assume a threatening attitude in Egypt or in Europe.

A cable from the Australian Colonies, via Fiji and the Sandwich Islands, to Vancouver, the western terminus of the Canadian Pacific Railway, would connect them telegraphically with England by a line which would have the great advantage to every British interest of being entirely removed from all European complications. Moreover, a very large aggregate saving in the cost of transmission would be effected.

The Australian Colonies were first connected with England in November, 1873, consequently the following year (1873) was the first year the International line was in operation. The business in 1873 consisted of 8,952 messages to and from the colonies. The last returns are for 1884, when the messages sent and received reached 48,896; showing an extraordinary development in eleven years, averaging an annual increase of 40 per cent. This increase may, however, be abnormal, and, as the last three years of the period show a more moderate growth, it will be safe to take the latter as a basis on which to estimate future business.

The number and cost of messages between the Australian Colonies and Europe, for the three years referred to, was as follows:—

	No. of Messages.			Cost.	
1882	39,175	...	£225,567
1883	43,334	...	251,277
1884	48,896	...	270,766

These results give a fair indication of the steady growth of the business under the present high tariff.

The annual increase in the number of messages is equal to $12\frac{1}{2}$ per cent., and the average cost of each message sent during the three years 1882, 1883, and 1884, is £5 13s. 9d.; the charge of ordinary messages per word (between Sydney and London) being 10s. 10d., Government messages 8s., and press messages 6s. 7d.

The undersigned has brought the question of a cable from Vancouver to Australia before the Board of Directors of the Canadian Pacific Railway, and has succeeded in effecting arrangements of a most satisfactory character. This company will, within a few weeks, have telegraphic connexions with all the principal points in the United States, including all the important cities on the Pacific coast, and will be able to transmit messages on such terms as will enable the Pacific Cable Company to secure practically the entire business between the continent of America and the Australian colonies. The cable landing from Port Darwin, in the direction of India, will, moreover, enable the new company to command a very large share, if not all, the business between America and Asia.

It will be practicable under these arrangements with the Canadian Pacific Railway Company to transmit messages between the Australian Colonies and England at considerably less than one-half, possibly at one-third, the present charges, and between the colonies and all the important cities in the United States and Canada at one-quarter the rates now exacted.

It is proposed, immediately on the Pacific cable being laid, to lower the charges on ordinary messages between Australia and England from 10s. 10d. to 4s. per word. This reduction will bring the cost of an average message from £5 13s. 9d. down to £2, and, without doubt, will give a very great impetus to telegraph business. It is not easy to estimate with any approach to accuracy what increase would result from this cause—men of experience in such matters are of opinion that the business would probably be doubled; but even if we limit our expectations to its ascertained normal growth, and base our calculations on a steady increase of traffic of only $12\frac{1}{2}$ per cent. per annum, we shall see that the advantage of the new line to the Colonies will be immense.

The latest returns, with $12\frac{1}{2}$ per cent. per annum added, give 85,000 messages for 1889. Assuming that the new cable would then be laid, and the Canadian route in operation throughout, the estimate for a series of years would be as follows:—

	No. of Messages based on an annual growth of $12\frac{1}{2}$ per cent.			Saving effected, being the difference between £5 13s. 9d. and £2, or £3 13s. 9d. per Message.	
1889	85,000	...	£312,400
1890	95,000	...	350,275
1891	107,000	...	392,550
1892	119,000	...	438,800
1893	133,000	...	490,420
1894	148,000	...	542,050
1895	166,000	...	612,125
1896	186,000	...	685,875
1897	208,000	...	767,000
1898	234,000	...	862,000
Total	1,481,000	...	£5,456,497

It will thus be seen that, without taking into account any additional increase in the number of messages which the great reduction in charges would undoubtedly produce, a very great saving would be effected in the Australian business. If the estimate be well founded, it would amount to £5,456,497 within the first ten years, being an average saving of over half a million pounds per annum.

The new line, when established, will form a connexion through South Australia with Port Darwin, and thence by existing telegraph lines with Asia and Africa. It is obvious, therefore, that it possesses a peculiar interest to the Imperial Government, as it will afford the means of communicating, not only with the Australian Colonies independently of lines passing through the Mediterranean, but also with India and every British station between Hong Kong and South Africa.

Canada has already done much towards establishing the new line of telegraph between Great Britain, Australia, and Asia. She has, by an enormous expenditure in connexion with her national railway, brought Vancouver within telegraphic reach of England, and she has thus rendered it a comparatively easy task to complete the whole connexion. It has cost in all about £40,000,000 of public and private money to establish the railway and its adjunct the telegraph, by which Vancouver has attained the commanding position which it occupies in respect to the Pacific Cable scheme. The Pacific Cable is, however, in some degree a corollary to the line across the continent, and it is reasonable to expect that the Canadian Government will readily co-operate in its establishment.

