



Planning and Surveying for Microwave Radio Systems

EVERY microwave radio scheme should be carefully planned from the outset in order to achieve in the end the most reliable and economical system. This involves the selection of the most suitable sites for the radio stations, taking into consideration *all* the relevant factors (both technical and economic), the drafting of an overall frequency plan and the recommendation of the equipment that should be installed.

PLANNING SERVICE

The Marconi Company is able to offer Administrations and other clients a comprehensive radio survey and planning service. This service is based on the wealth of experience the Company has gained in engineering and installing microwave networks in every continent.

Based on a preliminary map survey an initial estimate can be submitted usually accompanied by a quotation for making an actual field survey of the proposed route.

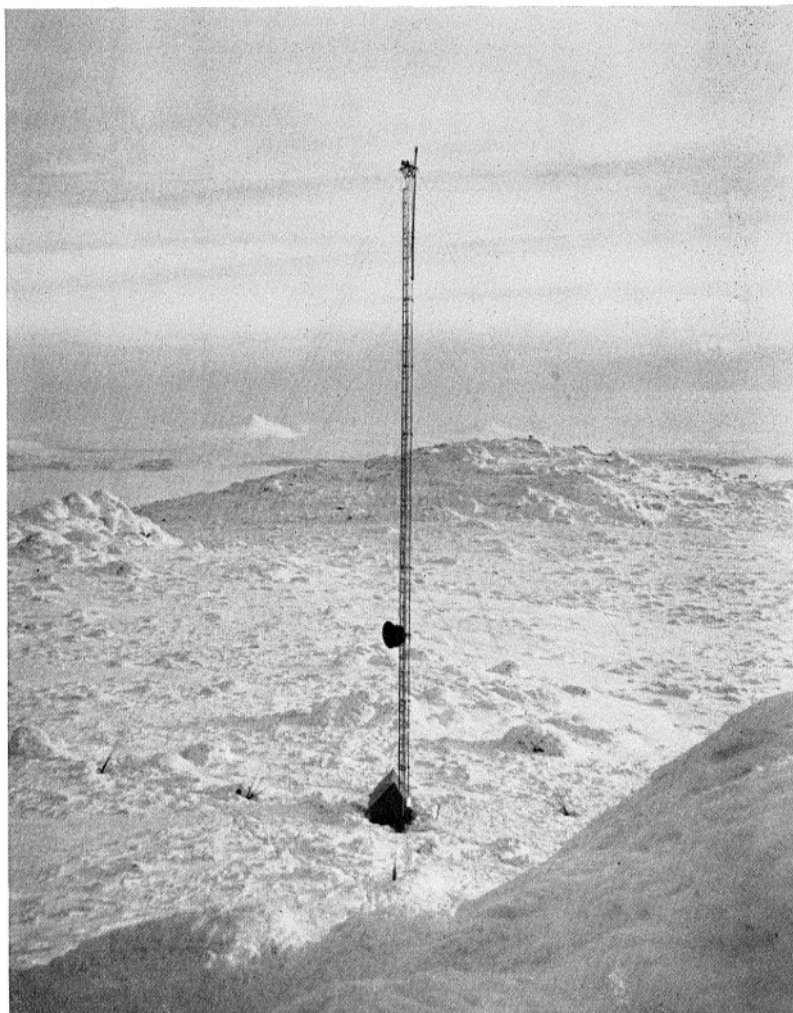
In most cases a field survey is advisable as it may reveal unforeseeable technical factors peculiar to the locality under consideration. It is often possible to plan economies as a result of a field survey which on many occasions outweigh the cost of the survey itself.

SURVEY TEAMS

Marconi survey teams consist of specially trained engineers with experience of this work in many parts of the world.

In addition to the radio recording gear and generating plant the survey teams take meteorological and optical measuring instruments, vehicles and camping equipment. They compile comprehensive reports on all the local conditions bearing on the radio problems, making accurate maps where necessary, in addition to the main task of signal strength recording on the proposed routes. The availability of suitable water and power supplies and the condition of tracks and roads are investigated thoroughly.

