History of the ICCRTS

In 1995, the Command and Control Research Program (CCRP), within the Office of the Secretary of Defense, held the first International Command and Control Research and Technology Symposium (ICCRTS) at the National Defense University in Washington, D.C. This meeting built upon a series of events established during the 1970s by the Office of Naval Research and the Massachusetts Institute of Technology that brought together interested researchers to exchange ideas on command and control (C2), its measurement and assessment, and the impact of new technologies on the C2 process.

The initial meeting was modest in size (63 participants) and included only a handful of non-U.S. participants. Subsequent meetings have been held on a bi-annual basis in the United Kingdom (1996, 2006), Sweden (1998), Australia (2000), Canada (2002), and Denmark (2004). Meetings in other years have been held in the United States. Participation has grown substantially, to include hundreds of participants from dozens of nations. Equally important, the ICCRTS has developed into the meeting where the best C2 analysts from around the world exchange ideas about the state-of-the-art and seek to influence the state-of-the-practice within the United States, its coalition partners, and the missions they undertake. The Symposium is a meeting place for professional researchers, academics, active duty and reserve officers, and policy makers.

The ICCRTS has consistently focused on leading-edge issues involving (a) new concepts in C2 (b) new technologies and their potential impact on C2, and (c) feedback and evidence from experiments, exercises, and real-world operations. The Symposium is also an important forum for discussion of coalition and collective C2 issues and for examining the complex endeavors (stabilization, operations, disaster relief) involving a variety of entities including military, civilian, government, international organizations, PVOs and NGOs.

The Theme of the 14th ICCRTS

The theme for the 14th International Command and Control Research and Technology Symposium is “C2 and Agility.” Agility is a key property for C2 in the 21st century. Since military forces work with an increasing number and variety of partners (coalition militaries, interagency, international organizations, non-governmental organizations, and private industry) in carrying out a wide range of missions, no single approach to C2 will prove effective. Research has shown that C2 must be robust, resilient, responsive, innovative, flexible, and adaptive in order to be effective in today’s operating environments. Exploring aspects of C2 and Agility, including better concepts, metrics, approaches, socio-technical systems, architectures, models, and analyses will form the central focus of this year’s ICCRTS.
Review and Acceptance Process

The study of Command and Control, and this Symposium, has increased significantly over the years. This has resulted in an increasing number of paper submissions competing for the available time slots.

Although participants have indicated that they find the vast majority of the papers to be of very high quality, feedback also suggests that participants would welcome more rigorous review and a raising of the bar that governs acceptance. A number of people have also suggested that we should review the presentation materials as well as the papers. Key date deadlines have been implemented to increase the amount of time for Track Chairs to review draft papers and provide detailed feedback to authors, as well as increasing the amount of time for authors to revise their papers. This is our ongoing effort to provide you with an event of the highest possible quality. We believe that these steps will allow authors to improve their papers and presentations, and thereby improve the overall quality of the Symposium.

While we have found abstracts useful in identifying papers that are, for any number of reasons, not appropriate for this Symposium, abstracts do not provide enough information for decisions regarding paper acceptance. Therefore, while we will still continue to accept abstracts as first submissions, authors are urged to submit papers for review as soon as possible. We will make every effort to provide timely feedback to authors. This rolling review process enables us to give the required attention to all papers that are submitted and maximize the time available for authors to make modifications to improve their papers. We understand that many authors will be in the middle of projects when the time comes to submit first drafts of their papers. If this is the case, this should be noted and we will expect the author to update the paper and presentation prior to final submission.

Thank you for your participation in the ICCRTS. If accepted, your professional paper will be included in a CD of the Symposium proceedings and also posted on the Events page at www.dodccrp.org. Please review the author guidelines and timelines to ensure that you are aware of and adhere to the ICCRTS submission process.

Key Dates (Please note: all deadlines are final and will be strictly enforced.)

