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FEASIBILITY ASSESSMENT OF A TRANSIENT SOUND SENSOR BASED ON THE SILICON RETINA ARCHITECTURE

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FINAL REPORT

TITLE: FEASIBILITY ASSESSMENT OF A TRANSIENT SOUND SENSOR  
 BASED ON THE SILICON RETINA ARCHITECTURE

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ABSTRACT

The technical objective of this project was to investigate the feasibility of using silicon retina architectures for transient signal detection in the noisy ocean environment. The basic idea is to use simple electric networks to average out the ambient noise. In this report I discuss how to choose optimal analog circuit parameters in order to capture the onset/offset of temporally transient signals in the presence of a spatially homogeneous noise. The noise is modelled on observations at sea recently published by R. Kennedy (NUSC).

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