Administrations can send members of their staffs to accompany the survey teams to gain experience of this work, and survey equipment can be supplied to clients wishing to conduct their own surveys. The Company offers the facilities of its propagation research group in the evaluation of recordings sent in by Administrations using this equipment.



Surveying in Norway.

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FINAL PLANNING

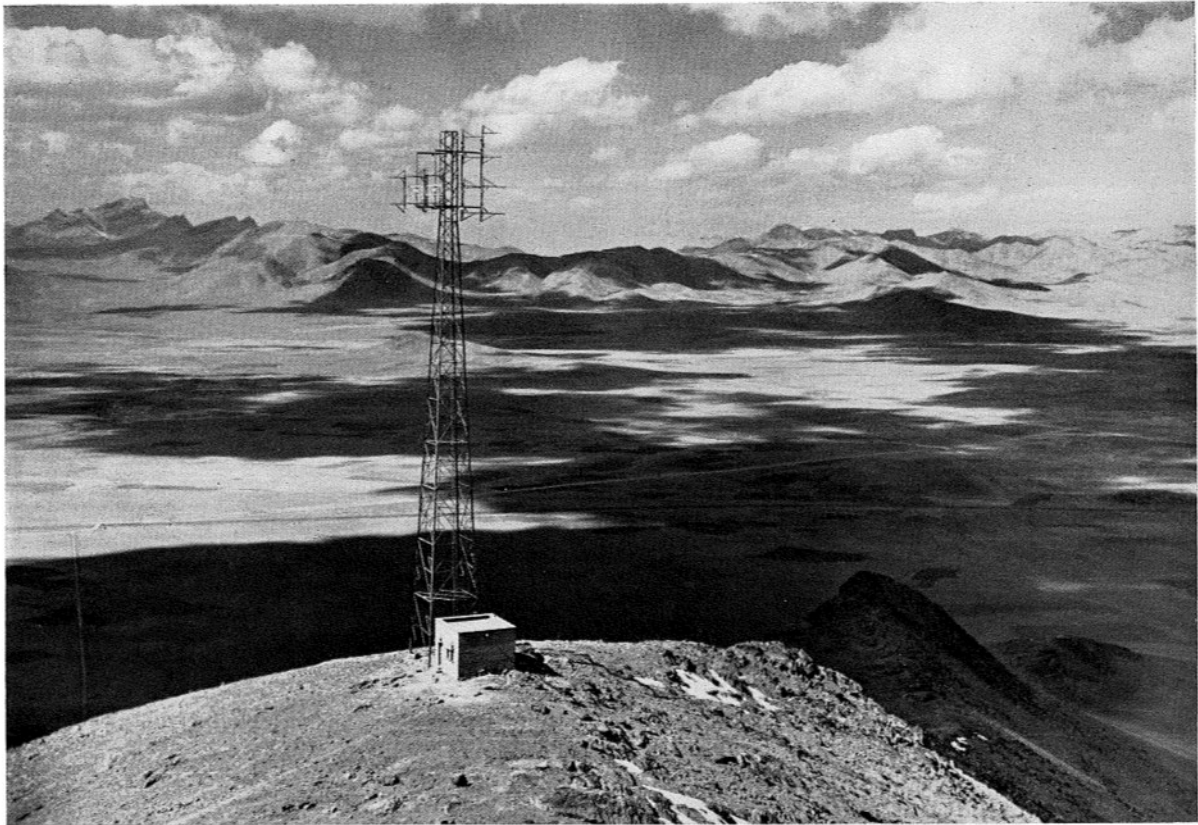
Following the study of the survey report by the Company's propagation team, the detailed scheme and frequency plan are submitted to the client for approval and discussion. In preparing the frequency plan, possible local interference from services working in the vicinity is taken into consideration.

As a result of such thorough overall planning the client will be assured of a

microwave radio system of guaranteed performance, giving the most reliable long term service in the most economical way.

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Aerial of the VHF multi-channel repeater station at Samangan, 8000 ft up in the Zagros mountains. It forms part of the trans-Iranian pipeline communications system.