

Information Sciences Department Newsletter

Volume 5, Issue 2, April – June 2010

Sponsor: Dan Boger
Editor: Mark Nissen

Publications

Books

none this quarter

Articles in Refereed Journals

Baer, W., "Introduction to the Physics of Consciousness," *Journal of Consciousness Studies*, **17**, No. 3–4, April 2010, pp. 165–91.

Chapters in Books

Maule, R., Gallup, S., and Jensen, J. "Knowledge engineering experimentation management system for collaboration", in (T. Sobh, ed.) *Innovations and Advances in Computer Sciences and Engineering*, pp. 573-578, Heidelberg, Germany: Springer, 2010.

Articles in Conference Proceedings

Baer W., "Multi-Eye Input Experiments for UAV Image Navigation and Control," SPIE Defense & Security Symposium, Orlando, Florida, USA. Paper #7697-45, 5 - 9 April 2010.

Baer, W. and Bernroider, G, "Indications for Quantum Computation Requirements from Comparative Brain Analysis," SPIE Defense & Security Symposium, Orlando, Florida, USA. Quantum Information and Computation VIII, Paper #7702-27, 5 - 9 April 2010.

Baer, W., "Theoretical Discussion for Quantum Computation in Biological Systems," Wolfgang Baer , SPIE Defense & Security Symposium, Orlando, Florida, USA. Quantum Information and Computation VIII, Paper #7702-31, 5 - 9 April 2010.

Bergin, R., Adams, A., Andraus, R., Hudgens, B., Lee, J. and Nissen, M.E., "Command & Control in Virtual Environments: Laboratory Experimentation to Compare Virtual with Physical," *Proceedings 15th International Command & Control Research & Technology Symposium*, Santa Monica, CA (June 2010).

Hutchins, S. G., and Kendall, T., "Analysis of Team Communications to Understand Cognitive Processes used during Team Collaboration," International Command and Control Research & Technology Symposium, Santa Monica, CA, June 23, 2010.

Hutchins, S. G., Kemple, W. G., Kleinman, D. L., Miller, S., Pfeiffer, K. D., Horn, Z., Weil, S., and Entin, E. E., "Maritime Operations Centers with Integrated and Isolated Planning Teams," International Command and Control Research & Technology Symposium, Santa Monica, CA, June 23, 2010.

Hudson, K. and **Nissen, M.E.**, "Command & Control in Virtual Environments: Designing a Virtual Environment for Experimentation," *Proceedings International Command & Control Research & Technology Symposium*, Santa Monica, CA (June 2010).

Kalbfleisch, M.L. and **Nissen, M.E.**, "Extending Hypothesis Testing of Edge Organizations Using

Functional Magnetic Resonance Imaging During ELICIT," *Proceedings International Command & Control Research & Technology Symposium*, Santa Monica, CA (June 2010).

Powley, E.H., **Nissen**, M.E. and Seykora, J., "Study of Trust as an Organizational Contingency, Part II: Examining Four Dimensions of Trust in ELICIT Experimentation," *Proceedings International Command & Control Research & Technology Symposium*, Santa Monica, CA (June 2010).

Wynn, D., Ruddy, M. and **Nissen**, M.E., "Command & Control in Virtual Environments: Tailoring Software Agents to Emulate Specific People," *Proceedings International Command & Control Research & Technology Symposium*, Santa Monica, CA (June 2010).

Osmundson, John, Rene Rendon and Thomas Huynh, "Systems of Systems Acquisition: System-of-Systems Systems Engineering and Contracting Processes and Structures", Naval Postgraduate School Acquisition Research Symposium, May 12-13, 2010, Monterey, CA.

Zhao, Y., **Gallup**, S.P., and **MacKinnon**, D.J., "Program-Awareness via Lexical Link Analysis (LLA)," 7th Annual Acquisition Research Symposium, Monterey, CA, May 13, 2010.

Other Publications

Wood, B.P., **Irvine**, N.J., **Jensen**, J.J., **Schacher**, G.S., **Gallup**, S.P. published Transnational Information Sharing Cooperation (TISC) Joint Capabilities Technology Demonstration (JCTD) Demonstration Execution Document (DED) in support of Operational Demonstration Two (OD2)-Trident Warrior, 06 June 2010.

Wood, B.P., **Irvine**, N.J., **Jensen**, J.J., **Schacher**, G.S., **Gallup**, S.P. published Joint Multi-Mission Electro-Optic System (JMMS) Joint Capabilities Technology Demonstration (JCTD) Demonstration Execution Document (DED) in support of Operational Demonstration Three (OD3)-RIMPAC 10, 30 June 2010.

Wood, B.P., **Irvine**, N.J., **Jensen**, J.J., **Schacher**, G.S., **Gallup**, S.P. published Transnational Information Sharing Cooperation (TISC) Joint Capabilities Technology Demonstration (JCTD) United States Southern Command Letter of Operation (LOO) Quick Look, 30 June 2010.

Wood, B.P., **Irvine**, N.J., **Jensen**, J.J., **Schacher**, G.S., **Gallup**, S.P. published Transnational Information Sharing Cooperation (TISC) Joint Capabilities Technology Demonstration (JCTD) United States European Command Limited Military Utility Assessment (LMUA) Quick Look. in response to Operational Demonstration Two (OD2)-Trident Warrior 10, 30 June 2010.