The following Governments are more or less interested in the undertaking:—

1. The Government of Great Britain.	7. The Government of Queensland.
2. " " Canada.	8. " " Victoria.
3. " " Hawaii.	9. " " South Australia.
4. " " Fiji.	10. " " Western Australia.
5. " " New Zealand.	11. " " Tasmania.
6. " " New South Wales.	12. " " India.

It will not be possible to carry out the undertaking by a private company without Government assistance. As electric cables are perishable, provision must be made for renewing or duplicating them when circumstances require it. It is also obvious that the reduced charges which are proposed will require a greatly increased business to yield a sufficient profit to meet dividends on capital. The company would, therefore, require a subsidy for a term of years, or until the business increased to such a volume as to render the line self-sustaining; but as the subsidy would be borne by so many Governments, it would fall lightly on each.

The first step to be taken is to ascertain to what extent the several Governments would be disposed to co-operate in establishing the work.

(Appended to Letter dated London, 10th July, 1886.)

TELEGRAPH FROM CANADA TO AUSTRALIA.

Letter to the Premier of Canada by Sandford Fleming.

Sir,

Ottawa, 20th October, 1885.

I had the honour a few years back to submit to the Canadian Government a scheme for forming a great Inter-Colonial and Inter-Continental telegraph system, a prominent feature of which was the laying of an electric cable across the Pacific Ocean, from the western coast of British Columbia to Asia. The great object which the scheme had in view was the establishment of an unbroken chain of telegraphic communication between England and Japan, China, India, Australia, New Zealand, and South Africa, directly through Canada, thus connecting telegraphically all the great British possessions in every quarter of the globe without passing through Europe.

The accompanying memorandum, dated London, Nov. 20, 1882, together with the documents submitted by the Secretary of State to the Canadian Parliament on the 20th February of the same year, will recall to your recollection the important public objects which the scheme had in view, and the efforts then made to carry it out. You are aware that through various causes these efforts proved unsuccessful; but the time which has elapsed has in no way lessened the importance of the project, or rendered it more difficult of accomplishment.

The political events which have so frequently assumed a threatening attitude in Europe, the difficulties which are never entirely absent in Egypt, point to the constant danger of interruption to existing communications by the Red Sea, and the immense importance of securing an independent line of telegraph removed from all Eastern complications. The projected line, extending from England through Canada to the Pacific coast, in the Province of British Columbia, and thence across the Pacific to Asia and the Australian Provinces, would supply an independent line of communication so much desired, and in so doing would indirectly, but it is held very materially, strengthen the military and naval power of Great Britain, while it would directly promote the highest interests of every one of the great Colonial possessions.

Within the present year, an overland line of telegraph will be completed along the route of the Canadian Pacific Railway, thus spanning the American continent, and there are a number of electric cables in operation across the Atlantic from England to Canada. The Canadian Pacific Railway Company have expressed a desire to facilitate the despatch of through telegraphic business along their line in every possible way, and are prepared to enter into a permanent agreement, which, with the competition existing on Atlantic lines, will secure exceedingly low tariff rates between England and the coast of British Columbia. There only remains to be established the submarine telegraph across the Pacific Ocean.

When the accompanying memorandum was issued, it was thought that the Pacific cable should follow a northern route by the Aleutian Islands and Japan. It was generally believed that in the great central area of the Pacific Ocean sub-aqueous rocky ledges and coral reefs prevailed to such an extent as to render the establishment and maintenance of an electric cable practically impossible. That opinion was based on an imperfect knowledge of the physical character of the Pacific Ocean, and on the charts which at one time were strewn with islands, reefs, and shoals, many of which were inserted on doubtful authority, and have consequently been omitted from the latest publications. Since then, also, it may be supposed that submarine telegraphy is better understood. Be that as it may, the view is now entertained that it may not be absolutely necessary to follow a northern route, and that the successful establishment of an electric cable running directly from British Columbia to the Australian Provinces may be quite within the range of practicability.

There are, indeed, extensive coral reefs in the central and southern Pacific; but the most authentic hydrographic information establishes that those reefs are generally in great groups, separated by wide and deep depressions, free from obstructions. It is further revealed by the latest bathymetric data that those depressions or troughs present (as far as ascertained) a sea floor precisely similar to that of the Atlantic, so suitable for submarine telegraphy. Those ocean depressions, alike by their geographical position and their continuity, open up the prospect of connecting Canada and Australia by a direct cable. The course of the cable would be from Vancouver to the Fiji Islands, touching at the Sandwich Islands and Fanning Island as mid-stations. From the Fiji Islands, a cable connexion would be formed with the existing Australian and New Zealand telegraph systems.

