

## Dual-use Extensibility Issues: Implementing DoD Virtual Mentors for Police

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### ABSTRACT

There is a need for improved mentoring of civilian law enforcement personnel; the DoD has similar needs and has funded development of globally accessible and extremely engaging virtual mentors. There is a short review of current efforts to respond to these issues, including results. The paper then sets the goals of reducing negative impacts in order to sustain a robust career field in law enforcement. This paper reports on an initiative to identify, scope, plan and implement the use of DoD funded capabilities to respond to the law enforcement needs. The early contacts with police who served in various levels of law enforcement environments are reported. Then it reviews the reported major stresses on such personnel resulting in difficult recruitment, low morale, early attrition, and high suicide rates. The development of a survey document to more precisely ascertain the major pathogenic bases for police problems is described. Some preliminary results are reported. A vision for how a virtual mentor might be effective in this situation is then presented. Beginning with a quick review of the Navy's MentorPAL project, existing capabilities are given. The implementation problems and risks are extensively analyzed. Issues of potential detrimental impacts, schedule disruptions, and cost/benefit are examined. The need for such a project to be implemented outside of the academic community raises several issues, some of which may be problematic. There is a section that considers how major government contractors might be enticed to pursue such a program. Then the metrics for judging whether such an implementation was progressing accordingly and had reached its ultimate goal are carefully laid out. Where longitudinal studies are going to be required, the paper sets forth issues to be considered and parameters to be included. The conclusions are recorded, along with several emerging technologies, techniques and research paths.

### ABOUT THE AUTHORS

**Dan M. Davis, CDR, USN, Ret.** is a Research Associate Professor at Catholic Polytechnic University and a consultant at the Institute for Creative Technologies, University of Southern California (USC), focusing on large-scale DoD simulations and avatar uses. Prior to retirement, he was the Director of the JESPP project at USC for a decade. As the Assistant Director of Advanced Computing Research at Caltech, he ran Synthetic Forces Express, bringing HPC to DoD simulations. He also served as a Director at the Maui High Performance Computing Center and in computer research roles at the Jet Propulsion Laboratory and Martin Marietta. He was the Chairman of the Coalition of Academic Supercomputing Centers and has taught at the undergraduate and graduate levels. As early as 1971, Dan was writing programs in FORTRAN on one of Seymour Cray's CDC 6500's. While in the Marine Corps, he saw duty in Vietnam as a Cryptologist and retired in 2002 as a Commander, U.S.N. He received B.A. and J.D. degrees from the University of Colorado in Boulder.

**Judith L. Jacobus, MA** is retired from a career of conducting speech therapy as a Speech and Language Specialist for more than two decades. Her experiences were in public schools settings in Orange County, California. She also previously taught for 12 years as a classroom teacher in multi-cultural communities there. Judith currently volunteers her professional skills for a local police department, so has extensive experience with dysfunctional adults and children in a variety of both every-day and more traumatic situations. Her participation in amateur theatrics has more fully familiarized her with the characteristics of human behavior as they are projected via verbal, facial and body-language cues. This experience has also exposed her to the skill and art of the selection of appropriate persons for specific on-screen roles. Judith holds a lifetime Special Education Credential in Speech and Hearing Therapy, K-12 from the State of California. She earned a B. A. Degree in Speech Communications from the California State University Long Beach, California and an M. A. Degree in Teaching and Teacher Leadership from the Grand Canyon University in Glendale, Arizona.

**John A. Parker, MA**, is the General Manager at Platt Investigations and a retired police executive. He is a state-licensed private investigator with twenty-six years of local law enforcement experience and over fifteen years experience in electronic security design and implementation. He has conducted, or participated in, hundreds of criminal and civil investigations. He served as faculty advisor to the Administration of Justice Department at Los Angeles Harbor College, and authored several articles dealing with business security and human resource issues. He is a lifetime member of the California Organization of Police and Sheriffs. John has a Bachelors Degree in Criminal Justice from Westfield State University in Westfield, Massachusetts and a Master's Degree in Business Management at the University of California San Diego.

**Jennifer H. Nolan, PhD**, is the President of Catholic Polytechnic University and Professor of Psychology in their College of Arts and Sciences. Her earlier work specialized in memory, dementias, stroke and insulin resistance. She is a brain plasticity specialist and certified Cogmed provider. Previously, she was the C.O.O. and co-founder of a stroke and brain injury rehabilitation center. Dr. Nolan has taught university courses at UC Irvine, Loyola Marymount University, and Glendale Community College. She has conducted local and nationwide clinical trials, and published in both scientific journals and popular magazines. She received a BA in Psychology from Loyola Marymount and a Ph.D. in Psychology from the Dept. of Cognitive Science at the University of California, Irvine.