

MONTHLY PROGRESS REPORT

NUCLEAR REGULATORY COMMISSION

WM DOCKET CONTROL CENTER

Contract Number NRC-02-86-006 U1M-RES

WM Record File

WM Project 10, 11, 16

D1046

Docket No.

SI

PDR ✓

LPDR B, N, S

DATE: 15 September 1986

TO: Distribution

Distribution: Bender Alkome

FROM: Hernan Otano, NASM Program Manager

(Return to WM, #2385)

VIA: Birger Andersen, SAIC Program Manager

SUBJECT: Monthly Progress for Period 1 August - 31 August 1986

This report is submitted in accordance with paragraph F.1.1 of the subject contract.

I. TECHNICAL

A. Task Performance:

Task 1A, Document Review - Task Complete

Task 1B, Current Digitizing & Indexing Procedures - Task complete

Task 1C, System Integration Plan - 75% complete, plan currently being adjusted and modified to accommodate equipment delivery delays discussed under Task 1E.

Task 1D, System Specification & Performance Standards - Draft specification document has been completed and will be submitted in mid September.

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Task 1E, System Procurement & Installation - All major hardware and software required for the pilot project was delivered during this reporting period with the exception of the laser printer and the high resolution monitor and compression/decompression subsystem boards. The laser printer does not present a problem since it is not critical to the initial system capabilities demonstration. The high resolution display and image compression/decompression subsystem has created a problem that will result in a delay of approximately one month in the current schedule.

Distributed Image Systems Corp. (DISCORP) was selected as the vendor to provide interface boards for high-resolution display, and image compression/decompression along with a high-resolution page oriented display monitor. The selection of DISCORP, though our second choice was based on the recommendation of the NASM Program Manager following a site visit to their Northridge facility in early July. At that DISCORP assured us that they would be able to meet the very tight delivery imposed by the NRC. Following the issuance of a purchase order, frequent contact was maintained with DISCORP. Their only indication of any problems was the delay in the delivery of the high resolution monitor. In the last week of August, DISCORP was still unable to guarantee delivery of the monitor but indicated that they could provide a loaner until our order could be filled. Delivery of an incomplete order was received on September 3, 1986. A loaner high-resolution monitor was provided, however, the monitor interface board was a non-production wire-wrap, the required software display drivers was not provided nor was the compression/decompression board. The enclosed shipping document indicates that the missing items will be shipped at a later date, I have been unable to obtain a direct answer as to when later will be.

Based on this experience, it has been recommended that DISCORP be considered in default for non-delivery of the specified hardware and software.

To alleviate this problem in a timely manner with minimum delay in the project schedule we have reopened negotiations with LaserData Corp to provide the required boards and monitor. Delivery of this hardware is scheduled between October 1 and October 15. LaserData has indicated their willingness to support the pilot project and will assist us in meeting the pilot project objectives.

Task 1F, System Tests - The demonstration of full text search was accomplished during the reporting period. The current NRC database operating on Stairs was transported to an IBM PC environment as ASCII text and reformatted to be compatible with the PG DOS full text search application program "Textbank". During conversion, all Stairs file headers were retained. The databases is currently maintained on the Priam winchester disk drive with a full ASCII file backed up on tape cartridge. The database is fully operational for data retrieval from an IBM-PC AT. It is not intended that Textbank replace Stairs at this time. As documents are added to the Stairs database they will also be added to the Textbank database. This will provide a vehicle for further evaluation of the Textbank program and its suitability to the NRC's document control applications.

Task 3B, Thesaurus Evaluation - A thesaurus selection task outline was prepared and approved by the NRC Program Manager. The task provdes for the study an evaluation of 6-8 thesauri for databases in order to choose one to be used by the NRC for the Pilot Project. The product of this investigation will be:

- * Recommendation of one thesaurus for NRC use.
- * Requirments for linking thesaurus to full text

search program

- * Requirements for the demonstration of a min - thesaurus with full text search

A written evaluation will be submitted explaining the benefits of the chosen thesaurus, in addition to a table comparing the pros and cons of each thesaurus considered in the evaluation.

B. Key Milestones Achieved:

The key milestone achieved during this reporting period was the transport of the NRC Stairs database over to the PC environment and operating system and demonstrating full text search capabilities using the TextBank application software. The database consists of approximately 4000 pages of documents.

