

The 2004 International Symposium on  
**Collaborative Technologies and Systems**  
**(CTS 2004)**

**PROGRAM**

**January 18 - 23, 2004**

**The Catamaran Resort and Hotel  
San Diego, California, USA**

Sponsored by



The Society for Modeling and Simulation International – SCS  
P.O. Box 17900, San Diego, CA, USA

# The 2004 International Symposium on Collaborative Technologies and Systems (CTS 2004)

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Jacob Sukhodolsky, Saint Louis University, USA  
Alf Inge Wang, Norwegian University of Science and Technology (NTNU), Norway

**SUNDAY, JANUARY 18, 2004**

- 8:00 a.m. - 5:00 p.m. **CONFERENCE REGISTRATION**  
Location: **Kon Tiki Foyer**
- 8:50 a.m. - 9:00 a.m. **Welcome**  
**Symposium General Co-Chairs**  
Location: **Boardroom East & West**
- 9:00 a.m. - 10:30 a.m. **CTS 2004 TUTORIAL I (T I)**  
Title: **Mobile/Wireless Networks, Internet, and  
Multimedia: Enabling Technologies for  
Collaborative Systems**  
Speaker: **Professor S.R. Subramanya**  
University of Missouri at Rolla, USA  
Session Chair: **Dr. Michael Cox** (Wright State University, USA)  
Location: **Boardroom East & West**
- 10:30 a.m. - 10:45 a.m. **Coffee Break**  
Location: **Kon Tiki Ballroom**
- 10:45 a.m. - 12:15 a.m. **CTS 2004 TUTORIAL I (T I) – Cont.**  
Title: **Mobile/Wireless Networks, Internet, and  
Multimedia: Enabling Technologies for  
Collaborative Systems**  
Speaker: **Professor S.R. Subramanya**  
University of Missouri at Rolla, Missouri, USA  
Session Chair: **Dr. Michael Cox** (Wright State University, USA)  
Location: **Boardroom East & West**
- 12:15 a.m. - 1:30 p.m. **LUNCH** (On Your Own)
- 1:30 p.m. - 3:00 p.m. **CTS 2004 TUTORIAL II (T II)**  
Title: **What's the Use? Methods for Studying the  
Human Use of Collaborative Systems**  
Speaker: **Dr. Diane J. Schiano**  
CSLI, Stanford University, California, USA  
Session Chair: **Dr. Chia Han** (University of Cincinnati, USA)  
Location: **Boardroom East**
- 1:30 p.m. - 3:00 p.m. **CTS 2004 TUTORIAL III (T III)**  
Title: **The Collaboration Market and Technologies**  
Speaker: **David Coleman**  
Collaborative Strategies, California, USA  
Session Chair: **Dr. Kirk Weigand** (IFSD/AFRL, USA)

Location: **Boardroom West**

3:00 p.m. - 3:15 p.m.

Coffee Break

Location: **Kon Tiki Ballroom**

3:15 p.m. - 5:30 p.m.

**CTS 2004 TUTORIAL II (T II) – Cont.**

Title: **What's the Use? Methods for Studying the Human Use of Collaborative Systems**

Speaker: **Dr. Diane J. Schiano**

CSLI, Stanford University, California, USA

Session Chair: **Dr. Chia Han** (University of Cincinnati, USA)

Location: **Boardroom East**

3:15 p.m. - 5:30 p.m.

**CTS 2004 TUTORIAL III (T III) – Cont.**

Title: **The Collaboration Market and Technologies**

Speaker: **David Coleman**

Collaborative Strategies, California, USA

Session Chair: **Dr. Kirk Weigand** (IFSD/AFRL, USA)

