

October 24, 2013

Dr. Ed Urban  
Executive Officer  
Scientific Committee on Oceanic Research (SCOR)  
College of Earth, Ocean, and Environment  
Robinson Hall  
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Newark, DE 19716 US

**RE: SCOR Working Group Proposal on Climate and tsunami science with green repeaters on submarine cable systems**

Dear Ed:

I am writing in support of the proposal submitted for review by SCOR next month on "Climate and tsunami science with green repeaters on submarine cable systems".

Let me provide some brief historical background to put this opportunity in context. In the early 1990's when the first generation of fiber-optic cables were being designed, the U.S. scientific community led by Lou Lanzerotti at Bell Labs tried to have AT&T incorporate temperature sensors into the electro-optical regenerators. Although this was doable from the AT&T design engineers' perspective, the plan was nixed by AT&T brass as an unwarranted risk to the system. Imagine today if temperature sensors had been incorporated into TAT-8, -9, -10, -12, Hawaii-4, -5, TPC-3, -4, and PacRimEast, and other cables of this generation—the extraordinary deep-ocean temperature data set in the Atlantic and Pacific for global change since the 1990's, lost.

A new effort and opportunity now exists, led jointly by three U.N. Agencies: International Telecommunications Union (ITU), UNESCO Intergovernmental Oceanographic Commission (UNESCO-IOC) and the World Meteorological Organization (WMO). Because ITU's membership includes the global communications companies, the industry is engaged. Furthermore, the increasingly high profile of ocean climate change and tsunami disasters has led to a broad recognition of mankind's need to obtain fundamental data from the sea floor.

The explicitly international nature of this endeavor necessitates scientific input from the broad international community. At the same time, international scientific recognition of this opportunity is needed to establish a strong foundation for working with the telecommunication companies and governments. The Scientific Committee on Oceanic Research (SCOR) provides such a respected framework.

Dr. Ed Urban  
Page 2  
October 24, 2013

I strongly recommend SCOR to take this first step for establishing a SCOR Working Group to provide an international focus and scientific framework for establishing scientific sensors in future submarine telecommunications cables. The time is ripe to leverage the interests of the U.N. and telecommunications industry. Let's not lose another decade of deep-ocean data for lack of action and resolve.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Rhett Butler". The signature is fluid and cursive, with the first name "Rhett" being more prominent than the last name "Butler".

Rhett Butler  
Interim Director  
Hawai'i Institute of Geophysics and Planetology  
University of Hawai'i at Mānoa