Presentations (not included in conference proceedings above)

MacKinnon, D.J. **Zhao**, Y., and **Gallup**, S.P., "Matching Navy Recruiting Needs with Social Network Profiles Using Lexical Link Analysis (LLA)" given at the 2010 Navy Workforce Research and Analysis Conference, Rosslyn, VA, May 13, 2010.

Nissen, M.E., "Application Services for Command & Control," invited presentation, Naval Postgraduate School C4I Workshop, Monterey, CA (June 2010).

Nissen, M.E., "Knowledge Dynamics: Key Principles for Afloat Knowledge Managers," invited presentation, Navy Afloat Knowledge Managers Course, Dam Neck, VA (May 2010).

Nissen, M.E., "KM Education and Research: Naval Postgraduate School," invited presentation, KM2010 Conference, Washington, DC (May 2010).

Utschig, J., "Joint Battlespace Awareness ISR Integration Capability (JBAIIC) Program Initiatives, Experimentation and Results," Stuttgart, Germany, at the U.S. Austrian Command and Control Integration Board (CCIB), June 9, 2010.

Utschig, J., "Joint Battlespace Awareness ISR Integration Capability (JBAIIC) Program Initiatives, Experimentation and Results," Brussels, Belgium, at the NATO NetCentric Warfare Conference, June 23, 2010.

Zhao, Y., MacKinnon, D.J. and Gallup, S.P., "Lexical Link Analysis for Navy Strategic Communications Using Open Sources," invited presentation to Chief of Naval Information (CHINFO), at the Naval Postgraduate School, Monterey, CA, April 13, 2010.

Grants and Funding

Kimmel, R.A., "Joint Intelligence Operations Center (JIOC)", Defense Intelligence Agency (DIA), \$220,000.

Kimmel, R.A., "Commander, Third Fleet (C3F) Sea Trial Experimentation Support", Commander, Third Fleet (C3F), \$150,000.

Roeting, W.H. and Gallup, S.P., "Intelligence, Surveillance, and Reconnaissance (ISR) Net-T Field Exercise", United States Air Force (USAF), \$100,000.

Roeting, W.H. and Gallup, S.P., "Joint Battlespace Awareness ISR Integration Capability (JBAIIC) Support for Joint Expeditionary Forces Experiment (JEFX) 10-3 in Support of Joint Fighting Information to the Tactical Edge (J-FITE)", United States Joint Forces Command (USJFCOM), \$231,000.

Roeting, W.H., "National Reconnaissance Office (NRO) Applied Research, Field Experimentation, and Analysis", SAF/FMBIB-AFOY, \$150,000.

Wood, B.P. Gallup, S.P. "Transnational Information Sharing Cooperation (TISC) Joint Capabilities Technology Demonstration (JCTD)" U.S. Southern Command (SOUTHCOM), \$187,000.

Awards

Bergin, R., Center of Homeland Defense and Security Cohort Impact Award (March 2010).

Significant Professional Activities

Gallup, S.P., and all of **DISE**, successful completion of underway portion of Trident Warrior 2010, 24 June 2010.

Hutchins, S. G., NPS Testbed for Team collaboration Model Validation, collaboration and knowledge integration site visit, April 2010.

Hutchins, S. G., Kemple, W. G., Kleinman, D. L., Miller, S., and Pfeiffer, K. D., Operationalizing and Conducting Experiments for Maritime Operations Center (MOC) Planning, presented at ONR review meeting, Washington, D.C., May 11-12, 2010.

MacKinnon, D. J. completed APAN (All Partners Access Network) (in MAKALAPA, ComPacFleet) and Hard Kill/Soft Kill integration validation (aboard USS BENFOLD DDG 65) data collection for RIMPAC, in support of Trident Warrior 2010 (TW10), June 14, 2010.

Maule, R., Successful completion of Trident Warrior 10 Laboratory 2 Experiment - April 5-23 at SSC-SD. NPS served as the analysis lead for the experiment.

Roeting, W.H., Garza, V.R., Irvine, N.J., Jarvis, N.R., Pham, B.Q, Wood, B.P., (Joint Battlespace Awareness ISR Integration Capability team) participated in JEFX 10-3, Dugway, UT 05-23 April 2010.

Wood, B.P., met with the Mayor of Salinas, Dennis Donohue, and the Salinas Police Department Chief of Police to further discuss NPS/Department of Homeland Security research effort. Salinas, CA, 18 May 2010.

Wood, B.P., Irvine, N.J., Hutchins, S., MacKinnon, D.J., Deyerle, L.,S. MacKinnon, F.G., McKenzie, S.A., Redmon, B.J., Schulz, R.H., participated in Operational Demonstration Two, Trident Warrior 10 for Transnational Information Sharing Cooperation (TISC) Joint Capabilities Technology Demonstration (JCTD), San Diego, CA, Alameda, CA, and Monterey, CA 07-18 June 2010.

Wood, B.P., participated in United States Southern Command Science, Technology, and Experimentation Conference, Miami, FL 30 June 2010 (through 01 July).

PhD Student Accomplishments

none this quarter