Press Release – FiberSense & Southern Cross Cable Networks

January 2022

FiberSense and SX announce world first in-band solution to monitor and protect submarine cables

Deep-tech fiber sensing company FiberSense and critical infrastructure owner Southern Cross Cable Network (SX) have today announced successful testing of the world's first subsea cable monitoring service that can co-exist on a live traffic carrying fiber. The FiberSense DigitalAsset™ Marine system is the first of its kind to proactively defend critical subsea assets. With increased range, the FiberSense DigitalAsset™ Marine service can easily cover the shore-end network, all the way from the Cable Landing Station to the first repeater. For SX, this enhanced 24x7 real-time monitoring would add significant protection, deterrence, and new maintenance advantages without the need to reserve scarce dark fibers. This innovative solution has now been rigorously field tested from our New Zealand cable station and is available from FiberSense for commercial release.

Subsea telecommunication cables are vital – they carry the cloud and the internet between continents. Cable breaks are increasingly causing large enterprise, government and consumer disruptions with enormous total costs to the community. More cables are being built as the Internet/Cloud/SaaS demands sees exponential growth in data use that in turn presents steeply rising implications when an outage occurs.

"Submarine cable infrastructure is the only capital infrastructure that once deployed to the ocean floor is completely invisible from the surface. It has been that way since the first trans-Atlantic cable was installed in the 1850's. Today, around 70% of damage to submarine cables is due to anchor drag and fishing net trawling. High-risk areas are also found at cable protection zones and near landing stations where there is increased risk of multiple cables being taken out by the same event. For SX, implementing the FiberSense marine innovations across our marine plant shore ends, we can now see and mitigate a range of threats that were virtually impossible to detect before. These threats include cable strumming, cable un-earthing, anchor drag, fishing net drag, shunt fault location and subsidence. I predict that this will become the de facto standard for all marine cables over the next decade." said Dean Veverka, Director Networks & VP Operations, SX.

Founder and CEO of FiberSense, Mark Englund said "Dean Veverka and the SX team have a rich history in being at the vanguard of supporting new technologies into the submarine space. We are delighted to be partnering with SX in launching DigitalAsset™ Marine today. DigitalAsset™ Marine is a big deal for subsea cable resilience and maintenance. Being able to see for the first time these types of events in real time by location along the cable allows the cable operator to action mitigation strategies exactly where the risk

is detected. The fact that our services run over existing live traffic paths opens up the potential for all existing telecommunications submarine cables with no spare capacity to be protected in this way. The maintenance implications have also turned out to be significant in the development of DigitalAsset™ Marine and alongside the protection and deterrence effects, we're really excited about the total impact this capability is going to have on resilience and maintenance of an increasingly vital piece of critical infrastructure like submarine cables across the oceans of the world".

FiberSense can identify and pinpoint these threats across the cable fronthaul section, continuously along the cable and in real-time. This enables a variety of response mechanisms from Automatic Identification System (AIS) messaging to coast guard intervention, and ship to shore radio. Once activated, the FiberSense DigitalAsset™ Marine system detects, locates and identifies a vessel. An alarm is posted in real-time if any anchoring event or other aggression event is detected and several mitigation strategies are employed in order to avert a break. In tandem with AIS integration, culpability is assigned, but FiberSense still works even if AIS is deactivated. Additionally, FiberSense has developed a world leading capability to detect when a section of cable is uncovered on the ocean floor or is suspended above the ocean floor and is strumming, in real-time by location to meter accuracy. An exposure or strumming event makes the cable much more vulnerable to external damage or a cable fault. In addition to protecting the submarine telecommunications and power cable infrastructure, FiberSense is also able to detect and classify earthquake and tsunami events and the material public benefit this will provide at scale.

ABOUT SOUTHERN CROSS CABLE NETWORKS

Southern Cross Cables Limited operates the Southern Cross Cable Network ("SX") providing fast, direct, and secure international bandwidth from Australia, New Zealand, and Hawaii to the heart of the internet in the USA. The Southern Cross Cable Network comprises two existing submarine communications cables with the new Southern Cross NEXT route due to be complete Q2 2022. "Southern Cross" provides high-speed, low-latency, resilient international connections to the U.S. West Coast, where global Internet hubs are located.

Media enquiries: media@sccn.co.nzWebsite: www.southerncrosscables.com

Social Media (Instagram / Facebook / Twitter / YouTube): SXCables

ABOUT FIBER SENSE

Fiber Sense Ltd was formed to dramatically improve everyone's experience in public spaces by adding a new level of real time and historical awareness of anonymised objects and events in public spaces. The team at FiberSense invented and patented a new class of sensor system over optical fiber cable infrastructure called Vibration Detection and Ranging. FiberSense has deep competencies that sit at the intersection of optical fiber sensing, integrated photonics, machine learning and optical fiber telecoms networks. They bring this capability and its unique awareness capabilities together in a digital platform that can be sampled at www.fiber-sense.com

 Media enquiries: info@fiber-sense.com **website:** www.fiber-sense.com