

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 074-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503

1. AGENCY USE ONLY (Leave blank)

2. REPORT DATE

February 6, 2003

3. REPORT TYPE AND DATES COVERED

Final February 2000 - December 2002

4. TITLE AND SUBTITLE

Using Shared Models of Activity for Coalition Task-Driven Cooperation

5. FUNDING NUMBERS

F30602-00-1-0024
DARPA J662/02

6. AUTHOR(S)

Austin Tate, Jeff Dalton, John Levine and Jussi Stader

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Artificial Intelligence Applications Institute
The University of Edinburgh
Appleton Tower, Crichton Street
Edinburgh EH8 9LE, United Kingdom

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

Air Force Research Laboratory
525 Brooks Road
Rome
NY 13441-4505

10. SPONSORING / MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT

Approved for public release; distribution unlimited

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 Words)

An I-X Process Panel (I-P²) supports a user or collaborative users in selecting and carrying out "processes" and creating or modifying "process products". Both processes and process products are abstractly considered to be made up of a set of "Issues" which are associated with the processes or process products to represent unsatisfied requirements, problems raised as a result of analysis or critiquing, etc. They also contain "Nodes" (activities in a process, or parts of a process product) which may have parts called sub-nodes making up a hierarchical description of the process or product. The nodes are related by a set of detailed "Constraints" of various kinds. Finally there can be "Annotations" related to the processes or products, which provide rationale, information and other useful descriptions. Processes and process products in I-X are represented in the <I-N-C-A> (Issues - Nodes - Constraints - Annotations) Constraints Model of Synthesized Artifacts. I-X and I-X Process Panels (I-P²) have been demonstrated in a realistic multi-national coalition military scenario. They are being considered for use in a number of future joint and multi-national forces experiments and demonstrations.

14. SUBJECT TERMS

Planning, Task Support, Coalition, Collaboration, AI

15. NUMBER OF PAGES

181

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT

UNCLASSIFIED

18. SECURITY CLASSIFICATION OF THIS PAGE

UNCLASSIFIED

19. SECURITY CLASSIFICATION OF ABSTRACT

UNCLASSIFIED

20. LIMITATION OF ABSTRACT

UL

