### UNITED NATIONS OPEN-ENDED INFORMAL CONSULTATIVE PROCESS ON OCEANS AND THE LAW OF THE SEA

16th meeting: "Oceans and sustainable development: Integration of the three dimensions of sustainable velopment, namely, environmental, social, and economic"

#### 6 – 10 April 2015

Presentation by the International Cable Protection Committee (ICPC) By Douglas Burnett ICPC International Law Advisor douglas.burnett@squirepb.com



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## Prime activities of the ICPC

- Promote awareness of submarine cables as *Critical Infrastructure* to Governments, other seabed users and the public
- Establish internationally agreed standards for cable installation, protection and maintenance
- Monitor the evolution of international treaties and national legislation and help to ensure that submarine cable interests are fully protected
- Liaison with UN Bodies .....(UNEP, ISA, ITU, IMO)
- Support independent research into cables and ocean environment



# About ICPC 145 Members from 64 Countries

- Established in 1958 for Owners and Operators of submarine cables
- In 2010, membership opened up to Governments, Ship Operators, System Suppliers and Survey Companies.
- In 2013, Associate Membership class created for Industry supporters
- Australian, United Kingdom, Malta, New Zealand and Singapore Government Departments are now members

"Cyberspace, in the physical form of undersea fiber-optic cables, carries an even greater value for trade [than shipping goods] through financial transactions and information."

Greenleaf and Amos, "A New Naval Era" U.S. Naval Institute Proceedings, June 2013, at 17



**Courtesy WFN Strategies** 



## 98% of all international voice, data, video, and internet traffic is on submarine cables

- The approximately 265 independent, fiber-optic submarine cable systems form the world's undersea submarine cable networks. With the laying of fiber-optic cables along the east coast of Africa in 2009-2010, the last major group of States now has access to these globally linked systems.
- Each day the Society for Worldwide Interbank Financial Telecommunications (SWIFT) transmits about 15 million messages to more than 8300 banking organizations, securities intuitions, and corporate customers in 208 countries. The United States Clearing House for Interbank Payment System (CHIPS) process over USD 1 Trillion per day to more than 22 countries for all manner of commodity exchanges, investments, and securities. Industries such as shipping, airlines, supply chain, and manufacturing are all enmeshed in the global economy through submarine cables.



*"When the communication [cable] networks go down, the financial sector does not grind to a halt, it snaps to a halt."* 

Malphrus, Board of Governors of the Federal Reserve, 3-5 May 2010.

Seven facts policy makers need to know:

•There is no single global submarine network any more than there is a single world airline network (about 265 systems = 1,576,481KM).

•Cable systems are generally owned by consortia of 4-30 private companies or on occasion a single company-99% are non-government owned. Cable systems are not "flagged" to any one State.

• Cable repair is organized regionally by private contract-not by government mandate. Contracts require repair ships to sail within 24 hours; GOAL = FAST RESPONSE.

•There are about 43 cable ships in the world, about half are on stand-by and half laying new cables or other tasks(training, maintenance)

•Cable ships are expensive, custom built, conspicuous, require specialized crews, and fly diverse flags (UK, France, Marshall Islands, Singapore, Japan, China, Korea, UAE, Indonesia)=COMPETITIVE RATES + EFFICIENCY

•Cable repairs are urgent not only to restore service, but because each cable acts as the backup for other cables=RESILIENCY

www.iscpc.org

•Cables have a neutral to benign environmental footprint on the seabed

## Fiber Optic Cables Improve Economics

"In addition to the expected positive socio-economic impact in Solomon Islands, improved broadband connectivity is also expected to increase the frequency and quality of communications among the countries in the region, facilitating a growth in trade related services such as tourism and back-office functions. A recent World Bank study indicates that a 10% increase in broadband penetration results in a 1.38% increase in gross domestic product (GDP) growth in low and middle income countries." (ADB says funds for optic cable approved and ready, 27 March 2014) http://www.solomonstarnews.com/news/business/1393-adb-saysfunds-for-optic-cable-approved-and-ready

"The EASSy project will contribute to the socio-economic development of the region through the expansion of inter-Africa trade, facilitated by lower costs and better communication. The expected increase in employment and income for the regions will help to reduce poverty and lead to sustainable development. Additionally, the EASSy project will help in breaking the barriers of social and geographical isolation and assist the population in its quest to access information and continued education." (East African Submarine Cable System reaches financial close-The African Development Bank Signs Loans for the EASSy Cable Project, 23 November 2007) <a href="http://www.afdb.org/en/news-and-events/article/east-african-submarine-cable-system-reaches-financial-close-the-african-development-bank-signs-loans-for-the-eassy-cable-project-4051/">http://www.afdb.org/en/news-and-events/article/east-african-submarine-cable-system-reaches-financial-close-the-african-development-bank-signs-loans-for-the-eassy-cable-project-4051/</a>

http://www.pacificnetwork.tv/keith-schofield/



# Submarine Cables Future?

- Bright, providing UNCLOS provisions\* on submarine cables remain.
- Socio-economic benefit examples? Will change face of education allowing universities to offer courses worldwide. Underpin global monitoring of the marine environment for change, hazards and knowledge.
- Cradle to grave carbon footprint of an international cable system is about 7 grams of carbon dioxide equivalents for every 10,000 gigabit kilometer
- Compare 2 day video conference NY to Stockholm (5.7 kg of CO2) with an equivalent 2 day face to face meeting (1920 kg CO2)
- 3-D printing will reduce the amount of aircraft flights and shipping voyagesand their carbon input into the atmosphere/ocean, but the blueprints, software, payments that will allow this new process to work will depend upon cables

\*Articles 21, 51, 58, 79, 87, 112-115 and 297



Cables are small: <u>deep-ocean</u> types are typically 17-20 mm diameter <u>and</u> <u>shallow depth</u> (<1500 m) armoured types may reach 50 mm diameter.

- In contrast, submarine oil/gas pipes reach 900 mm diameter, and fishing trawls 5,000 – 50,000 mm width.
- Cables composed primarily of marine grade polyethylene with steel strength member, copper conductor & glass fibre.
- Chemically inert in the ocean
- Low carbon footprint
- Overall fibre-optic cables are neutral to the marine environment



Modern fibre-optic cable in hand (for scale) & relative to 300 mm diameter subsea pipe.

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### **Cables and Marine Organisms I**

Independent, longterm studies undertaken in Europe, **USA, Australia and New Zealand show** little change in the abundance and diversity of marine organisms living close and distant from a tele-communications cable



Telecommunications cable with encrusting marine organisms

Source: Glauco Rivera. www.iscpc.org



### How to work with the Submarine Cable Industry? Collaboration and Transparency are the Key



#### SUBMARINE CABLES IN THE SARGASSO SEA: LEGAL AND ENVIRONMENTAL ISSUES IN AREAS BEYOND NATIONAL JURISDICTION

23 October 2014, George Washington Law School, Washington D.C

### **WORKSHOP REPORT**

16 January 2015



Authors: Douglas Burnett, David Freestone and Tara Davenport

www.iscpc.org



Sharing the seabed in harmony

