INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

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OF ITU

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SERIES L: CONSTRUCTION, INSTALLATION AND PROTECTION OF CABLES AND OTHER ELEMENTS OF OUTSIDE PLANT

As-laid report and maintenance/repair log for marinized terrestrial cable installation

ITU-T Recommendation L.29

(Previously CCITT Recommendation)

ITU-T L-SERIES RECOMMENDATIONS

CONSTRUCTION, INSTALLATION AND PROTECTION OF CABLES AND OTHER ELEMENTS OF OUTSIDE PLANT

For further details, please refer to ITU-T List of Recommendations.

FOREWORD

The ITU-T (Telecommunication Standardization Sector) is a permanent organ of the International Telecommunication Union (ITU). The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1 (Helsinki, March 1-12, 1993).

ITU-T Recommendation L.29 was prepared by ITU-T Study Group 6 (1993-1996) and was approved by the WTSC (Geneva, 9-18 October 1996).

NOTES

1. In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

2. The status of annexes and appendices attached to the Series L Recommendations should be interpreted as follows:

- an *annex* to a Recommendation forms an integral part of the Recommendation;
- an *appendix* to a Recommendation does not form part of the Recommendation and only provides some complementary explanation or information specific to that Recommendation.

Recommendation L.29

AS-LAID REPORT AND MAINTENANCE/REPAIR LOG FOR MARINIZED TERRESTRIAL CABLE INSTALLATION

(Geneva, 1996)

Introduction

A marinized terrestrial cable is an underwater optical fibre cable construction, based on a conventional multi-fibre terrestrial cable core protected to withstand the marine environment, designed for unrepeated applications and tested for use in non-aggressive shallow waters, with a varying repair capability.

In proximity of the landing points there are often many cables coming from various routes. In the shore end portions the cables and related protections, such as burials, articulated steel pipes, etc. are closer and closer. Moreover, often the actual route is quite different from that foreseen as the laying route, as designed according to the various surveys, and the related documents are not updated. This situation could affect subsequent installations and maintenance operations of cables and other services.

In order to update charts, the national hydrographic institute has to be provided with the as-laid cable route information both after completion of the installation work and after any repair if significant route changes occur. This will provide properly designed routes, for future underwater services and cables, and allow safe maintenance over existing lines to be carried out.

It is recommended

The companies in charge of the installation of cables in shallow waters, especially close to the landing points of sea, lake and river shores, should provide the Purchasers with an *as-laid report* after the completion of the work and a *Maintenance/Repair Log* after any repair or replacement.

The *as-laid report* should contain, at least, the following information:

- detailed as-laid position list (in geographical coordinates and progressive kilometre posts along the route) with all the relevant points such as course alterations, joint positions and crossing points with other services (active and retired). Such a position list should be provided with geodetic references and local datum shift parameters (for example, from WGS-48) for the main international geodetic system;
- general layout map with the whole cable route and sections;
- detailed landing point map containing, at minimum, the following information:
  - cable position after burial in the landing approach area and to the beach joint;
  - position of all the relevant structures, if any, such as spare coils, concrete mooring blocks, signal poles;
  - burial depth for all the above-mentioned structures;
  - brief description of the cable protection in the different sections;
  - any useful information to determine the position of the cable and any relevant structures for maintenance or new system installation purposes.

Such documentation should also be updated on the basis of a *Maintenance/Repair Log* with the following information:

- operation number and date;
- cable repair ship;
- details of repairs or replacement [cable type(s), quantity of original cable removed, quantity of spare cable installed, repair joint locations and burials as applicable];
- position of failure (longitude, latitude and depth);
- measurements.

The *as-laid report* and the *Maintenance/Repair Log* should be required in the installation or repair supply contracts as well as the delivery time.

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