LAWRENCE A (LARRY) SCANLAN

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EXPERIENCE UCLA International Center for Talent Development 1999 -

Principal Scientist. Qualitative and quantitative research into the lifespan consequences of talent development, commitment sources in talent development, and the use of technology to enhance the development of talent. Responsibilities include formulating and organizing research projects, collaborating on scholarly publications, fund raising, and grant and proposal preparation.

Larry Scanlan & Associates 1976 - Present

Human Factors and Engineering consulting on product design, safety, hazard warnings, and engineering processes. Investigate the human factors and engineering aspects of automobile, aircraft and other accidents.

Raytheon Company (formerly Hughes Aircraft) 1968 - 2002

Manager, Modular Digital RF System and Digital Enhancement Programs. Responsible for definition, capture, and management of these technology programs that have developed low-cost, high-performance digital receivers being used in the F/A-18 E/F airborne radar, and planned for the National Missile Defense ground based radar, and Global Hawk reconnaissance radar systems.

Manager, Technology Programs. Responsible for Advanced Technology New Business pursuit and management. Managed the proposal for the Rapid Prototyping of Application Specific Signal Processors (**RASSP**) program including team-based win strategy. Managed the Hughes portion of the \$47.5M Sanders, Hughes, Motorola and ISX RASSP program that reinvented the process by which embedded digital signal processors are designed, manufactured, upgraded and supported.

Associate Manager, Hughes Night Vision System Product Line. Managed all technical aspects of this \$40M/year program including development activities, long range product enhancement planning, and advanced applications. Extended customer base by tailoring HNVS for new missions and new aircraft (rotary and fixed-wing, tilt-rotor and high performance). Directly managed transition from development to initial lowrate production. Accomplished design upgrade for high rate production.

HNVS System Engineering Manager. Leader of the team that invented a state-of-the-art, Forward Looking Infrared (FLIR) system to satisfy the

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demanding requirements of night pilotage, navigation, target recognition and nap-of-the-earth flight. Very successful flight demonstrations resulted in a 100-unit production program. Very successful flight demonstrations in resulted in a 100-unit production program. HNVS saw extensive service in Desert Storm where it provided night operations capability for both Army and Navy helicopters. Field reports confirm its superior performance and excellent picture quality.

Directly managed trade studies, aircraft installation design, system interface definition and system partitioning. HNVS was the first tactical FLIR to successfully provide DC restoration and was the first FLIR system to achieve high levels of integration through the extensive use of microprocessors. Patents awarded for system architecture and video processing hardware and software.

Head of Human Factors Research. Directed research to understand human operator behavior in complex man-machine systems. Authored over 50 research publications and presentations dealing with target acquisition performance and modeling, visual search behavior, and operator performance. Studies included advanced display, symbology, symbol generation and video processing technologies on pilot performance in advanced fighter cockpits. Manager of the Simulation and Computing Center. Hands on management of the design, implementation and maintenance of a state-of-the-art simulation and computing facility for system design and pilot performance measurement.

Research Assistant, University of Illinois 1969 to 1974.

Conducted a series of research efforts on Radar Time-Compression that combined basic and applied research to achieve a useful output with strong theoretical foundation. The results were applied by the US Air Force to increase the detection range of airborne surveillance radar systems and the performance of optical satellite detection and tracking systems. The theoretical portion built a bridge between visual time compression and Gestalt Psychology concepts of apparent motion, extended the quantitative understanding of apparent motion and established the effectiveness of economical experimental design methods in behavioral research.

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EDUCATION	 1975 Ph.D. Engineering Psychology, University of Illinois. 1971 M.A. Engineering Psychology, University of Illinois. 1968 B.S. Electrical Engineering, Calif. State Univ., Northridge. 1973 Computer Science, University of Illinois. Completed course work for M.S.
TRAINING	Instrument Rated Private Pilot. Shipley Proposal Writing, 1990. Line Manager Development Course (38 weeks of study), 1985-86. Effective Negotiations Workshop, 1984. Leadership Management Course, 1984.
SELECTED AWARDS	 <u>Hughes</u> Superior Team Award, 1991. Technical Achievement, 1982 & 1983. These awards include significant monetary payments. A. C. Williams Full-Study Doctoral Fellowship, 1969-1974 Full-Study Masters Fellowship. <u>Society of Engineering Psychologists</u>: George Briggs Dissertation Award. Recognized the combined applied and basic research synergy achieved in the Radar Time-compression research project. <u>Human Factors Society</u>: Best Student Paper, 17th Annual Meeting. Award based on the Radar time-compression research thread. <u>California State University</u>:
PATENTS	 Elected to Tau Beta Pi (Engineering Phi Beta Kappa). Five disclosures, three applications, and two awards. Application: "Continuously variable DC power supply" 1969 Award: "Signal Processor for an Imaging Sensor System." Uncommonly broad scope that establishes the intellectual rights to the overall architecture of the Hughes Night Vision System (HNVS) "Image Contrast Enhancement Technique." Describes a unique digital approach for mapping sensor image information to achieve maximum viewer performance.

PUBLICATIONS See Separate List