

NEWS RELEASE

For Immediate Release

January 9, 2015



***MakaiLay Power* used by OUOCI Consortium to Install Power Cable in Venezuela**

Makai Ocean Engineering, Inc. recently modified the popular telecom cable lay software, *MakaiLay*, to address specific issues experienced by the subsea power cable industry. The result of this effort was *MakaiLay Power*, a real-time software tool for controlling power cable deployment at-sea. This software was recently purchased and used by the OUOCI Consortium to install a subsea power cable in Venezuela for the Chacopata-Margarita Submarine Cable Interconnection Project. The OUOCI Consortium, which stands for Oceanus Co., Ltd. (OU) and Ocean C&I (OCI), used the cable ship CS Creator (IMO No.9630846) for the lay. The cable installation involved two separate 230kV XLPE (polyethylene-insulated) power cable lines from and was completed by OUOCI Consortium successfully in November, 2014, with the following highlights:

- ✓ Length: ~31km x 2 lines
- ✓ Depth: approximately 30m
- ✓ Placement accuracy : within 1m from the planned RPL
- ✓ No cable suspensions
- ✓ On time: Installation completed 3 days earlier than planned
- ✓ Bottom tension maintained: below 0.2 ton

Watch a brief video showing the successful project completion here (en Español):

<https://www.youtube.com/watch?v=Jey3wcnY-E0>

MakaiLay Power enables operators to accurately model the cable shape, bottom tension and touchdown location as it is installed on the seafloor, reducing the risk of damage to the cable. This software can greatly enhance the speed, safety, and accuracy of a power cable lay in any water depth. In the transition from shallow-water to mid- and deep-water, and for bathymetry with steep slopes, it becomes difficult to accurately control the cable's tension and bend radius at the seafloor, unaided. In these situations, *MakaiLay Power's* cable payout and navigation instructions become critical. With the accurate picture of subsea cable conditions provided by *MakaiLay Power*, operators can control cable bottom placement and tension accuracy, which significantly reduces the time, labor, cost, and risk involved in subsea power cable installation. The *MakaiLay* suite includes a route planning tool, a simulating/training tool, as well as the real-time, at-sea tool for controlling cable deployment.

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Watch a brief video showing the software in action here:

http://youtu.be/j6p0Mf_CAv?list=PLokGt-Zs-l1Fa5GGroyEZ3cNBGa_PKZPL

ABOUT OCEANUS: OCEANUS Co., Ltd. is a fast-growing Korean Oil & Gas EPCIC company (DNV approved in ISO9001, 14001, OHSAS 18001) with over 300 employees and branch offices in Middle East, South America. OCEANUS with existing subsidiaries and branch offices have been providing “Total Solution” for Engineering, Procurement, Construction, Installation and Testing & Commissioning for a variety of Oil & Gas projects such as: Offshore Fixed Platform, Middle Size FPSO/ FSO, Subsea Pipeline / Subsea Power Cable, Subsea Items (SPM / PLEM), and Onshore Facilities. Visit www.ocean-us.co.kr for more.

ABOUT OCEAN C&I : OCEAN CONSTRUCTION & INSTALLATION CO., Ltd. is a specialized submarine cable installation company including several kinds of marine protection. OCEAN C&I provides project management and cable engineering services. OCEAN C&I has been in charge of project management for Jindo ~ Jeju 154kV HVDC cable project for the last 3 years in Korea and has been carrying out 230kV submarine Power Cable installation, including the cable protection for 64 kilometers between Chacopata and Margarita in Venezuela which will be completed in March, 2015. Visit <http://www.oceancni.com> for more.

ABOUT MAKAI: Makai Ocean Engineering, Inc. is an innovative ocean technology firm based in Hawaii, USA since 1973. Makai’s expertise includes submarine cable software and services, marine pipelines, Seawater Air Conditioning (SWAC), Ocean Thermal Energy Conversion (OTEC), underwater vehicles, and marine engineering and R&D. For the last 15 years, Makai has produced the world’s most popular submarine cable installation, planning, and simulation software. Makai is ISO 9001:2008 certified. Visit www.makai.com for more.

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For more information, please contact:

Duke Hartman
Vice President of Business Development
Makai Ocean Engineering, Inc.
+1 (808) 259-8871
Duke.Hartman@makai.com
www.makai.com