Location: **Boardroom West**

5:30 p.m. -

Sunday's Wrap-up

Location: **Boardroom East & West**

6:00 p.m. -

WMC 04 Welcome Reception

Location: TBD

**Note: All CTS 2004 tutorials are available to attendees of CTS 2004 and WMC 04 free of charge.**

**MONDAY, JANUARY 19, 2004**

- 7:30 a.m. - 5:00 p.m.**                      **CONFERENCE REGISTRATION**  
Location: **Kon Tiki Foyer**
- 7:30 a.m. - 8:30 a.m.**                      **Informal Meet & Greet - Coffee / Pastries**  
**Monday Presenters and Session Chairs Get-together**  
Location: **MultiPurpose Room**
- 8:30 a.m. - 9:00 a.m.**                      **Western MultiConference Welcome and Opening Remarks**  
**Dr. Hamid Vakilzadian**, WMC 04 General Chair  
Location: **Aviary Ballroom**
- 9:00 a.m. - 10:00 a.m.**                      **WMC 2004 Keynote Speech**  
Title: **Self-Conscious Modeling**  
Speaker: **Dr. Kirstie L. Bellman**  
The Aerospace Corporation, California, USA  
Session Chair: **TBA**  
Location: **Aviary Ballroom**
- 10:00 a.m. - 10:30 a.m.**                      **Coffee Break**  
Location: **Kon Tiki Ballroom**
- 10:30 a.m. - 12:00 p.m.**                      **CTS 2004 KEYNOTE SPEECH I**  
Title: **Collaborative Dynabooks: A Research Agenda on Learning with Multimedia**  
Speaker: **Dr. Mark Guzdial**  
Georgia Institute of Technology, USA  
Session Chair: **Mr. William McQuay** (IFSD – AFRL, USA)  
Location: **Aviary Ballroom (Cockatoo)**
- 12:15 a.m. - 1:30 p.m.**                      **LUNCH** (On Your Own)

**SESSION 1:**

**INFRASTRUCTURE FOR COLLABORATIVE SYSTEMS AND APPLICATIONS**

Monday, January 19, 1:30 p.m. - 2:15 p.m.  
Session Chair: **Dr. Mads Nygard** (NUST, Norway)  
Location: **Aviary Ballroom (Cockatoo)**

- 1. Design and Implementation of Audio/Video Collaboration System Based on Publish/Subscribe Event Middleware**  
Geoffrey C. Fox, Wenjun Wu, Ahmet Uyar, and Hasan Bulut  
(Indiana University and Syracuse University, USA)
- 2. Merging Contributions in Cooperative Creation of 3D-Persons**  
Faysal Abouzaid, Omar Cherkaoui, Sabri Boutemedjet, Gilles Lemire, and Gilles Gauthier  
(Université du Québec à Montréal, Canada)

**SESSION 2:**

**COLLABORATIVE VIRTUAL ENVIRONMENTS**

Monday, January 19, 2:15 p.m. - 3:00 p.m.

Session Chair: **Dr. Boldizsar Bencsath** (Budapest University of Technology, Hungary)

Location: **Aviary Ballroom (Cockatoo)**

- 1. DEVISE: A Collaborative Virtual Environment for Integrated Concurrent Engineering**  
Kenneth J. Witt, Rebecca Giorcelli, Marjorie Darrah, Barry Ives, and Russell Peak  
(Institute for Scientific Research, Inc., WV and Georgia Institute of Technology, USA)
- 2. Collaborative Technologies in the Virtual Testbed Aerospace Operations Center (VT-AOC)**  
Tom Broadstock and Bradley Dunaway  
(SAIC, Ohio, USA)

**3:00 p.m. - 3:30 p.m.**

**Coffee Break**

Location: **Kon Tiki Ballroom**

**SESSION 3:**

**SECURITY AND COLLABORATION (SS)**

Monday, January 19, 3:30 p.m. - 4:30 p.m.

Session Chairs: **Drs. Christian Toinard** (ENSI-Bourges, France) and  
**Vincent Glaume** (CEA/DIF, France)

Location: **Aviary Ballroom (Cockatoo)**

- 1. Protection Against DDoS Attacks Based on Traffic Level Measurements**  
Boldizsar Bencsath and Istvan Vajda  
(Budapest University of Technology and Economics, Budapest, Hungary)
- 2. Trusted Linux Systems and Application to Cluster Architecture**  
Mathieu Blanc  
(CEA/DIF, France)
- 3. Team Access Control based on Organization Roles**  
Fahad T. Alotaiby  
(George Mason University, Virginia, USA)

**SESSION 4:**

**AGENT-BASED TECHNOLOGIES IN COLLABORATIVE SYSTEMS**

Monday, January 19, 4:30 p.m. - 5:30 p.m.

