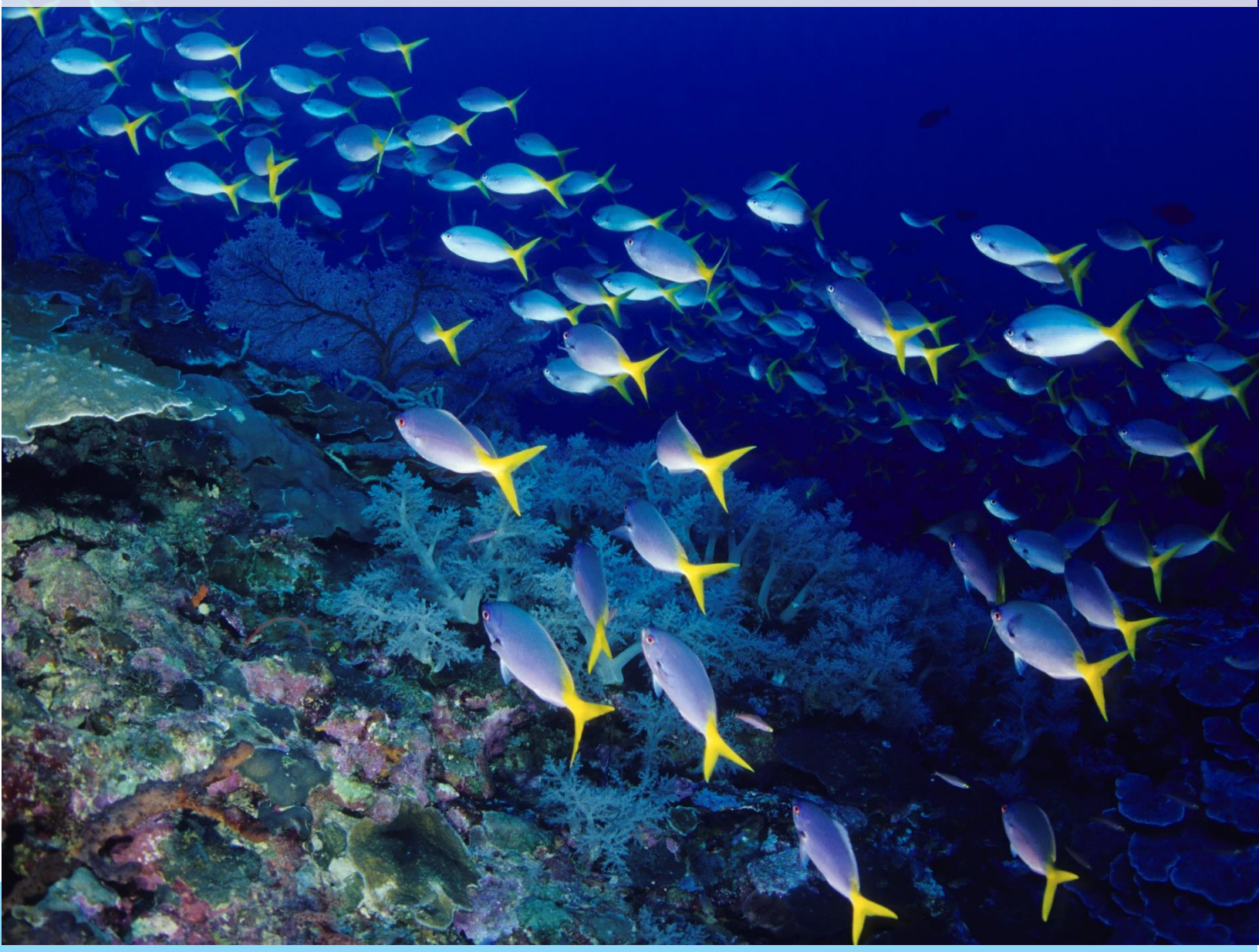
PIONEER CONSULTING
SUBSEA CONNECTIVITY EXPERTS

Marine Services for Undersea Telecom Cables

A Technology & Market Assessment Report: Executive Summary



Legal Address: 221 River Street, 9th Floor, Hoboken, New Jersey 07030 USA

www.pioneerconsulting.com

Executive Summary

Objective

Marine Services for Undersea Cables is an update to Pioneer Consulting's first Marine and Technology Assessment Report published in 2011. This report provides an updated overview of the marine services market for undersea telecommunications cables including the key players, current trends affecting the submarine cable industry and the technical requirements for these services.

