

CHRISTOPHER R. SCHNELLE

Principal Engineer

Networked Sensors and Platforms Section

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B.S. in Electrical Engineering Honors, Purdue University, 1983

M.S. in Electrical Engineering, Purdue University, 1984

M.S. in Telecommunications, Southern Methodist University, 2002

M.S. in Engineering Management, Southern Methodist University (Expected Dec 2003)

Mr. Schnelle has been active in the aerospace industry since 1980. His experience includes hardware and software development of both avionics and test systems. He has extensive knowledge of specifications and standards used in both military and commercial aviation.

At Purdue University, Mr. Schnelle studied a generalized engineering curriculum with emphasis in the areas of digital and control systems design. While at Purdue, Mr. Schnelle worked as an engineering co-op with General Dynamics Corporation, Fort Worth Division. During his graduate studies at Purdue University, Mr. Schnelle taught courses in computer programming, amplifier design, and electronics laboratory practices. He researched interconnection networks for generalized cube configured parallel computers.

At Barber-Colman Company, Mr. Schnelle was a project engineer on aerospace programs in the areas of helicopter engine controls, cabin and windshield temperature controls, D.C. permanent magnet and brushless motor controls, and aircraft auxiliary control systems. Mr. Schnelle was lead engineer for the development of a distributed microprocessor based waste management control system. His responsibilities included development of the system architecture, inter-LRU communication busses, fault tolerance techniques, and crew interface. He was also responsible for developing a software development process suitable for use on systems requiring FAA certification.

At Southwest Research Institute, Mr. Schnelle has continued working in the area of aviation electronics. Mr. Schnelle adapted and integrated test program sets for use on test equipment for a wide range of General Electric turbine engine controllers and monitors. He led the development and test of wiring and structural modifications for the F-111F Engine Monitoring System program. Mr. Schnelle has led flight control computer upgrade programs for both fixed wing aircraft and helicopters. One program developed a digital replacement for the analog A-10 Stability Augmentation System computer. The second flight controls program developed and tested an upgraded the Automatic Flight Control System Amplifier used on the USAF MH-53J helicopter. The third program addressed compatibility issues related to using MH-53J flight control system components on Israeli Air Force C-53 helicopters. After the successful completion of development and operational testing, the IAF is currently procuring the system for use on its CH-53 fleet.

Mr. Schnelle has worked on a number of upgrade programs for the A/OA-10A aircraft. In addition to flight controls work, he has led study and integration programs related to the engine monitoring, structural recording, inertial navigation, GPS, and display and control systems on the aircraft. Mr. Schnelle led the development of A-10 specific technical requirements for these systems and supported source selection of major components by the USAF and associate contractors.

In addition to requirements development and source selection support for the A/OA-10A, Mr. Schnelle led the development of technical specifications for the KC-135 Embedded GPS/INS and provided on-sight support during both source selection by the USAF and product development by the successful bidder.

Recently, Mr. Schnelle has provided systems engineering expertise on tasks involving weapons seekers, head up displays, and Unmanned Aerial Vehicles (UAVs).

Other areas of interest include infrared free-space optical air-to-ground communications as well as the compression, transmission, and processing of high fidelity digital video information.

PROFESSIONAL CHRONOLOGY: General Dynamics Corporation, 1980-3 (engineering co-op, 1980-2; engineer, 1983); teaching assistant, Purdue University School of Electrical Engineering, 1983-4; Barber-Colman Co., 1985-8 (design engineer, 1985-7; senior design engineer, 1988); Southwest Research Institute, 1988-(research engineer, 1988-90, senior research engineer, 1990-6; principal engineer, 1996-).