Session Chair: **Dr. Faysal Abouzaid** (Universite du Quebec, Canada)

Location: **Aviary Ballroom (Cockatoo)**

- 1. GTrans: An Application for Managing Mixed-Initiative Collaborative Planning During Emergency Response Situation**  
Trivikram Immaneni and Michael T. Cox  
(Wright State University, Ohio, USA)
- 2. Collaborative Document Recommendation in a CIS Framework**  
Clara Bighini and Antonella Carbonaro  
(University of Bologna, Bologna, Italy)
- 3. Deception as a Means for Power Among Collaborative Agents**  
Derrick Ward and Henry Hexmoor  
(University of Arkansas, Arkansas, USA)

**SESSION 5: 5:30 p.m. – 6:00 p.m.**

**CTS 2004 DEMO I**

***GlobalIMMCS – Global Multimedia Collaboration***

**Geoffrey C. Fox, Wenjun Wu, Ahmet Uyar and Hasan Bulut  
(Community Grid Computing Laboratory, Indiana University, USA)**

**Session Chair: Mr. Stephen Thomas (AFRL, USA)**

**Location: *Aviary Ballroom (Cockatoo)***

**6:00 p.m. -**

**Monday's Wrap-up**

**6:30 p.m. -**

**WMC 04 Exhibitors Reception**

**Location: *Kon Tiki Ballroom***



**TUESDAY, JANUARY 20, 2004**

**7:30 a.m. - 5:00 p.m.**

**CONFERENCE REGISTRATION**

Location: **Kon Tiki Foyer**

**7:30 a.m. - 8:30 a.m.**

**Informal Meet & Greet - Coffee / Pastries**

**Tuesday Presenters and Session Chairs Get-together**

Location: **MultiPurpose Room**

**8:30 a.m. - 10:00 p.m.**

**CTS 2004 KEYNOTE SPEECH II**

Title: **The Future of Collaboration**

Speaker: **David Coleman**

**Collaborative Strategies, California, USA**

Session Chair: **Dr. Azad M. Madni** (Intelligent Sys. Tech., Inc. USA)

Location: **Aviary Ballroom (Cockatoo)**

**10:00 a.m. - 10:30 a.m.**

**Coffee Break**

Location: **Kon Tiki Ballroom**

**10:30 a.m. - 12:00 p.m.**

**CTS 2004 PLENARY SPEECH I**

Title: **Collaboration Systems Design: Lessons Learned and Challenges**

Speaker: **Dr. Atul Prakash**

**University of Michigan - Ann Arbor, MI, USA**

Session Chair: **Dr. B. Chandrasekaran** (Ohio State Univ., USA)

Location: **Aviary Ballroom (Cockatoo)**

**12:00 p.m. – 1:45 p.m. WMC 2004 LUNCHEON**

**LUNCHEON SPEECH**

**New Directions in Simulation**

**Geoffrey Charles Fox**

**Community Grids Laboratory**

**Indiana University**

**LOCATION: Rousseau Room**

**1:45 p.m. - 2:00 p.m.**

**Short Break**

Location: **Kon Tiki Ballroom**

**SESSION 6:**

**KNOWLEDGE MANAGEMENT IN COLLABORATIVE SYSTEMS**

Tuesday, January 20, 2:00 p.m. - 3:00 p.m.

Session Chair: **Dr. Gordon K. Lee** (San Diego State University, USA)

Location: **Aviary Ballroom (Cockatoo)**

- 1. Putting User at the Center: Lessons for Knowledge Management from Knowledge-Based Systems Research (Invited Paper)**  
B. Chandrasekaran  
(The Ohio State University, Ohio, USA)
- 2. Grid Enabled Knowledge Management Services**  
Jawed Siddiqi, Babak Akhgar, Mehrdad Naderi and Saadat M. Alhashmi  
(Sheffield Hallam University, United Kingdom)
- 3. Using Knowledge Management to Improve Process Efficiency through Advanced Collaboration Technology**  
Gary A. Whitted  
(Ball Aerospace & Technologies, Corp., Ohio, USA)

**3:00 p.m. - 3:30 p.m.**

**Coffee Break**

**Location: Kon Tiki Ballroom**

**SESSION 7:**

**COLLABORATIVE ROBOTS**

Tuesday, January 20, 3:30 p.m. - 6:00 p.m.