C. Meetings and Field Trips:

No formal scheduled meetings were held during the reporting period, however, a number of informal technical meetings were held between NASM, SAIC, and NRC project staff members to discuss and clarify a wide variety of technical issues including:

- * DCC Document Handling Procedures
- * File Header Strategies
- * Palantir Demonstration
- * Pilot Project Facilities Layout
- * Current Full Text Search Capabilities

II. COST EXPENDITURES

Cost expenditures for the reporting period are shown in Attachment B. The labor expenditures include SAIC overhead,

fringe and G&A charges against direct labor. Hardware/software cost expenditures include items that were delivered during the reporting period along with a cumulative list of all hardware/software received to date. SAIC fee has been added to reflect total cost to NRC.

III. PERSONNEL ASSIGNED

Personnel assigned to the project during the reporting period are shown in Attachment B. Included are both time and cost expenditures for each SAIC staff member assigned to the project

IV. PROJECTION OF COSTS

Projection of costs by month to completion of the work contained in the current statement and work breakdown structure (WBS) for period 1 July 1986 thru 31 January 1987 is presented graphically in Attachment C. The current variance in the actual vs. projected costs is a reflection of equipment that has yet to be delivered and therefore not entered as a cost item. Attachment D contains a revised schedule of the tasks contained in the statement of work. A schedule of deliverables as reflected in the current statement of work is presented in Attachment E.

HARDWARE COSTS & DELIVERY SCHEDULE

ATTACHMENT "A"

Date: September 11, 1986

Project: NRC Pilot Project - FY 86

Project Title: "Demonstration of Laser Disc Technology for Licensing Records

ITEM HARDWARE/SOFTWARE DESCRIPTION

	COST	PRO SUBMITTED	PO ASSIGNED	ACTUAL COST	PROMISED DELIVERY	ACTUAL DELIVERY
MICROCOMPUTER						

1 IBM PC AT (Model 339)	\$5,300	7/7/86	7/10/86	\$3,865	9/15/86	9/3/86
2 Hercules Monochrome Graphics Board	\$400					
3 AST Memory Card	\$500	9/8/86	9/18/86		10/1/86	
4 Additional Memory 128K RAM (256K Chips)	\$80	7/17/86	7/31/86	\$57	8/6/86	8/17/86
MASS STORAGE DEVICE						

5 PRIMA DataTower (160MB + 60MB Tape Backup)	\$10,000	7/17/86	7/31/86	\$7,677	8/6/86	8/15/86
6 SONY Writable Optical Disk Subsystem	\$18,000	7/11/86	7/18/86	\$14,545	8/15/86	8/5/86
Writable Disk Drive WDD-3000 3 6 bytes \$8556						
Writable Disk Controller WDC-2000 \$5989						
7 PC Interface to Optical Disk	\$1,800	7/11/86	7/18/86	\$1,575	8/15/86	8/15/86
OPTICAL SCANNING SYSTEM						

8 Display Subsystem	\$4,875	9/8/86	9/9/86	\$4,875	10/15/86	
* LV 610 Monitor Controller						
* LV 630 Decompression Processor						
* LV 700 High Resolution Page Oriented Display						
Scanner Subsystem						
* Form Feed Scanner - RICOH IS-400	\$8,000	8/30/86	9/1/86	\$7,700	9/15/86	
* LV 810 Compression Proc./ Scanner Interface	\$2,025			\$2,025		
SDD Compound Document Processor	\$40,000	7/1/86		\$31,500	7/8/86	7/8/86
DISPLAY SYSTEM						

10 Roland High Res Model # MB142	\$350					
PRINTERS						

11 Laser Printer (8 ppm) & PC Interface	\$4,500	9/11/86		\$4,060		
12 Matrix Printer	\$400					
13 ADDITIONAL HARDWARE (Task 3)	\$17,900					
SYSTEM SOFTWARE						

14 Operating System (PC DOS 3.1)	\$85			\$85	9/3/86	9/3/86
15 Full Text Search Software	\$2,000	7/17/86	7/21/86	\$746	7/30/86	7/31/86
SUPPLIES AND EXPENDIBLES						

16 Tape Cartridges & Printer Supplies	\$6,000					
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	\$122,215			\$78,710		
	20%					

