Abstracts

94 GHz FMCW Radar for Low Visibility Aircraft Landing System

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This paper describes a 94 GHz bistatic FMCW radar currently under development for an aircraft landing system. Using a narrow vertical fan beam antenna, the system scans the runway rapidly in azimuth, processes the radar returns, and obtains a realistic real-time runway image with sufficient information and resolution to enable a pilot to operate in and out of the airport in conditions with visibility as low as zero without dependence on today's auto-land systems. This system may use an airport's glide slope indicator to approach the landing area. The range performance requirements of the landing system are illustrated in Fig. 1.

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