Session Chair: **Dr. Kuo-Chi Lin** (University of Central Florida, Orlando, FL, USA)

**Mr. Louis Chan** (IFSD - Air Force Research Lab, Ohio, USA)

Location: **Aviary Ballroom (Cockatoo)**

- 1. The Development of a Testbed for Evolutionary Learning Algorithms for Mobile Robotic Colonies**  
Damion Gastelum, Thomas Jones, Amit Agarwal, Jay Kothari, Supriya Bhat, Hong Kyu Lee, Edward Grant, Andrew Nelson, Stuart Rubin, and Gordon K. Lee  
(San Diego State University, USA, Korea University of Technology and Education, Korea, North Carolina State University, and SPAWAR, USA)
- 2. Control of Collaborative Mobile Robots Subject to Nonholonomic Constraints**  
Chadwick A. Sylvester, Gloria J. Wiens, and Norman G. Fitz-Coy  
(University of Florida, USA)
- 3. Behaviors of UAV in a Swarm**  
Kuo-Chi Lin and Bill McQuay  
(University of Central Florida and Air Force Research Laboratory, USA)
- 4. Towards Collaborative Robots for Infrastructure Security Applications**  
Yi Guo, Lynne E. Parker, and Raj Madhavan  
(University of Central Florida; University of Tennessee, Knoxville; and NIST, USA)
- 5. Human and Robot Exploratory Teamwork**  
Ronald Provine, Steven Poltrock, James Troy and Michael Uschold  
(Boeing Company, Washington, USA)
- 6. A collaborative Search and Engage Strategy for Multiple Mobile Robots with Local Communication in Large-scale Hostile Area**

Xiaohui Cui, Rammohan K. Ragade, and Adel S. Elmaghraby  
(University of Louisville, Kentucky, USA)

**7. Social Reasoning and Collaboration among a Large Group of Robots**

Henry Hexmoor and K. Madhava Krishna  
(University of Arkansas, Arkansas, USA)

**SESSION 8: 6:00 p.m. – 6:30 p.m.      CTS 2004 DEMO II**

***Collaboration Tools for Integrated Missile Warning Mission Rehearsal and Exercise***

**Eric Loomis (Ball Aerospace & Technologies Corp., Ohio, USA)**

**&**

**John Friskie (Sytronics, Inc., Ohio, USA)**

**Session Chair: Mr. Mark Stephenson (SAIC, USA)**

**Location: Aviary Ballroom (Cockatoo)**

**6:30 p.m. -                      Tuesday's Wrap-up**  
**Location: Aviary Ballroom (Cockatoo)**

**6:30 p.m. -                      CAE Reception**  
**Location: Kon Tiki Ballroom**

**WEDNESDAY, JANUARY 21, 2004**

**7:30 a.m. - 5:00 p.m.**

**CONFERENCE REGISTRATION**

Location: **Kon Tiki Foyer**

**7:30 a.m. - 8:30 a.m.**

**Informal Meet & Greet - Coffee / Pastries**

**Wednesday Presenters and Session Chairs Get-together**

Location: **MultiPurpose Room**

**SESSION 9:**

**COLLABORATIVE SYSTEMS: RESEARCH AND DEVELOPMENT**

Wednesday, January 21, 8:30 a.m. - 10:00 a.m.

Session Chair: **Mr. Kenneth Allen** (SAIC, USA)

Location: **Aviary Ballroom (Cockatoo)**

**1. Collaboration Technology for Joint and Naval Applications: Past Progress and Future Directions**

LorRaine T. Duffy and Marion G. Ceruti

(Space and Naval Warfare Systems Center, California, USA)

**2. The Evolution Towards Intelligent Collaboration: A Reflective Meta-Level Approach to Media Space Design**

Wayne Robbins

(Defence Research & Development Canada)

**3. Context-driven Collaboration During Mobile C<sup>2</sup> Operations**

Azad M. Madni and Carla M. Madni

(Intelligent Systems Technology, Inc., California, USA)

**4. On-Line Collaborative Community**

Mark M. Stephenson

(Science Applications International Corporation (SAIC), Ohio, USA)

**10:00 a.m. - 10:30 a.m.**

**Coffee Break**

Location: **Kon Tiki Ballroom**

**SESSION 10:**

**COLLABORATION WORK AND ACCELERATION TECHNIQUES**

Wednesday, January 21, 10:30 a.m. - 12:00 p.m.