	\$97,772					

MONTHLY COST EXPENDITURES - 1 AUGUST thru 31 AUGUST 1986

ATTACHMENT 'B'

Project: NRC Pilot Project - FY 86
 Project Title: Demonstration of Laser Disc Technology for Licensing Records
 Contract Number: NRC-02-86-006

LABOR COSTS EXPENDITURES

NAME	HOURS	COST	CUM. HOURS	CUM. COST
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B. Andersen	104	\$7,865	224	\$16,940
M. Whitley	143	\$3,128	284.5	\$6,223
S. Fullerton	112	\$5,317	180	\$8,546
A. Muller	44	\$3,174	68	\$4,905
A. Ratliff	22	\$661	29	\$871
Tech. Typist	0	\$0	0	\$0
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	425	\$20,145	786	\$37,485

HARDWARE COST EXPENDITURES

HARDWARE ITEM	MONTHLY CUMULATIVE:		DELIVERY
	COST	COST	
-----	-----	-----	-----
Palantir CDP + Software		\$31,500	7/8/86
Group L Search Software		\$756	7/31/86
SONY Writable Optical Disk Sys.		\$14,545	8/1/86
PRIAM DataTower (160MB + 60MB Tape)	\$7,677	\$7,677	8/15/86
Instar Optical Disc Interface	\$1,575	\$1,575	8/15/86
PC DOS 3.1 & Misc. Software	\$350	\$350	8/7/86
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	\$9,602	\$56,403	

\$56,403

 \$93,888

SAIC Fee @ 10% \$9,389

Total Cumulative Cost \$103,277

NASM Overhead and Support Services \$76,099

SAIC Technical Support SubContract \$273,884

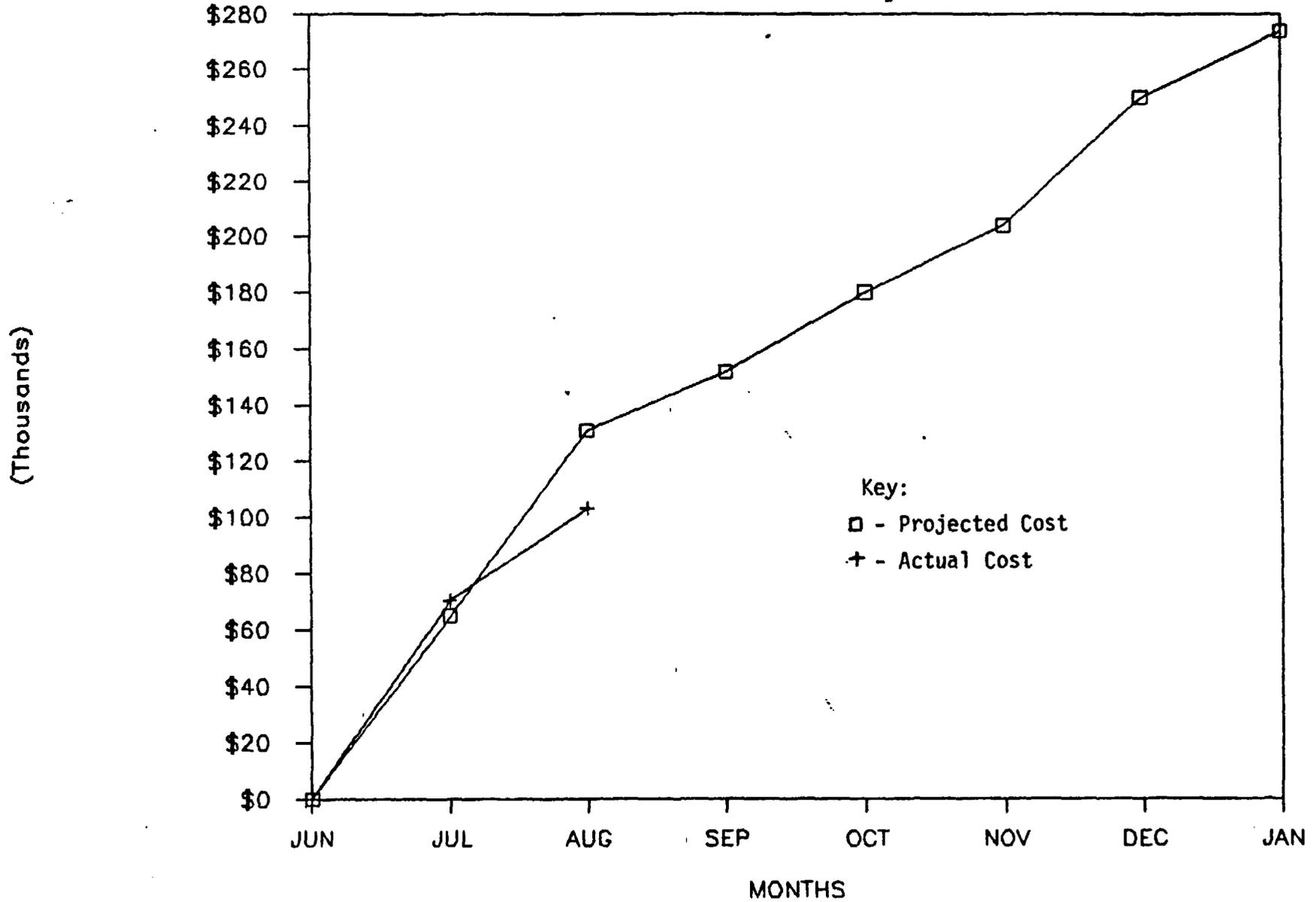
Total NRC Contract to Smithsonian/NASM \$349,983

