

## **UPDATE ON THE STATUS OF THE ON-GOING RANGE-DEPENDENT LOW FREQUENCY ACTIVE SONAR MODEL BENCHMARKING EFFORT: FROM CAMBRIDGE TO KOS**

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***Abstract:** In April 2010, a symposium in Memory of David Weston was held at Clare College in Cambridge (UK). International researchers from academia and research laboratories met to discuss two sets of test problems for sonar performance models, one aimed at understanding mammal echolocation sonar („Problem A1’), and the other at benchmarking low frequency active sonar models („Problem A2’) in range-dependent environments. Solutions for Problem A2 have been computed for selected test cases, and an international effort is under way for tackling the first range dependent scenario, which consists of two range independent sections joined by an upslope wedge, with a target in the shallow part of the waveguide and an active sonar in the deeper part, comprising an omnidirectional transmitter and a 65-element horizontal receiving array. The sonar parameters are based on those used for the ONR Reverberation Modeling Workshops of November 2006 and May 2008. The status of the benchmarking effort is discussed, in view of the way forward in this effort, for which the need is perceived in several nations concerned with anti-submarine warfare (ASW) system performance prediction and mission planning.*