Session Chair: **Dr. LorRaine Duffy** (SPAWAR, USA)

Location: **Aviary Ballroom (Cockatoo)**

**1. Making Collaboration Work Even When You're Not! Saving Time and Money Through Advanced Collaboration**

Bradley D. Mallare, Jason M. DeWeese, and Tom Collier

(Ball Aerospace & Technologies Corp., Ohio, USA)

**2. Customization of Supply Chain Strategy: A Simulation and Collaborative Approach**

S. K. Tsoi, C.F. Cheung, and W.B. Lee

(The Hong Kong Polytechnic University, Hong Kong)

**3. Can You Accelerate Your Project Using Extreme Collaboration? A Model Based Analysis**

John Chachere, John Kunz, and Raymond Levitt

(Stanford University, California, USA)

#### 4. Collaborative Environments for Studies and Analysis

Stephen Thomas

(Air Force Research Laboratory, WPAFB, Ohio, USA)

**12:00 a.m. - 1:30 p.m. LUNCH (On Your Own)**

#### SESSION 11:

### e-DESIGN AND REALIZATION OF ENGINEERED PRODUCTS AND SYTEMS (SS)

Wednesday, January 21, 1:30 p.m. - 3:00 p.m.

Session Chair: **Dr. Bart O. Nnaji** (University of Pittsburgh, PA, USA)

Location: **Aviary Ballroom (Cockatoo)**

#### 1. Enabling Electronic Commerce within the e-Design Paradigm

Raymond R. Hoare

(University of Pittsburgh, Pennsylvania, USA)

#### 2. A Web-based Environment for Managing Product Knowledge

Akshaye Sikand and Janis Terpenney

(University of Massachusetts – Amherst, USA)

#### 3. An Encapsulated Design Model for Efficient Information Flow in e-Design

Ming-En (Alex) Wang

(University of Pittsburgh, Pennsylvania, USA)

#### 4. Scheduled, Role - Based Distributed Data Access Control Model for Data Sharing in Collaborative Design

Yan Wang, Pamela N. Ajoku, and Bart O. Nnaji

(University of Pittsburgh, Pennsylvania, USA)

**3:00 p.m. - 3:30 p.m.**

**Coffee Break**

**Location: Kon Tiki Ballroom**

#### SESSION 11: (Cont.)

### e-DESIGN AND REALIZATION OF ENGINEERED PRODUCTS AND SYTEMS (SS)

Wednesday, January 21, 3:30 p.m. - 3:55 p.m.

Session Chair: **Dr. Bart O. Nnaji** (University of Pittsburgh, PA, USA)

Location: **Aviary Ballroom (Cockatoo)**

#### 5. EMMA: The Extensible Multimedia Applications Framework for Developing Collaborative, Streaming Multimedia Applications

Bentz Tozer, Dara Kusic, Amy Ridilla, and Raymond R. Hoare

(University of Pittsburgh, Pennsylvania, USA)

#### 6. A Fuzzy Approach to Decision Making in Rapid Prototyping Benchmarking (no presentation)

Mani Mahesh, Y. S. Wong, J.Y.H. Fuh, and H.T. Loh

(National University of Singapore, Singapore)

**4:00 p.m. – 5:30 p.m.      CTS 2004 PANEL SESSION**

***Collaborative Technology – Policy, Practice & the Way Ahead***

**Moderator: Vance Saunders (Ball Aerospace & Technologies Corp., Ohio, USA)**

**Panelists:** **Paul Bailor** (Lockheed Martin Integrated Systems & Solutions)  
**Vasco Drecun** (Collaborative Product Development Associates, LLC)  
**Charles Nietubicz** (HPC Division, U. S. Army Research Laboratory)  
**Virginia Williamson** (Air Force Program Executive Office, C3 Support Systems)

**Location: Aviary Ballroom (Cockatoo)**

**SESSION 12: 5:30 p.m. – 6:00 p.m.      CTS 2004 DEMO III**

***Composing Executable Architectures in VSO***

**Dr. John Woodring (Modasco, Inc., California, USA)**

**Session Chair: Mr. Gary Whitted** (Ball Aerospace & Technologies, Corp., USA)

**Location: Aviary Ballroom (Cockatoo)**

**6:00 p.m. -**

**Wednesday's Wrap-up**

**Location: Aviary Ballroom (Cockatoo)**

THURSDAY, JANUARY 22, 2004

7:30 a.m. - 5:00 p.m.

