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**DPRC**  
**Grant #:DE-FG01-95IS50316**  
**Performance Report**  
**Annual**  
**October -September 1996**

**Introduction**

This report describes the progress achieved by the Declassification Productivity Research Center (DPRC) during the first year of its activities under DOE Grant DE-FG01-95IS50316. It is being submitted in lieu of either a separate annual or the forth quarterly performance report in anticipation of the continuation of the Grant into its second year. The intent of this report is to address progress against the statement of work (SOW) of the Grant.; accordingly, its format follows that of the SOW, and describes the products resulting from DRPC activities this past year.

**Background**

The DPRC was established at GWU as an independent, world-class research capability and computer facility to support the DOE Declassification Productivity Initiative (DPI). The goal of DPI is to increase the flow of unrestricted government information to the public. To this end, the work at GWU involves both basic and applied research in the areas of (1) system-level declassification process analysis and modeling, (2) development of computer systems to automate declassification processes, including text analysis and interpretation, (3) coordination/ integration of new technology among into the processes, and (4) development and promulgation of inter-operability and document transfer standards.

**Accomplishments of the DPRC**

SOW Element = 231. Coordination of On-going Research: Carry out activities in regard to the research programs sponsored by the Agencies to promote cross fertilization of results and progress, and to reduce redundancy between their development programs, including: research review meetings, annual research planning meetings, and progress reports.

The DPRC organized and hosted several meetings of the Automation Working Group (AWG) of the multi-agency Declassification Productivity Management Council (DPMC) at the GWU Virginia Campus. Two of these meetings, specifically those dedicated to AWG planning, were facilitated by DPRC personnel in GWU's computer-based Group Decision Support (GDS) facility to promote communications and cross fertilization among the agencies.

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**MASTER**

The DPRC attended, and participated in the Second Intelligence Community Information and Classification Management Conference, held at MITRETEK on May 21 and 22, 1996. A DPRC booth, manned by student interns and faculty members, distributed information about the center and its on-going projects throughout the conference.

SOW Element = 232. Identify, Evaluate and Select: Work with appropriate technologies and new research initiatives which have applicability to document declassification: attend national conferences, conduct independent assessments, develop analytical models and establish and maintain Internet World Wide Web sites, etc. for knowledge exchange.

The DPRC carried out a system-level study of the interactions among several different agencies engaged in the declassification of documents involving multi-agency equities. Both Freedom of Information Act (FOIA) and Executive Order 12598 reviews were considered. The study approach and results are intended to help reduce processing time, declassification errors and government costs, and to improve the public's access to information currently being unnecessarily safeguarded by the government. The final report is being reviewed by the agencies which participated in the study prior to distribution.

The DPRC also developed and experimented with dynamic simulation models involving (1) current and future declassification processes within DOE and (2) interactions among several agencies engaged in FOIA and EO 12598 declassification reviews of documents with multiple equities. These models represent the work flows within and among agencies, and provide the capability to investigate expected impacts of changes in process characteristics and policies on over-all performance and throughput. The final report for this study is also being reviewed by the agencies which participated in the study prior to distribution.

The DPRC has developed and now maintains an Internet Web Site (<http://www.va.gwu.edu/dprc/>) as a communication tool for the following communities:

Federal agencies involved in declassification.

Academic researchers and commercial enterprises working on technologies useful in declassification.

The general public with an interest in declassification-related activities and technologies.

The DPRC also operates an Internet List Serve System.

([AWG-list@seas.gwu.edu](mailto:AWG-list@seas.gwu.edu)) on behalf of the AWG to support interactions and convenient communications among the AWG members, especially between scheduled AWG meetings.

SOW Element = 233. Carry out Research Activities: Involve both state-of-the art (advanced) and enabling (in place) technologies/ approaches to declassification processes: support MS and Ph.D. thesis and faculty research projects of relevance to declassification.

The research projects described above under SOW (projects 1 and 2) are both on-going efforts, involving four GWU Ph.D.-level graduate students. These projects were conducted as independent research efforts by the students, and are being further considered for their appropriateness for dissertation research

The DPRC has also carried out research on a novel approach to the development of a computer system to support the redaction process. This approach is based on a theory under development by one of the DPRC principals, called \*deep structure.\* Deep Structure seeks to identify and code the forms of the rules which describe knowledge, rather than the rules themselves. The power of Deep Structure lies in (1) the intrinsic stability of rule forms to process changes and (2) the programming simplicity afforded to the software development and maintenance processes. A prototype redaction system has been developed using Deep Structure, and is currently under test and evaluation to assess its utility and effectiveness.

SOW Element = 234. Evaluate Existing and New technologies: For both state-of-the-art (advanced) and enabling (in place) technologies, by means of analytical models and/ or prototype demonstrations: conduct evaluations, verify and validate theoretical models, and develop and test prototype models.

