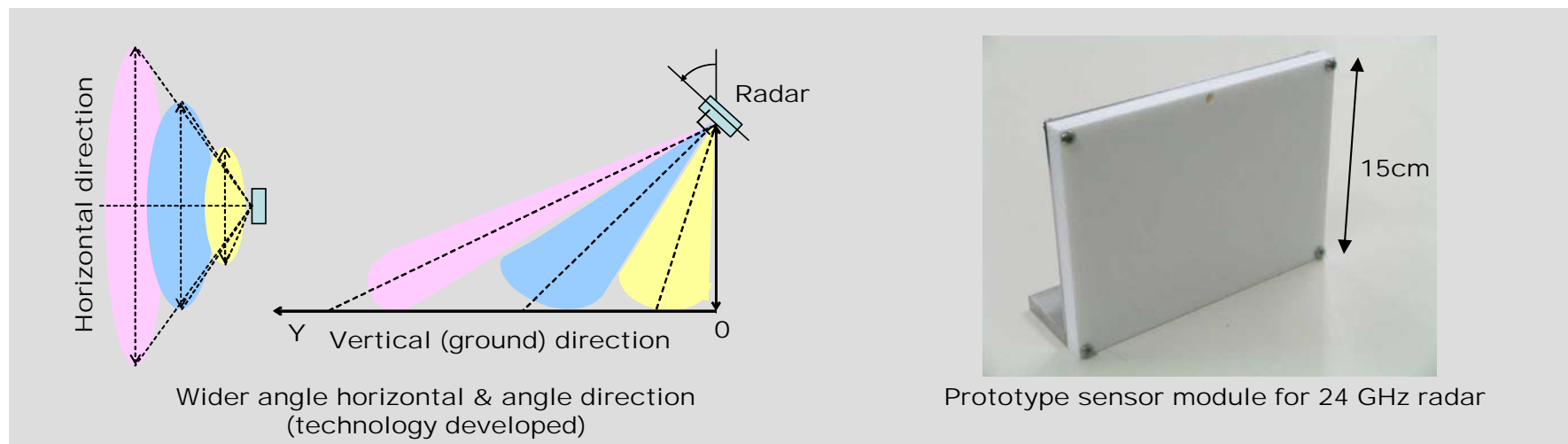


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Development of a sensor module for 24 GHz band radar enabling wide angle detection of objects regardless of environmental changes



The Central Research Laboratory of Hitachi, Ltd. has developed a 24 giga-hertz (GHz) band sensor module for radars, suitable for use in security and other monitoring applications. The prototype developed uses the mono-pulse method which takes advantage of the phase difference in radio waves, and three sets of transmitting/receiving antennas set to emit radio-waves in different directions, providing both wide angle vertical and horizontal detection which had been difficult to achieve until now. As a result, it is possible to detect a moving object within a horizontal range of 80 degrees and a ground distance of 10 meters from the radar.

As the sensitivity of the sensor module is not influenced by environmental changes such as sunlight, rain, fog, etc., it is expected to become a basic technology providing stable detection in surveillance systems, especially outdoor applications.