



## MAINTENANCE PLANNING AND OPERATIONAL SUPPORT SERVICE

After the marathon efforts required to fund, procure, and install a submarine fiber optic cable, arranging the ongoing maintenance of the system can become another obstacle. And yet, inattention to this mundane requirement could cost the system owner dearly in terms of quality of service degradation and loss of end customer confidence. Faults ultimately impact current and future profitability.

Independence to advocate for the system operator or owner is a key hallmark of a valued provider of maintenance services. As a truly independent company with no allegiance to any supplier, Pioneer Consulting offers Maintenance Planning and Operational Support Services that are tailored to the individual needs of each customer's system. This approach allows for creative maintenance solutions which

reduce the maintenance budget while preserving quality of service on the submarine network.

Pioneer's full-time team of submarine system maintenance experts has decades of experience around the world, with consortium and private systems, large and small, repeatered and repeaterless, transoceanic and festoon.

Pioneer has the expertise to evaluate and then skillfully develop customized mission-critical operational processes which should be implemented before the initiation of service as well as over the lifetime of the system. For the system operator, this becomes the key tool to keep the system working properly, delivering the quality of service that has been promised to customers. This is the only way for the

system operator to assure a timely return on investment.

Beyond the system's Ready for Service date, Pioneer also offers its expertise to assist with maintenance contract performance management over the lifetime of the system. When a submarine system reaches its RFS date, the relationship between the system operator and the system supplier changes. The system operator's ability to manage this relationship going forward, will determine whether the system is properly protected and maintained and faults are avoided. For example, arranging equipment return and repair is a critical function which requires agreement in advance of detailed terms and conditions. Pioneer's recommended program will enhance system performance, increase customer satisfaction, and will therefore have a beneficial effect on the system operator's P&L.

This post-RFS service can be expanded to handle all of the system operator's marine maintenance needs over the operational lifetime of the system.

Pioneer recognizes that each customer's requirements are unique but some

examples of our services are described below:

## **C&MA DRAFTING & NEGOTIATION**

- Evaluation and definition of Construction and Maintenance Agreement (C&MA) structure on behalf of cable owner

## **CONTRACT MANAGEMENT**

- Liaison services between cable owner and system supplier
  - Review and analysis of the relevant documentation
  - Recommendations to the cable owner on optimization of the services to be rendered by the supplier
  - Assistance with warranty issues e.g. return and repair (R&R)
- Liaison services between cable owner and other owners in the C&MA
  - Provision of cable owner's representative
  - Monitoring quality of service as per C&MA
- Liaison services between cable owner and Third Parties
  - Notification of repair operations to other owners of undersea facilities

- Liaison services between cable owner and cable ship operator, such as:
  - Monitoring mobilization of repair vessels
  - Assistance with cable crossing notifications
  - Monitoring adherence to performance requirements and contract compliance
  - Preparation of reports
  - Review of invoices
  - Monitoring repair costs

### **TECHNICAL SUPPORT**

- Supervision of repair operations
- Provision of repair services to outside plant through sub-contractors
- Provision of 24/7 technical help desk and liaison services between cable stations, cable owners, and cable ships.

### **OPERATIONAL PROCESS DEVELOPMENT**

- Procedures for corrective and preventive maintenance covering:
  - Logistics
  - Service Provision
  - Service Management
  - Network Administration
  - Schedule Management

–Network Operating Center (NOC)

- Drafting and approval of more than 80 process documents

### **TERTIARY SUPPORT**

- Provides specialist backup expertise to the client's own permanent front-line and central office staff to assist with:
  - Unusually adverse system performance
  - Specialist performance trend analysis.

### **CABLE RECORDS MANAGEMENT**

- Provide and maintain cable owner's marine cable documentation necessary for repairs

### **CABLE AWARENESS**

- Identification of major risks to the wet plant from marine activities
- Promote cable awareness among seabed users
- Representation of cable owner e.g. on fishermen's committees
- Investigate and report on fishermen's claims and other incidents

### **CROSSINGS MANAGEMENT**

- Evaluate crossing notices received from third parties
- Provide crossing information

## **SPARE PLANT MANAGEMENT**

- Spare plant management services
- Manage spares delivery
- Monitor cable owner's cable storage and depot operations

## **QUALITY AUDITS**

- Maintenance Procedures and Practices
- Faults Occurrence
- Spares Management
- Service Provisioning

## **CUSTOMER SATISFACTION STUDY AND ANALYSIS**

Pioneer will undertake periodic customer satisfaction surveys and analyze the data obtained to produce conclusions and recommendations for the system owner on ways to improve customer perception of service quality.

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