ID: Type: **Oral**

Cables Sensing the Pulse of the Planet

A Joint Task Force sponsored by three UN agencies—International Telecommunication Union, the World Meteorological Organization and the Intergovernmental Oceanographic Commission of UNESCO—is leading an effort for integrating environmental monitoring sensors into transoceanic commercial submarine telecommunication cables, extending their capabilities beyond transoceanic telemetry. These are called SMART Cables – Science Monitoring And Reliable Communications. The initiative addresses two issues of importance to science and society: a) the need for sustained climate-quality data from the oceans; and b) the need to increase the reliability, integrity, and scope of the global tsunami warning network. To 'keep it simple', the initial focus is upon integrating sensors for temperature, pressure, and acceleration; additional sensing and infrastructure capabilities are considered for the future. Several science workshops have reviewed and endorsed the SMART cable concept and modeling studies are underway; several paths are being pursued for pilot systems. The initiative, currently at the concept stage, has the potential of providing a first order addition to the ocean and earth observing system, with unique contributions that will strengthen and complement existing systems. See http://www.itu.int/en/ITU-T/climatechange/task-force-sc.

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Track Classification: 1. The Earth as a complex system