

SUBOPTIC
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EXPANDING GLOBALLY SUBOPTIC SYMPOSIA

BY DR. Y. NIIRO

In the year 2022, a symposium on optical submarine cable systems that started in Japan has expanded rapidly to world-wide. This article will describe: Why did the symposium start from Japan? Why did it expand to the world so quickly? And what will happen in the future?

JAPAN SYMPOSIUM

The first submarine cable in Japan began 150 years ago, when a 1 km long, single-core telegraph submarine cable was laid between Honshu and Kyushu. In 1896, the Okinawa Maru, a full-scale cable ship of 2,200 tons built in England, was put into service (Figure 1). Over the years, telegraph submarine cable technology was inherited, and Japan later developed its own coaxial submarine cable systems, which were laid in the Pacific Ocean and Asian area.

Thirty years ago, recurring meetings of local submarine cable experts began, led by those who had developed and laid coaxial submarine cables, with the aim of passing on the valuable experience of submarine cables. This meeting was held once a year for more than ten years, but gradually declined due to the aging of the members.

Four years ago, concerned about the decline of the submarine cable industry in Japan, the Optical Submarine Cable Sym-

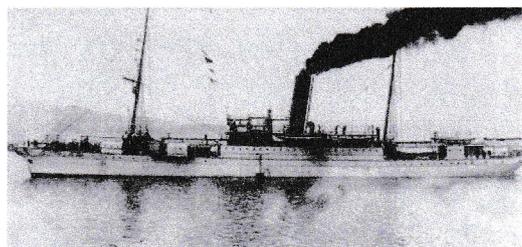


Figure 1: The Okinawa Maru, Japan's first cable ship

posium was organized to revitalize Japanese submarine cable industry. The first symposium 2019 was attended by 100 people, the second by 300, and the third by 250. As described in the Figure 2, Japan symposium is held once a year at a venue of university to listen to lectures by industry experts on

the latest submarine cable technologies, the latest market trends, cable installation, cable maintenance, etc. The symposia were attended by telecommunication companies, equipment manufacturers, cable manufacturers, and cable maintenance specialists and others involved in the submarine cable industry.

「光海底ネットワークシンポジウム」
1st Optical Submarine Networks Symposium in Japan

◆日時: 2019年10月4日(金) 13:00 受付開始
13:30~18:00 講演会(無料)
18:00~20:00 懇親会(有料)

◆会場: 東京工業大学 麗前会館(大岡山駅徒歩1分)
ロイヤルブルーホール Tokyo Institute of Technology
<http://www.somjka.titech.ac.jp/1st/>

主催: OSN研究会
協賛: 電子情報通信学会「光通信システム研究会」
Support: The Institute of Electronics Information and Communications
ホームページ
<https://osn-sym.wixsite.com/mysite2>

講演会プログラム lecture program

13:30	「光海底ネットワークシンポジウム」開催にあたり	
13:40	OSN研究会 共同代表 新納原 謙 Dr. Y. Niiro	
13:40	講演1 「国際光海底ケーブルプロジェクトの現状と将来」(仮題)	
14:20	講演2 「サイバーセキュリティと光海底ネットワーク」	
14:20	NTT-C サービス推進部 担当部長 佐藤 吉雄	
15:00-15:20	休憩 コーヒーブレイク	
15:20	講演3 「最近の光海底ケーブル市場の動向」(仮題)	
15:20	NEC 海洋システム事業部 島原 淳	
16:00	講演4 「光海底ネットワーク用ファイバの現状と将来」	
16:00	住友電工 光通信事業部 海外技術 主幹 小笠野 裕史	
16:40	講演5 「光海底ケーブルシステムの最新技術動向」(仮題)	
16:40	KDDI総合研究所 執行役員 森田 浩郎	
17:20	「光海底ネットワークシンポジウム」の今後	
17:20	OSN研究会 共同代表 秋葉 雅幸 Dr. S. Akiba	

Figure 2: Japan Symposium 2019

SUBOPTIC

The first international Sub-Optic conference was held in Versailles, France in 1986. After that, the conference was very active due to the global expansion of optical submarine cables, and the number of participants increased year by year. As Sub-Optic grew, its sponsorship by the system suppliers evolved, and SubOptic reinvented itself with a new constitution as the SubOptic Association in 2017. The focus of the Association continued to be the tri-annual conference which Suboptic was renowned for. Later, just a year or so ago, the Association launched the SubOptic Foundation to expand its value to the industry. SubOptic set up the Foundation to focus on outreach

of the submarine cable industry especially through new education and research initiatives. In part, the Foundation's hope is to increase awareness of the importance and value of the submarine cable industry to the world and attract new talent to the industry. The SubOptic Foundation called upon industry alumni who have contributed to the industry over the years to serve as advisors to discuss ideas on how to broaden support for the submarine cable industry around the world (Figures 3 and 4).

The SubOptic Foundation Committee focused some of its attention on recent success of the "Japan Symposium." Japan had organized its own symposium for the sustainable development of the submarine cable industry. The symposium attracted attention because it was easy for newcomers and students to attend: (1) held in their own language,

(2) there was no charge for participation, and (3) they could learn the latest information on submarine cables through lectures. International conferences on submarine cables are held every year in various parts of the world, to study the latest information in the industry. However, most all of these international conferences are held in English and are very expensive, some costing as much as in the thousands of USD per person, making them difficult for students and newcomers to attend.