This report takes the opportunity to evaluate the current stock and structure of marine services provision. Based on this, and the wider trends across the submarine telecommunications marketplace, we provide analysis for the market areas impacting the marine services industry.

The function of this report is to look solely at the marine services marketplace for submarine telecommunications cable systems. However, this market does not exist in isolation, so we have considered the trends in adjacent industries (such as oil, gas, power cables and wind farms) that have impacted vessel availability. We have come to the conclusion that although the impact can be significant, overall, it is in the interests of companies that choose to offer services in both markets to retain a diversified portfolio of assets, so they depend on neither for survival.

Report Summary

Submarine Telecommunications Marine Services Market

The market for telecommunications marine services has matured over a period of more than 100 years to reach its present state of development. The largest providers of marine services (companies such as Global Marine, SubCom, ASN and Orange Marine) operate in different ways but provide a mature and assured set of services for the installation and maintenance of undersea cable systems. The market is currently supporting marine services supplied by:

- Submarine telecommunications cable owners and operators
- System suppliers
- Independent marine services suppliers (including vessel operators and services suppliers).

The market can be further segmented by the processes required in the telecommunications cable marketplace. This includes activities such as feasibility and desktop study, software and charting services, survey and route engineering, shallow and deep-water marine installation, jointing technology, marine repair and maintenance, depot services, provision of equipment to marine service providers and personnel services to resource these activities.

Perhaps the greatest value in this report is the comprehensive information concerning the detailed activities and infrastructure that makeup the survey and installation marketplace. The tutorial-level of information is provided for the vessel, their services, the nature of marine installation and maintenance agreements, storage, and many other ancillary services. This attention to the details enables the reader to have the foundation to assess for themselves the strengths of their commercial and market transactions.

Changes in the Past Decade

Over the past ten years, several acquisitions of major installation companies took place. Minor restructuring of these companies was also put in place, but the overall installation and maintenance services have remained the same.

The largest transaction occurred when Orange Marine took control of Elettra (previously owned by Telecom Italia) on October 1, 2010, and now operates seven cable ships providing installation and maintenance services.

In November 2018, TE Connectivity completed the sale of its subsea communications business, TE SubCom to Cerberus Capital Management. SubCom remains as a turnkey system supplier that includes cable and repeater manufacturing, marine installation, and cable maintenance services. SubCom operates seven cable ships providing marine installation and maintenance services.

In March 2020, HC2 Holdings, Inc., a diversified holding company, announced that it had completed the sale of 100% of Global Marine Group (GMG) to an investment affiliate of J.F. Lehman & Company, LLC. The sale of GMG excluded the previously joint venture with Huawei Marine Networks Co., Limited (HMN). Global Marine operates nine cable ships providing fiber optic cable solutions to the telecommunications and oil & gas markets. Global Marine also maintains a successful joint venture in China with S.B. Submarine Systems (SBSS) in conjunction with China Communications Services Corporation Limited, known as China Comservice, a subsidiary of China Telecommunications Corporation (China Telecom).

Vessels

For submarine telecommunications cable marine services, in this report we have provided details of 21 survey vessels and 65 active cableships. Over the last ten years (2011-2020) there has not been a significant retirement of cable ships and eight new cableships were added to the global fleet. The average age of the current active cableship fleet is 25 years.

There continues to be a balance in creating new cable ships between the conversion of old vessels for cable operations and the desire to build new vessels that require lower maintenance.