Whatever route be followed by the cable across the Pacific, the object will be to bring the group of Australian Colonies into direct connexion with Canada, and secure a means of communication between them and England independent of all lines passing through or in proximity to Europe. Messages will be conveyed by the new line at lower rates than are now exacted, and the immediate effect which must follow its establishment is manifest. The cost of telegraphing between Australia and England will be reduced, intercourse will be facilitated between the sister Colonies and Canada, and an impulse given to commercial activity.

Apart altogether from the political advantages of the new independent telegraphic connexion, the gain to the general commerce of the Colonies which it would serve would justify them in co-operating with Canada in promoting the undertaking.

The undertaking may be promoted by the several Governments agreeing to give for a term of years a subsidy sufficient to induce a company to embark in it. The subsidy may be a fixed sum, contributed in

equitable proportions, or it may be dependent on the business transacted by each respective colony, and on the reduction in rates which would follow immediately on the line going into operation.

It is quite obvious that the gross foreign telegraph business of any one colony, reckoned at the difference between the present high rates and the reduced charges, would produce a considerable aggregate sum. That sum might be taken to represent the year's savings accruing to the colony from the establishment of the new line of telegraph, and it would obviously well repay that colony to share the amount so saved with the Telegraph Company. Suppose the accrued saving so reckoned in any one year to be £50,000, a moiety to the company as a subsidy would be £25,000, while the colony itself would gain a direct pecuniary benefit from the undertaking to a like extent. The illustration as presented will explain the principle on which a subsidy may be based.

Among the British possessions in the southern hemisphere directly interested in the work are Fiji, Tasmania, New Zealand, Western Australia, Queensland, New South Wales, South Australia, and Victoria. I venture to think that their co-operation with Canada in the manner set forth would, without difficulty and with no great delay, secure to them and to the whole British colonial system all the political and commercial advantages to result from the projected line of communication.

As the contemplated work is of special importance to the Mother Country and all her Colonies, I trust I may be allowed to entertain the hope that you will be pleased to bring the subject under the notice of the respective Governments.

I have the honour to be, Sir,

Your obedient servant,

SANDFORD FLEMING.

The Right Hon. Sir John A. Macdonald.

TELEGRAPH BETWEEN AUSTRALASIA, CANADA, AND GREAT BRITAIN.

Sir,

London, 19th July, 1886.

The undersigned, who were present at the meeting of the Agents-General on the 12th instant, having been requested by you to ascertain the amount of subsidy which would be necessary to enable a company to connect England telegraphically with Australia through Canada and the Pacific Ocean, have the honour to state:—

We have considered the whole question, and are of opinion that a substantial company can be formed to establish an efficient telegraph connexion on the route proposed for a total annual subsidy of £100,000 for twenty-five years.

The subsidy may be apportioned as follows, i.e.:—

1. Great Britain, on behalf of the United Kingdom, India, and the Crown Colonies	£50,000
2. Canada	10,000
3. Queensland	10,000
4. New South Wales	10,000
5. Victoria	10,000
6. New Zealand, Tasmania, and Western Australia	10,000
	<u>£100,000</u>

Or should the Imperial Government, by an arrangement with the Colonial Governments, itself guarantee the whole amount, the total subsidy may be considerably reduced, as the Imperial guarantee would enable the company to find capital at a lower rate of interest. With such guarantee, a total subsidy of £90,000 for twenty-five years would suffice, and thus reduce the annual contributions.

The subsidy mentioned is calculated to pay interest on borrowed capital, and provide a sinking fund for its repayment in twenty-five years.

As the company would transmit all the messages of the various contributing Governments free, and the rates chargeable to the public for "through" messages would not be more than one-half the present regular tariff charges, Great Britain and the colonies would save a much greater sum than the amount of subsidies above proposed.

If the several Governments agree to pay over to the company a percentage of the gross savings which would thus be effected by each country, the company could still further reduce the charges to the public.

We have the honour to be, Sir,

Your obedient servants,

DONALD A. SMITH.

RANDOLPH C. WANT.

ANDREW ROBERTSON.

MATTHEW GRAY.

SANDFORD FLEMING.

The Honorable Sir Charles Tupper, G.C.M.G., C.B.,
High Commissioner for Canada, London.