**CONFERENCE REGISTRATION**

Location: **Kon Tiki Foyer**

7:30 a.m. - 8:30 a.m.

**Informal Meet & Greet - Coffee / Pastries**

**Thursday Presenters and Session Chairs Get-together**

Location: **MultiPurpose Room**

**SESSION 13:**

**DISTANCE AND COLLABORATIVE e-LEARNING**

Thursday, January 22, 8:30 a.m. - 9:15 a.m.

Session Chair: **Dr. Raymond R. Hoare** (University of Pittsburgh, PA, USA)

Location: **Aviary Ballroom (Cockatoo)**

**1. Multi Platform Low Bandwidth Remote Lecturing**

Renzo Davoli

(University of Bologna, Bologna, Italy)

**2. A Case for a Collaborative Computing Tool for Image Processing**

Jeffrey A. Shafer, Joseph T. Fieler, Shawn T. Nichols, Frank A. Scarpino, and John G. Weber

(University of Dayton, Ohio, USA)

**SESSION 14:**

**WEB-ENABLED COLLABORATION AND SERVICES**

Thursday, January 22, 9:15 a.m. - 10:00 a.m.

Session Chair: **Dr. Renzo Davoli** (University of Bologna, Italy)

Location: **Aviary Ballroom (Cockatoo)**

**1. Architecture and Data Model of a WebDAV-based Collaborative System**

Sunghun Kim, Kai Pan, Elias Sinderson, and E. James Whitehead, Jr.

(University of California, Santa Cruz, California, USA)

**2. Integrating New Web/Java Technologies: Results from KnowledgeKinetics™ Version 4.0 Research and Development**

Ty W. Hayden and Eric C. Loomis

(Ball Aerospace & Technologies Corp., Ohio, USA)

10:00 a.m. - 10:30 a.m.

**Coffee Break**

Location: **Kon Tiki Ballroom**

10:30 a.m. - 12:00 p.m.

**CTS 2004 PLENARY SPEECH II**

Title: **Mixed-Initiative Computing**

Speaker: **Dr. Michael T. Cox**

Wright State University, Ohio, USA

Session Chair: **Dr. Marion Ceruti** (SPAWAR, USA)

Location: **Aviary Ballroom (Cockatoo)**

**12:00 a.m. - 1:30 p.m. LUNCH (On Your Own)**

**SESSION 15:**

**MOBILE COLLABORATIVE WORK (SS)**

Thursday, January 22, 1:30 p.m. - 2:15 p.m.

Session Chairs: **Drs. Heri Ramampiaro and Alf Inge Wang**  
(Norwegian University of Science and Technology, Norway)

Location: **Aviary Ballroom (Cockatoo)**

- 1. Adaptive Consistency Management Support for Limited Capacity Devices in Ad-hoc Mobile Networks**  
Jim McGovern and Caspar Ryan  
(RMIT University, Melbourne, Australia)
- 2. A Group Mobility Prediction Scheme with Call Admission Control in Wireless Cellular Networks**  
John Tsiligaridis and Raj Acharya  
(State University of New York at Buffalo, New York, USA)

**SESSION 16:**

**COLLABORATIVE NETWORKING INFRASTRUCTURE (SS)**

Thursday, January 22, 2:15 p.m. - 3:00 p.m.