Percent of Total Funds Allotted 30%

Percent of SAIC Technical Support SubContract 38%

PROJECTED VS ACTUAL COST CURVE

Period 1 Jul. - 31 Aug. 1986



NRC PILOT PROJECT - SCHEDULE & MILESTONES

ATTACHMENT "D"

TASK DESCRIPTION	1	2	3	4	5	6	7
	Jul	Aug	Sep	Oct	Nov	Dec	Jan
TASK 1 - SYSTEM CONFIGURATION, INSTALLATION & TESTING							
A. Review existing documents, procedures & information flow into Docket Control Center.	***						
B. Review current indexing & digitizing	****						
C. Prepare system integration plan to include incorporation of the NASH/SAIC System for Digital Display into existing pilot project operation.		0000	0000	0000			
D. Prepare system specification & performance standards for system hardware & software.		0000	00	00			
E. Procure and install system.	0000	0000	0000	00			
F. Conduct system tests to include: (1) demonstration of full text search with display of both image & text on a high resolution monitor and in hard copy (2) demonstration of complete capture process.				****	**		
G. Prepare test & evaluation report documenting the results and outcome of the system tests carried out in Task 1F					0000		
TASK 2 - SYSTEM OPERATION AND DEMONSTRATION							
A. Prepare Configuration Management Plan.					00	0000	
B. Conduct training and assistance to NRC personnel in the operation of equipment and text retrieval software.				****	****		
C. Conduct demonstration document data capture, storage, and retrieval (document processing to be 500 pages/day for a 5 month period).					*****	****	
D. Convert existing pilot project electronic records into SDD database (estimated 4000 pages).						****	
F. Demonstrate integration of SDD technology into existing operations of the Docket Control Center.							**
G. Conversions and submission of records to optical disc.							**
H. Documentation on the demonstration of all system operations including the mastering & copying laser disc.							0000
TASK 3 - GENERAL TECHNICAL ASSISTANCE							
A. Provide assistance in development of file architecture	****	*****	****				
B. Provide assistance in the development of subject index/thesaurus			****	****	****		

* - Task Activity

NRC PILOT PROJECT
Deliverables Schedule
15 September 1986

SUBTASK 1 - System Configuration, Installation, and Testing

- * System Integration Plan - Nov. 1, 1986
- * System Specification - Nov. 1, 1986
- * Test and Evaluation Report - Dec. 1, 1986

SUBTASK 2 - System Operation & Demonstration

- * Configuration Management Plan - Nov. 30, 1986
- * NRC Personnel Training - Nov. 1, 1986
- * Equipment Installation - Oct. 15, 1986
- * Conversion & Submission of Records - Jan. 1, 1987
to Optical Disk
- * Documentation & Demonstration - Jan 31, 1986
of all System Operations

SUBTASK 3 - General Technical Assistance

- * File Architecture Plan - TBD
- * Thesaurus Development Plan - TBD
- * Demonstrate Limited Thesaurus in - TBD
Conjunction with Selected Text
Search Software