Submit your abstract, outline, or initial draft paper by **November 3, 2008**

You will receive an invitation to submit a formal draft paper by **November 26, 2008**

Your formal draft paper and draft presentation must be submitted by **January 20, 2009**

You will receive CCRP reviewer comments by **March 2, 2009**

Your final revised paper must be submitted by **March 23, 2009**

Your final presentation must be submitted by **May 26, 2009**
The 14th ICCRTS will be comprised of tracks on various topics. Each presentation will be given 30 minutes: 20 minutes to present, 5 minutes for questions and discussion, and 5 minutes to allow individuals to move to the next presentation of their choice. The Track Chairs will provide feedback to assist authors in finalizing their papers and presentations.

**Topic 1: C2 Concepts, Theory, and Policy**

The changing nature of the missions being carried out, the impact of new information technologies, and the need to work in richer contexts (joint, coalition, inter-agency, etc.) have resulted in new approaches to C2. This topic examines issues related to designing, analyzing, and implementing new C2 concepts. The transformation of DoD will require updated policies and governance processes to manage this evolution successfully. New policies will need to address integration, increase collaboration, enhance support roles, and provide agility to the warfighter.

**Topic 2: Networks and Networking**

This topic addresses network designs and topologies, as well as the social or socio-technical nature of networking, and how we can continue to understand and improve it. The related issue of coalition interoperability requires new organizational and process models that reflect coalition operations and behaviors, and the development and application of international standards.

**Topic 3: Information Sharing and Collaboration Processes and Behaviors**

This topic will explore the cognitive and social processes used when sharing information, and the patterns of behavior associated with them. It will emphasize collaboration as a tool for improving information, creating shared awareness and shared understanding, generating courses of action, supporting decision making, planning, and execution.

**Topic 4: Collective Endeavors**

This topic addresses aspects of cooperation between civilian and military organizations, and multinational endeavors between different nations, which is necessary for success in complex endeavors—from disaster relief and peacekeeping to counter-insurgency and Network Centric Warfare campaigns—to meet the emerging needs of a situation and bring all assets to bear. Topics include procedures, security, languages, skills, organizational culture, or similar subjects in the context of lessons learned from civil-military and multinational endeavors.

**Topic 5: Experimentation and Analysis**

This topic includes experiments and analyses related to the application of network-centric concepts and approaches. Experiments and analyses may focus on any aspect of command and control—networking the force, information sharing, trust, shared awareness, shared understanding, decision-making, planning, execution, and assessment of ongoing operations.
Topic 6: Modeling and Simulation
This topic encompasses models and simulations that represent emergent behavior, such as C2 in peace operations, allocating sensors, the effects of social networks, data management, self-organizing behaviors, scenario management, and the network-centric operations value chain, among other M&S topics.

Topic 7: C2 Approaches and Organization
The changing nature of missions, new technologies, and richer endeavor contexts may require new organizational forms. This topic examines designing, analyzing, and implementing new organizational forms, as well as research on issues relevant to the transformation from the Industrial Age to the Information Age, and attempts to describe new organizational forms and approaches (e.g., edge organizations, “power to the edge” concepts).

Topic 8: C2 Assessment Tools and Metrics
Information Age operations require that metrics and measurements be rethought. Metrics for agility, effects-based operations, networks, and networking are encouraged, as are measures of C2 process, quality, and impact. This topic also focuses on methodologies, tools, and techniques to analyze C2 and its impact on operations.

Topic 9: C2 Architectures and Technologies
This topic includes discussions of the nature of architectures suitable for emerging concepts of operations and the infostructure necessary to support them. Included are coalition and cooperative C2 arrangements, the introduction of new frameworks and architectures currently in development, and the examination of the practice of creating architectures.

Topic 10: Collaborative Technologies for Network-Centric Operations
This topic will integrate papers on new concepts, models, case studies, and experiments exploring collaboration and data-sharing technologies for different types of network-centric operations.
Abstract Submission

Abstract submissions must contain a cover page that includes the following information:

14th ICCRTS
“C2 and Agility”
Title of Paper
Topic(s)
Name of Author(s) [indicate student with STUDENT]
Point of Contact
Name of Organization
Complete Address
Telephone
E-mail Address

In addition to the abstract, we encourage authors to submit an outline for the full paper. This will enable us to provide more useful feedback early in the review process.

