

Abstract**A Local Positioning System which operates based on reflected wireless signals**

5 A local positioning system is proposed for wirelessly locating an object using
existing features within a static environment, such as walls, as the references
for determining the position of the system. An antenna 16 attached to the object
transmits RF signals which are reflected by the surroundings. During a training
mode, the reflected signals are used to train a neural network 22, 43 to map the
10 position of the object to the characteristics of the reflected signals. During a
working mode, the trained neural network is to identify the position of the object
based on reflected signals in working mode. Optionally, the reflected signals
may be subject to a clustering process before input to the neural network.

[Fig 1(b)]

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