female staff will by that time be sufficiently reduced to enable it to be absorbed readily in other directions. There will still be a certain number of women required for long-distance work, as accounts must necessarily be kept of all messages beyond the metropolitan radius.

In addition to working-advantages and the saving in annual cost, I anticipate that the advent of the automatic will enable the metropolitan radius in each centre to be largely increased, and thus avoid such anomalies as higher rates having to be paid for telephones in Newtown than in the City of Wellington.

(3.) That the full automatic system be adopted also for any exchanges at smaller places that may be requiring new equipment—in all cases where after a study of the conditions it may be found that the operation and economic features and the general advantages to the public in respect of the character of the service given would justify it.

It was recently recommended that common battery outfits be obtained for Hamilton, Masterton, Blenheim, and Oamaru. After fuller consideration, the Chief Telegraph Engineer recommends that this be withdrawn in order that the position may be further studied, with the object of finally determining whether automatic switchboards should not be obtained instead. Recommended that tenders for automatic switchboards for these places be also called for. The cost will probably be £3,000 for each place, as against £2,000. The annual charges for day-work will be about the same, but, as the automatic will enable a twenty-four-hour day service to be given, the ultimate expense of providing for night attendance—say, £250 to £300 per annum—will be avoided.

(5.) That studies be made of the four large cities to obtain some idea of what may be the expected development in each—whether it is likely that it will be general throughout an area or more congested in particular parts of the area, and whether any particular parts will be specially difficult and therefore expensive to reach.

(6.) That the question of multi-office or satellite exchanges for the larger places be considered in their economic aspect as compared with giving service from, say, two or three exchanges in the area.

Development studies will be made as early as possible, and recommendations submitted later on.

(8.) That suitable appliances be obtained for determining the effect upon speech of apparatus that must be introduced into telephone circuits, and for enabling the results that may be expected from combinations of circuits which introduce varied kinds and quantities of apparatus to be definitely known.

This question can be dealt with as occasion arises, and authority obtained for further testing apparatus for general work of the Department as may be recommended by the Chief Telegraph Engineer.

(9.) That negotiations be opened with the representatives in the United States of the Wright and of the Morkrum typewriter telegraph apparatus to judge of their suitability for our conditions. These instruments are leased in the United States; they are not sold.

(10.) That quadruple Baudot apparatus be considered for use on the main circuits of the Department throughout the Dominion, and that two sets each for Auckland and Wellington be obtained for use over the circuits between those cities. The cost will be about £1,400 for apparatus.

Recommended that negotiations be opened up with the representatives in the United States of the Wright and the Morkrum typewriter telegraph apparatus, and that in the meantime two sets each of the Baudot multiple-printing telegraph be obtained for use between Auckland and Wellington, at a cost of £1,400. It is also recommended that when this apparatus is ready the British Post Office be asked to lend an officer for four months to instruct our officers and engineers. The cost of passage and salary will not exceed about £250, and against this we will have the use of the officer for four months. The money will be well spent, as experience has proved that it is a great loss of time to install entirely new apparatus without being able to completely instruct our officers beforehand.

(11.) That accumulators be installed for line batteries at the four large centres and a few other places where large numbers of primary cells are now in use. This would be more economical than present methods, and would improve working considerably.

This is an engineering matter. The cost is not great, and it can be dealt with from time to time as the Chief Telegraph Engineer may recommend. In point of fact, it has already been proposed to make a recommendation in connection with the new offices at Auckland and Wellington.

(12.) That the technical staff be increased as may be necessary to give effect to the foregoing and to cope with expected developments.

The training of engineers is being arranged as thoroughly as possible consistent with the number of qualified officers presenting themselves.

Attention is directed to the last paragraph of the Chief Telegraph Engineer's memorandum as showing the urgent necessity for immediate action in the direction of providing modern telephone equipments. Unless the new equipment is ready in Wellington, the ultimate capacity of the present switchboard will be reached within two years, when we shall simply have to close down as regards new business. Similar conditions apply to Auckland. As the income of the Wellington and Auckland exchanges is increasing at the rate of about £2,000 per annum each, the practical nature of the question is apparent.

To provide new expenditure of capital for the switchboards for the four centres I estimate that a sum of £40,000 will be required in each of the years 1914, 1915, 1916, and 1917, to which should be added a total of £12,000 for the four smaller places named above, the expenditure for which will probably fall into the same years.