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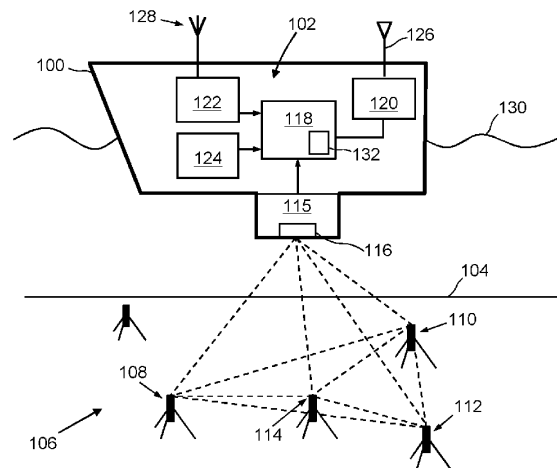


Figure 1

(57) Abstract: An offshore GNSS reference station apparatus (102) comprises: a processing resource (118) and an underwater acoustic communications unit (115). The underwater acoustic communications unit (115) comprises an underwater acoustic transducer (116), the underwater acoustic communications unit (115) being arranged to cooperate with the processing resource (118) in order to calculate a position. The apparatus (102) also comprises a GNSS antenna (128) site and an orientation determination unit (124) operably coupled to the processing resource (118). The orientation determination unit (124) is arranged to determine an orientation associated with the GNSS antenna (128) site and the acoustic transducer (116) of the underwater acoustic communications unit (115).

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