Please Comply with the Following:

- Title of Paper: 15 word max.
- Suggested Topic: Please provide up to 3
- Body of Abstract: 200 word max. Classification: All work must be Unclassified
- Body of Paper: 20 pages max. (not including appendices and references)

Multiple Authors

For papers with multiple authors, identify one point of contact. Our Coordinator will communicate with this person regarding the Symposium. This point of contact will be responsible for passing on any information to the other authors of the paper.

Eligibility for Student Paper

All students who are currently enrolled as graduate students and have 6 credit hours or more or are undergraduates and have 12 credit hours or more (or the European Credit Transfer and Accumulation System (ECTS) equivalent) of courses are eligible to submit ICCRTS abstracts/papers as a student. The level and current stage of study must be included (undergraduate: e.g., sophomore, or graduate: Master’s or Research Doctoral degrees, number of years in program). Abstract submissions must provide proof of student status with either a written statement from the department chair or a copy of the college or university course schedule for the current or immediate past quarter or semester. When more than one author is listed on the paper, it may be designated as a student paper if and only if the student applicant is the primary author (listed first and identified as student). If the other authors are faculty members, the faculty adviser must provide a written statement affirming that the student contributed to over 50 percent of the content.
Reporting Results of Analyses & Experiments

When reporting experimental results, you must provide sufficient information so that the experiment could be repeated, as per accepted scientific studies. This means providing an overview of the experimental design (within-subject, between-subject, Latin square, etc.), describing statistical processing methods used (ANOVA, Regression Analysis, etc.), providing the measure of statistical validity for any conclusions you draw (in the body of the paper), and explaining the implications of your conclusions.

Paper Criteria

Papers will be judged on the originality and quality of the argument or discussion, the relevance and timeliness of the topic, and on quality of the writing style. For the 14th ICCRTS, our Reviewers and Editors will be reading your papers with the following criteria in mind:

1. The paper is appropriate for the theme and topics of Symposium.
2. The paper is intellectually stimulating.
3. The literature review is adequate/appropriate.
4. The research design is adequate/appropriate.
5. The data analysis is adequate/appropriate.
6. The conclusions are reasonable.
7. The paper advances the state of knowledge.
8. The paper is logical and consistent.
9. The paper’s argument is persuasive.
10. The writing is clear and readable.

Papers will not be accepted if:

1. Topics stray from the conceptual focus of the Symposium.
2. Attempts are made to promote or sell specific goods and/or services.
3. Claims are unsubstantiated or facts are inaccurate.
4. Scientific merit is lacking.
5. Writing/explanations are poor.

Paper Submission Point of Contact

Please email all submissions to: ccrts-iccrt@dodcrp.org

For more information, please visit us online at: http://www.dodcrp.org
Location

The Omni Shoreham Hotel
2500 Calvert Street NW (at Connecticut Avenue)
Washington, DC 20008
Phone: 202-234-0700 or Fax: 202-265-7972

The CCRP is delighted to be able to host the 14th ICCRTS at the historical landmark Omni Shoreham Hotel. The Omni is celebrating its 75th year of service to the Washington DC area as a host location for U.S. Presidential Inaugural Balls, national and international conferences, international dignitaries, and renowned entertainers such as the Beatles. The hotel was also used as a film location for *The Pelican Brief, No Way Out*, and other films.

Accommodations

The ICCRTS was fortunate to reserve a “limited” block of hotel rooms at the exceptional government per diem rate of $209.00 USD for the Symposium. In addition, a special rate of $229.00 USD per night has been negotiated for those who are not eligible for the government rate.

**** Participants are encouraged to make your reservations as quickly as possible due to the limited number of rooms at these special rates.****

The Omni Shoreham is centrally located 1 block from the Woodley Road Metrorail stop and other public transportation systems. The Omni is within walking distance of a diverse selection of Connecticut Avenue restaurants and shops. Also nearby are the National Zoo, the National Cathedral, the Adams Morgan neighborhood, Dupont Circle, Rock Creek Park, and other interesting and popular DC attractions.