The typical cost for building a new purpose-built installation cableship is over US$100,000,000 with a construction time of about two years. Without the certainty of continued growth in the industry, a 25-year commitment to maintenance and operating costs has made this initial investment difficult. Conversions of existing vessels into cable laying platforms continues. In addition to outfitting existing vessels with cable tanks and cable machinery, the sourcing of new ROVs and sea plows require a lead time of about one year. The training of crews for cable operations and the sourcing of trained technical staff is also a limiting constraint for retrofitting vessels.

Over the last ten years, the industry has seen a significant growth in the number of survey vessels available for performing marine cable surveys. Fugro and EGS continue to be the main providers for submarine cable surveys but other installation companies, namely, IT International Telecom, Maritech and Elettra, are providing services for marine cable surveys as well. With the purchase of C&C Technologies in 2015, Oceaneering International has also entered the cable survey industry. There are currently 21 active vessels equipped to perform cable route surveys. Additionally, smaller companies own survey equipment kits that can be transported to project sites and mobilized on vessels of opportunity.

Services

From small companies to large, the marine telecommunications services marketplace is bound by one common aspect: the requirement for specialist services. The industry is probably always destined to be the poor relation to the marine services market required by the power and energy sector (in scale and market size), however, there is an ecosystem of companies and people that together service the requirements for these specialist skills. Although the market is segmented into a combination of niche and vertically integrated players, around the edges of it are a large number of small companies who together fill the gaps, leading to an integrated offering around the globe, providing service to largely shared international standards. For the purchasers of marine services, this means that expectations are clear, and they expect them to be met every time.

Submarine cable marine services exist within the larger ecosystem of the cable system manufacturers, maintainers, and telecom carriers (including “content” providers) who are the ultimate customers for marine services. The forty-year trend towards telecommunications liberalization has led to increased competition and watchfulness over costs. While some remnants of the costs and quality ascribed to the period when telecommunications was globally regarded as a government service, this approach has

largely been replaced by a market-based approach. While wider global macroeconomic factors do have an effect on marine services, the dominant effects are nearer to home, with the oil, gas and power cable sectors all relying on overlapping skills. This means that the fate of the telecommunications services marine sector is dominated by the factors in the oil, gas and power cable marketplace. To accommodate and adapt to these changes, we see marine services companies diversifying their portfolio, but few choosing to leave the telecom sector, as, although less profitable, it can act as a counterpoint to the energy sector to allow multi-use resources to be shared across markets.

The Future

Mesh networking and system upgradeability has led to some notable (and well reported) impacts and trends on the marine services marketplace that could reasonably be expected to continue. We note:

- ***The trend to greater shore end protection and deeper burial.*** Just ten years ago, one meter burial was common. Now, industrial fisheries and the requirement for greater cable protection have led to 2 m and 3 m burial being more common, particularly on high capacity transoceanic systems, though also in vulnerable areas within Asia.
- ***The trend to regional infill.*** While there will always be a need for transoceanic systems to be built (or replace) underserved routes, we see greater need for regional systems to meet the expansion of broadband intra-regionally. For marine services, this would indicate a trend to greater reliance on good route engineering, inshore cable protection, development of shallow water marine solutions to improve effectiveness of deployment and maintenance.
- ***Continuing technological developments to improve system reliability.*** Whether it is the increased reliance on survey and lay software aboard vessel, faster signal processing, broadband access while at sea, or improved mechanical and electrical equipment, the trend has been towards increasingly sophisticated solutions being needed to meet the exacting requirements of the end client. While all of these come at a cost, some have led to genuine cost savings caused by more effective deployment and better use of resources.
- ***Stress in the marine maintenance marketplace.*** We see the possibility of changes to marine maintenance causing potential problems, not least to small carriers and owners of capacity, who may find their needs considered less if the current status quo on consortium maintenance continues to break down.

If interested in learning more about "Maine Services for Undersea Telecom Cables" or if you would like to purchase this report, please reach out via: info@pioneerconsulting.com.