Session Chair: **Dr. Junaid A. Zubairi**  
(State University of New York at Fredonia, New York, USA)

Location: **Aviary Ballroom (Cockatoo)**

- 1. Challenges and Issues in Global Collaborative Networking**  
Junaid Ahmed Zubairi  
(State University of New York-Fredonia, USA)
- 2. Run-Time Monitoring and Dynamic Binding of Web Services**  
Zafar U. Singhera  
(ZAF Training and Consulting, California, USA)

**3:00 p.m. - 3:30 p.m. Coffee Break**  
Location: **Kon Tiki Ballroom**

**SESSION 17:**

**INDUSTRIAL TRACK**

Thursday, January 22, 3:30 p.m. - 4:30 p.m.

Session Chair: **Dr. John Woodring** (Modasco, Inc., USA)

Location: **Aviary Ballroom (Cockatoo)**

- 1. Enhancing Complex System Management Through Collaborative Technologies**  
Bruce Denner, David Martin, Eric Loomis, and Jim Nagy  
(Windmill International Inc., Ball Aerospace & Technologies Corp., and AFRL/IFTD, USA)
- 2. Performance Modeling of Collaborative ETL Processing**  
Tsae-Feng Yu  
(Oracle Corporation, New Hampshire, USA)
- 3. The SPEEDES CASS Motion Library**  
Craig Lammers, Kristy Mayo, and Jeffrey Steinman  
(RAM Laboratories, Inc., California, USA)



**SESSION 18:**

**WORK - IN - PROGRESS**

Thursday, January 22, 4:30 p.m. - 5:30 p.m.

Session Chair: **Dr. Wayne Robbins** (Defence Research & Development Canada)

Location: **Aviary Ballroom (Cockatoo)**

**1. The JBISim Project: Using Detailed Analytical Simulation and Model Abstraction to Investigate and Evaluate Joint Battlespace Infosphere (JBI) Support Technologies**

David Green, Jerome Reaper, and Joel Dallaire

(Science Applications International Corporation (SAIC), Ohio, USA)

**2. Development of a Distributive Collaborative Decision Support Environment for Affordability Assessments**

Ronald D. Shroder, Sam Boykin, DC Conroy, and John Weaver

(Frontier Technology. Inc., Ohio, USA)

**3. A Computer Simulation Experience to Develop and Assess Systems Based and Practice Based Learning and Improvement Competencies in Primary Care Residents**

Durwin S. Talon and Deanna Willis

(Indiana University – Purdue University at Indianapolis, Indiana, USA)

**SESSION 19: 5:30 p.m. – 6:00 p.m.**

**CTS 2004 DEMO IV**

***Improving Process Execution Efficiency through Collaboration Decision Support and Knowledge Management systems***

**Gary A. Whitted and Bradley D. Mallare**

**(Ball Aerospace & Technologies, Corp., Ohio, USA)**

**Session Chair: Mr. Bruce Denner** (Windmill International Inc., USA)

**Location: Aviary Ballroom (Cockatoo)**

**CLOSING  
SESSION:**

**CTS 2004 CONCLUSIONS AND FINAL REMARKS**

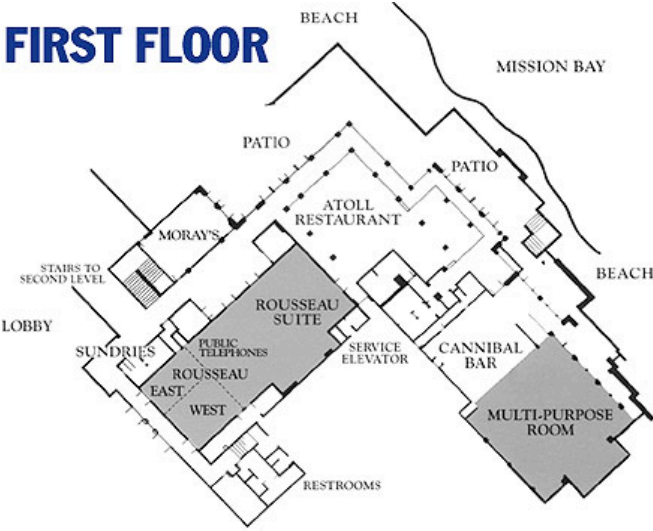
Thursday, January 22, 6:00 p.m. - 6:15 p.m.

Session Chair: **CTS Organizers**

Location: **Aviary Ballroom (Cockatoo)**

**Floor Plan:**

**FIRST FLOOR**



**SECOND FLOOR**

