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(54) Title: PASSIVE ACOUSTIC UNDERWATER INTRUDER DETECTION SYSTEM

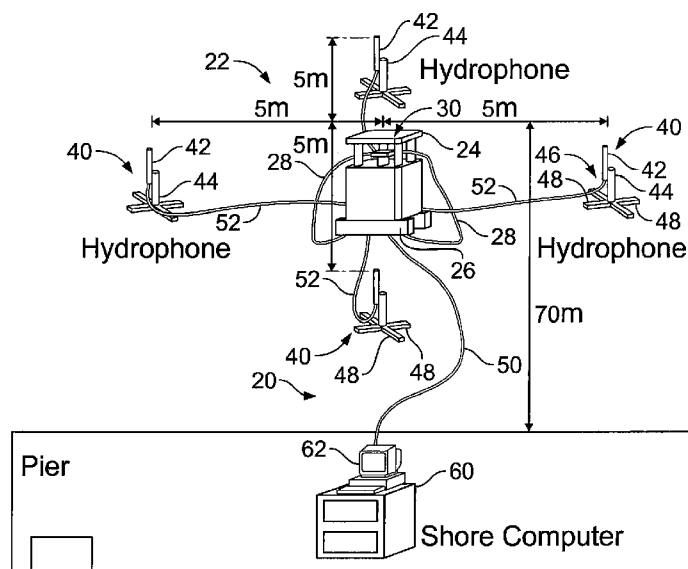


FIG. 1

(57) Abstract: A portable threat detection apparatus and method is disclosed which may comprise a plurality of acoustic emission sensors arranged in a cluster, forming a polygon defining at least two axes of alignment between respective pairs of acoustic emission sensors, a computing device in co-operation with a non-transitory computer readable storage medium comprising computer readable instructions for performing receiving a first signal produced by a first acoustic emission sensor within a respective pair of acoustic emission sensors, in response to the first acoustic emission sensor detecting an acoustic emission from a source, and receiving a second signal produced by a second acoustic emission sensor within the respective pair of acoustic emission sensors, in response to the second acoustic emission sensor detecting the acoustic emission, determining a cross-correlation factor between the first signal and the second signal, and, determining a bearing to the source based on the cross correlation factor.



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