John Keevil

Lead Engineer

Philadelphia, PA - Email me on Indeed: indeed.com/r/John-Keevil/a846c9bd45012d97

WORK EXPERIENCE

Lead Engineer

LOCKHEED MARTIN - Moorestown, PA - 1990 to 2013

Antenna design and analysis on 'Space Fence' prototype build and proposal efforts. Designed feed networks and optimized element for Tx and Rx antenna tiles using HFSS. Wrote MATLAB code for array simulations of far-field patterns with all errors and near-field power density. Performed Rx side-lobe analyses with and without errors. Computed near-field maximum power densities for Tx arrays and performed RADHAZ fence designs including diffraction. Performed Tx spoiled pattern simulations with and without errors.

Microwave design for EQ36 phased array antenna
Optimized stripline dipole element and performed HFSS simulations. Designed an 8-way stripline beamformer with directional couplers for calibration sampling and with Tx filtering using ADS and HFSS. Designed hole lattice in array ground plane to allow cooling air flow yet inhibit radiation leakage. This work contributed to a very fast concept-to-system delivery time.
Developed equations to design a lossless Blass Multiple Beam beamformer and implemented them in Excel.

Technical lead engineer on Overlapped Sub-array Multi-beam Rx phased Array IR&D using Rotman Lenses. Located a consultant to design the Rotman lens. Performed noise analysis and added low-noise amplification to reduce system noise figure. Specified all array components, oversaw the assembly, test and antenna pattern measurements. Wrote the electrical section of final report and presented it at ONR industry gathering. Due to my leadership the work was technically successful and recouped a 2 month schedule slip.

• Project engineer on ATDRSS satellite phased array IR&D
• Designed lumped element beamformers that used MMIC fabrication technology. My idea to substitute wide meander lines for capacitors, improved performance
• Performed aperture-fed microstrip patch CP radiator design for GPSIII
• Designed 4 to 20 GHz stripline combiner for prototype phased array
• Technical Support on assignment at Thomson CSF, France for one year. Performed reflected power and sum/diff pattern analyses for COBRA phased array

Customer interaction
• Presented OMSA IR&D results to ONR
• Presented MPAR (weather radar) prototype calibration method to NOAA

Range testing
• Array range testing (EQ36, Space Fence, OMSA, ATDRSS)

Principal Engineer

Bell Aerospace, Textron - Buffalo, NY - 1981 to 1990

Phased Array Concept/Architecture development
• Project antenna engineer for MMLS phased arrays: antenna element selection and analysis, beamformer development and design. Critical to winning mobile landing system contract with USAF

Phased array antenna element development, analysis, design
• Stripline-fed slot using NEC and Babinet slot/dipole equivalence

Sperry Gyroscope, Bracknell, United Kingdom - Design Engineer
Marconi Space and Defense Systems, Frimley, United Kingdom - Design Engineer
Marconi-Elliott Avionic Systems, Basildon, United Kingdom - Design Engineer

EDUCATION

Master of Science in Electrical Engineering
Drexel University - Philadelphia, PA

Bachelor of Science in Engineering Science
Exeter University