



FOIA-85-469

Appendix C/1

TECHNICAL ASSISTANCE IN SUPPORT OF  
THE NRC ADP PLANNING FUNCTION

Contract Number: NRC-33-85-324

TASK ORDER NUMBER 001

TECHNICAL EVALUATION OF DATABASE MANAGEMENT SYSTEMS

FINAL REPORT

SUBMITTED TO:

U.S. Nuclear Regulatory Commission  
Office of Resource Management  
Division of Automated Information Services  
Washington, DC 20555

SUBMITTED BY:

The MAXIMA Corporation  
7315 Wisconsin Avenue, Suite 900N  
Bethesda, Maryland 20814

12 June 1985

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## TECHNICAL EVALUATION OF DATABASE MANAGEMENT SYSTEMS

### 1. BACKGROUND

In November 1984, the U.S. Nuclear Regulatory Commission (NRC) issued a task order to The MAXIMA Corporation under Contract Number NRC-33-85-324 "Technical Assistance in Support of the NRC ADP Planning Function". The task order called for the technical evaluation of database management systems (DBMS) proposed by various software vendors.

The Commission had already decided to develop a Corporate Data Network (CDN) for use within the Agency. That network will require the use of a database management system and supporting software to serve as the primary tool for the development of the CDN. The DBMS selected will then support continuing maintenance, enhancement and production use of the system.

A competitive Request for Proposals (RFP) was issued by NRC in order to determine the availability and capability of various database management system software and integrated supporting software. The RFP required offerors to address specific mandatory requirements and desirable features with references to their product technical literature. Technical specifications, manuals, and brochures were to be submitted along with their proposals. Six proposals were received by NRC in response to this solicitation. These proposals were then forwarded to MAXIMA for an independent

technical evaluation. MAXIMA assessed each proposal separately, using subcriteria developed to support the RFP DBMS requirements and Evaluation Criteria. After performing this effort, MAXIMA briefed NRC on the strengths and shortfalls of each proposal.

The DBMS RFP stated that demonstrations of vendor proposed products might be requested to verify that the proposed DBMS had the capabilities documented in the technical proposal. After the evaluation of the six technical proposals, that met all of the mandatory requirements were selected and asked to conduct a Live Test Demonstration (LTD) of their DBMS product. MAXIMA participated in the vendor demonstrations, assessing the capabilities of each system and recording individual test results. MAXIMA then briefed NRC on their findings and overall recommendations.

Ex. 5

## 2. EVALUATION CRITERIA

The candidate products were evaluated by MAXIMA against predefined selection criteria contained in the RFP. MAXIMA assessed the technical capabilities substantiated in each proposal individually as they related to the mandatory and desirable requirements set forth in the selection criteria, pointing out and discussing those aspects of each individual proposal that supported or detracted from the selection criteria.

NRC had divided the criteria into 14 categories which were weighed by NRC as to the relative importance of each category in the judgement of NRC. A total of 1000 points were allotted



to the set of mandatory requirements and an additional 85 points were allotted to the desirable features.

With the approval of NRC, MAXIMA developed a set of subcriteria to use for evaluating submitted proposals. These subcriteria provided an objective standard for proposal evaluation. The criteria and subcriteria appear in each of the appendices to this report that contain MAXIMA's evaluation of the individual proposals (Appendix 1 through Appendix 6).

As each product was reviewed and evaluated against the criteria, a score ranging from zero to the maximum score allowed was assigned to that item. When all the software products had been evaluated against the criteria, the values assigned were tabulated and tallied for a final score.

Each proposal was evaluated by each member of the three person proposal evaluation team. Each proposal was evaluated individually against the evaluation criteria and not in comparison with any other proposal.

In addition to grading the proposals, MAXIMA prepared a brief written evaluation indicating how each DBMS candidate product satisfied or failed to satisfy the requirements, thus substantiating the numerical score assigned. These written evaluations are incorporated into the appendices at the end of each major section of selection criteria under the heading "Evaluators' Comments".