

WIRELESS TELEGRAPHY.

During the past year contracts have been let for the installation of two high-power, and for the necessary equipment for five low-power, stations in different parts of the Dominion. A good deal of initial work has been done in connection with the selection of suitable sites that will give a maximum range of transmission and of immunity from interference, as well as the greatest economy of operation and maintenance. One of the high-power stations is to be at Awanui, north of Auckland, and will have a range of 1,250 miles in the daytime, while at night-time, and under favourable conditions, the range will be considerably increased. This station will therefore be able to maintain uninterrupted communication with Sydney day and night. The other high-power station is to be installed near Bluff, Southland, and will have a similar equipment and range to that of the Awanui Station. It has been decided to place one of the low-power stations upon the summit of Mount Etako, South Tinakori Range, near Wellington, and probably one or two Government steamers will be similarly equipped. The station on Mount Etako will have a daylight range of at least 300 miles, and double that distance at night-time, thus enabling commercial business to be done with the numerous steamers equipped with wireless apparatus which make Wellington their port of call. The site has been so chosen as to give the greatest possible range of communication that can be economically obtained, within a convenient distance of Wellington. The power equipment has been chosen to give continuous operation of the plant both day and night, and to provide, as far as possible, against risk of interruption. The preliminary work of excavation and road-formation is being pushed forward. Plans and specifications for the buildings are complete, and this work will be put in hand with all possible despatch. Part of the electrical equipment is now being utilized in the General Post Office experimental station, and the remainder is expected shortly. Apparatus will be erected at or near Gisborne and Christchurch. The equipment for these stations is being manufactured by the Australasian Wireless Company (Limited), upon which devolves the erection and installation of the high-power stations. The equipment for the low-power stations will be installed by officers of the Department.

TELEPHONE EXCHANGES.

Calculagraphs for checking the duration of bureau communications were installed in twenty exchanges in April, 1910.

Twenty-one new exchanges were opened during the year, the number of subscribers increased 2,473, and the total number of connections by 3,547.

The total number of exchanges now is 174, made up of 58 central and 116 sub-exchanges.

The total number of connections is 33,228, compared with 29,681 in 1910. They may be classified as follows: Paying, 24,715; free, 1; bureaux, 3,032; service, 345; extensions, 5,135.

New connections numbered 4,280, and those given up 1,399. The increase in connections is equal to 11.43 per cent.

On the 31st March, 1911, there were 1,384 miles of telephone line and 33,440 miles of wire.

To meet the requirements of the increased number of subscribers, new switchboards have been installed at Thames, Tauranga, Opotiki, Ashburton, Sanson, Bull's, Kimbolton, Levin, Mangaweka, Martinborough, Rongotea, Masterton, and Patea; and additions have been made to existing boards at Waihi and Dargaville.

The laying of conduits for the purpose of placing the telephone cables in Auckland City underground is nearing completion. 25 miles 4 chains of ducts have been laid, and are now ready to receive cables.

At Oamaru aerial lead cables have been erected preparatory to installing the metallic system.

The subscribers' lines at Hastings have been converted to metallic circuits, and a modern central-battery switchboard installed at the exchange.

Work in connection with converting the Napier plant to an underground metallic-circuit system is proceeding, and preliminary arrangements have been made for the conversion to metallic circuit of the New Plymouth, Hawera, Palmerston North, Gisborne, Shannon, Masterton, and Manaia Exchanges.

CONSTRUCTION OF TELEGRAPH AND TELEPHONE TRUNK LINES.

The following is a comparative statement showing the length of new lines and wires erected in Telegraph Engineers' districts during the last five years:—

	1906.		1907.		1908.		1909-10.		1910-11.	
	Poles.	Wire.	Poles.	Wire.	Poles.	Wire.	Poles.	Wire.	Poles.	Wire.
Auckland	M. 135 ch. 60	M. 494 ch. 40	M. 139 ch. 60	M. 350 ch. 60	M. 228 ch. 60	M. 795 ch. 0	M. 191 ch. 36	M. 952 ch. 78	M. 173 ch. 15	M. 654 ch. 43
Wellington	156 35	641 40	104 43	696 74	157 2½	974 52	192 55	490 53	117 23	989 20
Nelson	146 67	217 49	245 16	484 77	52 22	254 58	38 16	189 72	31 15	156 27
Canterbury	111 30	170 8	90 47	266 20	62 30½	641 50	17 78	268 40	50 68	305 33
Otago	48 40	392 20	121 0	518 20	248 60	644 60	64 0	286 40	54 0	351 0
Totals	598 72	1,915 77	701 6	2,311 11	749 15	3,310 60	504 25	2,188 43	426 41	2,456 43

The extension of lines to outlying districts has been vigorously proceeded with, and 103 new offices opened.

Increased facilities for telegraph and bureau communication between centres have been given by the erection of additional metallic circuits and by superimposing Morse and telephone circuits over existing metallic circuits.

The construction of a metallic circuit of No. 8 copper wire between Auckland and Wellington to be used for bureau and telegraphic purposes is rapidly progressing.