With the support of SubOptic Foundation trustees and advisors, the symposium was then expanded to France, the United Kingdom, North America (Canada

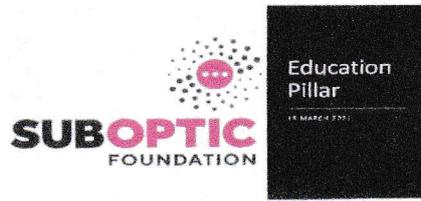


Figure-3 SubOptic Foundation



Figure 4: SubOptic Foundation Committee



Figure 5: France Symposium "Today is a fun day for optical submarine cables"

Figure 6: Find a Job in the Optical Submarine Cable Industry



and the USA), and South America in 2022, and inspired by the success of the first Japanese symposium, this initiative has rapidly expanded around the world.

SYMPOSIUM EXPANSION TO THE WORLD-WIDE

FRANCE SYMPOSIUM

A symposium was held in France in January 2022. The French symposium was designed to invite students from digital technical schools to spend a fun day learning about submarine cables as "Today is the Day of Optical Submarine Cables Supported by French telecom carriers and system suppliers". The program was designed to help students find jobs in the optical submarine cable industry.

The presentations covered a wide range of topics including global networks, submarine cable technology, geopolitical issues, specific projects, and oceanographic observations, with excellent presentations from French experts in each field (Figure 6).

The French symposium was a great success with nearly 300 participants. The symposium will be held again next year.

UK SYMPOSIUM

The UK Symposium was designed to provide students with the opportunity to meet with young presidents and executives active in the submarine cable industry to discuss technology, job hunting, and other topics. This

Symposium was branded "WAVE" (Figure 7). The symposium was unique in that it was held in a large meeting space in the iconic BT high-rise tower with a great view of London for a full day, where students

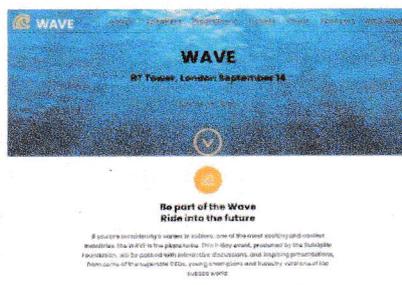


Figure 7: UK Symposium - Meet the CEOs



Figure 8: Excellent speakers



could listen to lectures on submarine cables and consult directly with front-line managers. As you can see from the photo, the submarine cable lecturers are young and brilliant. The UK Symposium was a unique opportunity for students to meet and talk directly with young and veteran managers in the industry (Figure 8).



Figure 9 Americas Symposium-Ride the Wave



Figure 10: Programs by Universities

FUTURE OF SUBOPTIC SYMPOSIUM

The SubOptic symposium, which started in Japan in 2019 “for the sustainable development of the global submarine cable industry” quickly expanded to the rest of the world. On each continent, submarine cables were discussed in local languages such as Japanese, French, English, and Spanish. In

AMERICAS SYMPOSIUM

The Americas Symposium was unique in that it is held simultaneously at several universities on different topics such as optical communication systems, submarine cable systems, and cable ships in order to study submarine cables (Figure 9).

The lectures cover the structure of international networks, the role of international submarine cables, submarine cable technology, installation, maintenance, and operation, etc. The symposium is diverse, using existing videos and lectures by experts in the field (Figure-10).

LATAM SYMPOSIUM

LATAM symposium on optical submarine cables was held in Chile, South America, in Spanish with the participation of over 80 students (Figure 11), 24 of which were sponsored to travel to Chile from Argentina, Brazil, Colombia, Mexico, and Peru. Held at a Chilean university, the symposium introduced the latest technologies and projects in optical submarine cables from Chilean and International experts. The first day of the symposium was a full day of lectures by experts and opportunities for students to meet with people from the industry, as well as lunch and a cocktail party in the evening. The second day included a tour of two submarine cable landing stations, and a tour of landing sites in the city of Valparaiso.

Future symposia in LATAM are planned in Portuguese in Brazil and Spanish in Uruguay.

the future, the symposium is expected to expand to more countries in more local languages, creating awareness and attracting young professionals to our industry. Videos of some of the recent Symposia are available on SubOptic’s

YouTube channel, so that people from around the globe who did not attend can view them and learn from them.

The Japanese symposium is planning to make even better plans in the future, stimulated by the unique projects of other countries around the world. We believe that each country will continue to compete with each other with their unique plan and continue to expand throughout the world.

The SubOptic Foundation will continue to support the global optical submarine cable symposiums, and the symposiums in each country will be networked so that people around the world can share the latest information on submarine cables and contribute to the further development of the world’s submarine cable industry.

Mr. Erick Contag and Mrs. Elaine Stafford of SubOptic Committee assisted me with this manuscript. I would like to thank them. **STF**



Figure 11: LATAM Symposium



DR. Y. NIURO carried out pioneering research & development of undersea fiber optic systems at KDD R&D Laboratories in Japan and laid TPC-3 which was the first Trans-Pacific optical fiber submarine cable in 1989. He was CEO of KDD Submarine Cable Systems and President of Tyco Networks Japan. After that, he was Guest Professor of the Tokyo City University. He is representative Director of Bharti Airtel Japan. He is an advisor of SubOptic Foundation.