Project 2 under SOW = 232 (above) provides for analytical representation of various new technologies as well as for effectiveness testing. Future utilization of these simulation models could conceivably provide guidance for technology developments with high potential to maximize declassification process effectiveness, error minimization, etc. .

The DPRC has conducted preliminary investigations into the feasibility and utility of establishing a computer-based declassification test bed at the GWU Virginia facilities. The test bed would emulate the hardware and software declassification systems and processes currently being used at the Agencies, and would provide \*walk in\* capabilities for the following activities:

- demonstrations of operations and interoperability of systems or methodologies used at the Agencies

- training (by an independent party) of agency personnel on the use of the system elements and on the declassification process being used

- system configuration and interaction policy studies for multi-agency declassification process effectiveness

SOW Element = 235. Disseminate (Evolving) Technology: Specifically, for technologies that related to the declassification processes and associated activities: develop and offer graduate-level courses, and special training; publish and present research results, host colloquia and invited guest lectures, and publish and distribute technical reports.

No special courses have been developed to date, but as described above, several instances of technology transfer have been initiated by the DPRC during its first year of operation.

The DPRC Internet Web Site has been expanded to provide for dissemination of technologies and other information of relevance to the declassification community. Several technology reports and project results, from DPRC projects as well as from other research centers, are now available on the web site.

The DPRC publishes and distributes a quarterly newsletter, The Communicator, for information dissemination within the declassification community. Two issues were published in this year, one in the Spring and another in the Summer. The distribution list has already reaches 300 persons and is still growing as more people learn about the utility of this publication.

SOW Element = 236. Develop Inter-Operability and Declassification Standards: For use within the Agencies for declassification systems and processes and for document format and file specifications.

The DPRC has developed a preliminary document format and file transfer standard to facilitate interactions among the Agencies for documents with multiple-agency equities. This standard has been presented to the AWG and was favorably received. It is currently being clarified to suit the needs and expectations of all the Agencies, prior to its acceptance and implementation.

## **Participants**

The above accomplishments involved the efforts of the following group of ten (10) individuals at GWU :

Professors Richard Scotti, Hermann Helgert, and Robert Harrington, Co-principal Investigators

Mr. Jeffery Long, Senior Research Associate

Ms Carol Lilly, Ms Jana Hayes, and Mr. Youngsuck Oh, Graduate Fellows

Mr. Rayed Hamdan, Mr. Douglas Stanley and Mr. Nadir Khan, Graduate Researchers

### **Future Projects at the DPRC**

The program at the DPRC for its second year will pick up from the above accomplishments and move forward on all fronts to increase the service and utility of the DPRC to the declassification and academic communities, and to the general public.

The DPRC research program for the 1996-1997 contract year is described on the following page, which was submitted with our grant renewal request letter to DOE, dated July 23, 1996.

DOE GRANT DE-FG01-95IS50316

Research Plan

Period October 1, 1996 to September 30, 1997

During the period October 1, 1996 to September 30, 1997 GW proposes to carry out a number of continuing and new research projects under the original statement of work. We will concentrate on the following ten project activities:

1. Continue the development of the Web site by expanding the site's content and creating linkages to other Web sites with related content. Specifically, we intend to carry out the following tasks:

- o Improve the structure and formats to enhance ease of use and understanding.

- o Monitor the Web for information and linkages of relevance to the Office of Declassification's mission.

- o Manage linkages to other sites to ensure that they are still relevant and active.

- o Develop Web pages for "Government Secrecy", including a library of information related to the history, policy and opinions on issues concerning classification, declassification, and public access.

2. Continue and expand the publication and dissemination of our newsletter, "The Communicator", and create a regular series of progress reports and special reports on topical research results and technology evaluations.

3. Continue active participation in and contribute to the work of the Automation Working Group (AWG).

4. Continue the multi-agency declassification characterization and documentation study begun in the spring of 1996. Expand the scope of the study to include several other agencies, in addition to the four included in the first part of the study.

5. Continue and expand the multi-agency simulation modeling study begun in the spring of 1996. Carry out model validation studies using operational data and exercise the model to predict feasible performance improvement approaches.

6. Collect information and conduct assessments of declassification-relevant technologies. Prepare and disseminate technology status reports as documents and via the DPRC Web site.

7. Design, procure and install a computer-based testbed for the evaluation of declassification tools and methodologies and the demonstration of interoperability of systems and technologies used in the declassification process. Provide "walk-in" accessibility for the testing and demonstration of usability and applicability of innovative tools and procedures.

8. Develop standards for the configuration of declassification systems and processes, and for the formatting and transfer of documents.

9. Perform a feasibility study on the implementation of a multi-agency multimedia data network for the exchange of documents throughout the declassification process, and for access to information on declassification technologies and methodologies.

10. Perform a conceptual design study for a database and clearinghouse to catalogue, manage and make available to the public declassified documents, as well as information on declassification technologies, including evaluations of usability and applicability.