AUTOMATIC DETECTORS FOR THE ECHOLOCATION PULSES OF SMALL CETACEANS

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1. ABSTRACT

This paper will examine design requirements for unattended acoustic monitoring equipment where the introduction of digital signal processing to provide a pre-classification process before storage offers significant advantages. Applications include baleen whale monitoring systems employing sub-surface long life "pop-up" buoys which may be deployed in deep water for later recovery using an acoustic command cable release after periods of weeks or months.

The advent of low cost mass storage devices combined with low power high speed processors permit real-time FFT analysis to be implemented offering much greater flexibility and performance than can be achieved with conventional analogue filters/comparator systems.

A system designed to discriminate between small cetacean vocalisations will be discussed.

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