



# Willie Johnson, Jr.

Radar & Combat ID

Development Manager for the US Army, Communications-Electronics Command, and Fort Monmouth for 35 years. After retiring from the government he spent thirteen years as a consultant for combat identification and radar systems developments.

Mr. Johnson's assignments at Camp Evans included Director of the Combat Identification Division responsible for the development of Battlefield Combat Identification, Non Cooperative Target Recognition and Army Identification Friend or Foe (IFF) technology and systems. He was instrumental in the development of the BCIS (Battlefield Combat Identification System) that addressed the fratricide problems experienced in Operation Desert Shield/Storm. He was the Army leader in applying evolving non-cooperative target identification technologies to US Army Air and Battlefield Target Identification requirements. The AN/VSX-2 Non-Cooperative Target Recognition System for aircraft identification resulted from this work. He also directed the Army's Mark XV IFF System developments.

As Director of the Radar Division, he was responsible for the development of advanced microwave, millimeter radars and Army IFF systems. Radar programs managed included Ku-Band and 94 GHz Remote Pilot Vehicle (RPV) MTI Surveillance and Target Acquisition Radar Systems, Air Force 94 GHz Tactical Avionics for Low Level Navigation and Strike (TALONS) Radar System, Hostile Weapons Location System (HOWLS) Airborne Radar Testbed. He also managed Army technical efforts in the development of a replacement system for the Mark XII EFT System. New millimeter wave inertialess scanned antenna technology was developed in the Division's In-House Laboratory Independent Research (ILIR) program.

As an Engineer in the Radar Division, he designed and developed innovative techniques to measure the radar cross section of artillery and mortar projectiles and established data bases for Army weapons locating radar programs including the TPQ-28, TPQ-36

and TPQ-37. He and Dr. Boaz Gelernter conducted research directed at reducing the large number of measurements needed to characterize projectile radar cross section. From this research they developed a technique for predicting the backscatter patterns of projectiles at elevated pitch angles that greatly reduced the time and cost to generate radar cross data bases. He later teamed with Wade Porter to develop a Simulation to investigate artillery projectiles radar cross section in flight. This simulation was used as a valuable analysis tool during weapon locating radar development programs. He was also nominated for an Army Research and Development Achievement Award for contributions to the development of technology for the detection and classification of stationary tactical targets by radar.

He represented the DOD and the US Army on national and international organizations as the Head of US Delegation on the NATO Research Group on Air Target Non-Cooperative Identification with Radar, a US Army member of the four county Technical Cooperative Program Subgroup K on radar technology, OSD Combat Identification Architecture Working Group, Tri-Service Cooperative and Non-Cooperative Working Groups and NATO Combat Identification Technical Working Group that developed and wrote the Battlefield Target Identification System (BTID) STANAG. He also served as a 1st Lieutenant in the US Army Signal Corps. Johnson holds the BS and MS degrees in Electrical Engineering.

Mr. Johnson served as chairman of Board of Trustees of Mt. Zion Church, Red Bank NJ for 30 years and was a member of the Building Committee during the construction of the Education Wing. He served as Polemarch of the Alpha Lambda (South Carolina State College) and Asbury Park, NJ Alumni Chapters of Kappa Alpha Psi. He has been active with community organizations that provided scholarships and aid to the needy and the church's Young Lion mentoring program.

He and his wife Joan have two daughters, Donna Johnson and Stacey Douglas, and are proud grandparents to Joshua Bailey and Mayla Douglas.