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Sommario/riassunto	Understanding the baseline underwater acoustic signature of an offshore location is a necessary, early step in formulating an environmental impact assessment of wave energy conversion devices. But in order to even begin this understanding, infrastructure must be deployed to capture raw acoustic signals for an extended period of time. This infrastructure is comprised of at least four distinct components. Firstly, a hydrophone, deployed underwater, which is capable of operating at a high sampling rate: 500,000 16-bit samples per second. Secondly, an analog/digital converter (ADC), to which the hydrophone transmits raw voltages. Thirdly, a communications infrastructure for bridging the gap from the ADC to shore. And finally, an onshore base-station for receiving the signals and presenting them to a remote analytic or simulation infrastructure for further processing. Attempting this signal capture in real-time poses many problems. On a practical level, deploying cabled infrastructure to deliver power and communications to the offshore components may be prohibitively expensive. However, reliance on solar power may result in interruptions to real-time wireless transmission. Additionally, a high sampling rate will require significant base-station memory/storage/processing capabilities as well as potentially high costs of delivery to a remote infrastructure, part of which could be alleviated by real-time signal compression. This paper discusses our attempts at implementing such a system which would reliably acquire real-time data and scale with

growing demands.