Jacobs' Team Experience – Applied Radar, Inc.

Radar and Antenna Design and Prototyping

Applied Radar, Inc. is an established research, development and engineering company specializing in microwave systems such as radar and communications systems and antenna systems including phased-array antennas and advanced lightweight conformal antennas. Core engineering expertise lies in advanced antenna design and development using novel materials, highly-integrated RF transceiver development using hybrid MMIC packaging, high-speed digital acquisition and processing, RF waveform synthesizers, and embedded microprocessor systems. These unique capabilities with an emphasis on hardware system development find wide application in a number of high-technology commercial and military sectors including wireless communication, sensing and navigation.

Applied Radar products offer many advantages over existing systems. Advanced phased-array antennas allow replacement of mechanically-scanned antennas with electronically-scanned antennas, enabling a low-profile antenna array with superior electrical performance and less maintenance. Their RF transceivers are low-cost and utilize highly-integrated packaging. Lightweight conformal antennas manufactured by Applied Radar, Inc. utilize novel lightweight materials to allow drastic reductions in cost and weight. Wireless digital communication systems manufactured by Applied Radar, Inc. allow high-speed digital channels for applications such as SATCOM and comm-on-the-move.

Applied Radar is responsible to Jacobs Aerospace and Defense Services for the Navy at Pt. Mugu for the development of a partial Active Electronically Steered Array (AESA) comprised of an antenna array, radome, and transmit/receive module(s). It includes the development of an antenna sub-array, transmit/receive modules, and radome mockup. They are also responsible for the fabrication effort to develop engineering prototypes of the three primary components. Component development efforts incorporate a total systems approach to ensure compliance with requirements specified by Jacobs.