

14:58:53

OCA PAD INITIATION - PROJECT HEADER INFORMATION

09/02/94

Active

Project #: E-24-X60 Cost share #: E-24-348 Rev #: 0
Center #: 10/24-6-R8258-0A0 Center shr #: 10/22-1-F8258-0A0 OCA file #:
Contract#: DMI-9410318 Mod #:
Prime #:
Subprojects ? : N CFDA: 47.041
Main project #:
Contract entity: GTRC
PE #: N/A

Project unit: ISYE Unit code: 02.010.124
Project director(s):
NEMHAUSER G L ISYE (404)894-2306

Sponsor/division names: NATL SCIENCE FOUNDATION / GENERAL
Sponsor/division codes: 107 / 000

Award period: 940815 to 950731 (performance) 951031 (reports)

Sponsor amount	New this change	Total to date
Contract value	30,000.00	30,000.00
Funded	30,000.00	30,000.00
Cost sharing amount		17,286.00

Does subcontracting plan apply?: N

Title: DEPLOYMENT OF THE MINTO- MIXED-INTEGGER OPTIMIZATION SYSTEM

PROJECT ADMINISTRATION DATA

OCA contact: Jacquelyn L. Bendall 894-4820

Sponsor technical contact Sponsor issuing office

PIUS J. EDBELU MARIA VALERIO
(703)306-1328 (703)306-1218

NATIONAL SCIENCE FOUNDATION NATIONAL SCIENCE FOUNDATION
4201 WILSON BLVD. 4201 WILSON BLVD.
ARLINGTON, VA 22230 ARLINGTON, VA 22230

Security class (U,C,S,TS) : U ONR resident rep. is ACO (Y/N): N
Defense priority rating : N/A NSF supplemental sheet
Equipment title vests with: Sponsor GIT X

Administrative comments :-
INITIATION OF PROJECT.

2055
N

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GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION

NOTICE OF PROJECT CLOSEOUT

Closeout Notice Date 02/02/96

Project No. E-24-X60_____ Center No. 10/24-6-R8258-0A0_

Project Director NEMHAUSER G L_____ School/Lab ISYE_____

Sponsor NATL SCIENCE FOUNDATION/GENERAL_____

Contract/Grant No. DMI-9410318_____ Contract Entity GTRC

Prime Contract No. _____

Title DEPLOYMENT OF THE MINTO- MIXED-INTEGER OPTIMIZATION SYSTEM_____

Effective Completion Date 950731 (Performance) 951031 (Reports)

Closeout Actions Required:	Y/N	Date Submitted
Final Invoice or Copy of Final Invoice	N	_____
Final Report of Inventions and/or Subcontracts	N	_____
Government Property Inventory & Related Certificate	N	_____
Classified Material Certificate	N	_____
Release and Assignment	N	_____
Other _____	N	_____

Comments _____
LETTER OF CREDIT APPLIES. 98A SATISFIES PATENT REQUIREMENT. _____

Subproject Under Main Project No. _____

Continues Project No. _____

Distribution Required:

Project Director	Y
Administrative Network Representative	Y
GTRI Accounting/Grants and Contracts	Y
Procurement/Supply Services	Y
Research Property Management	Y
Research Security Services	N
Reports Coordinator (OCA)	Y
GTRC	Y
Project File	Y
Other _____	N
_____	N

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 Atlanta GA 30332-0205

NATIONAL SCIENCE FOUNDATION FINAL PROJECT REPORT

PART I - PROJECT IDENTIFICATION INFORMATION	
1. Program Official/Org.	Pius J. Egbelu - IBM Research Division
2. Program Name	OPERATIONS RESEARCH & PRODUCTION SYSTEMS
3. Award Dates (MM/YY)	From: 08/94 To: 07/95
4. Institution and Address	Georgia Institute of Technology Administration Building Atlanta GA 30332
5. Award Number	9410318
6. Project Title	Engineering Research Deployment Teaching Initiative: Deployment of the MINTO Mixed-Integer Optimization System

This Packet Contains
 1 NSF Form 98A
 And 1 Return Envelope

grant Conditions (Article 17, GC-1, and Article 9, FDP-11) require submission of a Final Project Report (NSF Form 98A) to the NSF program officer no later than 90 days after the expiration of the Final Project Reports for expired awards must be received before new awards can be made (NSF Grants Policy Manual Section 677).

On a separate page attached to this form, provide a summary of the completed projects and technical information. Be sure to include your name and award number on each separate page. See below for more instructions.

PART II - SUMMARY OF COMPLETED PROJECT (for public use)

The summary (about 200 words) must be self-contained and intelligible to a scientifically literate reader. Without restating the title, it should begin with a topic sentence stating the project's major thesis. The summary should include, if pertinent to the project being described, the following items:

Primary objectives and scope of the project
Techniques or approaches used only to the degree necessary for comprehension
Findings and implications stated as concisely and informatively as possible

PART III - TECHNICAL INFORMATION (for program management use)

References to publications resulting from this award and briefly describe primary data, samples, physical collections, instruments, software, etc. created or gathered in the course of the research and, if appropriate, how they are being made available to the research community. Provide the NSF Invention Disclosure number for any invention.

J.P. Savelsbergh and G.L. Nemhauser (1995). "A MINTO short course." Report NSF-95-05, Georgia Institute of Technology.

To the best of my knowledge (1) the statements herein (excluding scientific hypotheses and scientific opinion) are true and complete, and (2) the text and graphics in this report as well as any accompanying publications or other documents, unless otherwise indicated, are the original work of the signatories or of individuals working under their supervision. I understand that willfully making a false statement or concealing a fact in this report or any other communication submitted to NSF is a criminal offense (U.S. Code, Title 18, Section 1001).

Principal Investigator/Project Director Signature	Date
	8/30/95

IMPORTANT MAILING INSTRUCTIONS
Return this entire packet plus all attachments in the envelope attached to the back of this form. Please copy the information from Part I, Block I to the Attention block on the envelope.

PART II - SUMMARY OF COMPLETED PROJECT

MINTO is an advanced software system that solves mixed-integer linear programs by a branch-and-bound algorithm with linear programming relaxations. It also provides automatic constraint classification, preprocessing, primal heuristics and constraint generation. Moreover, the user can enrich the basic algorithm by providing a variety of specialized application routines that can customize MINTO to achieve maximum efficiency for a problem class.

MINTO has been in use by a group of researchers worldwide and has been received very positively. The primary objective of this research project was technology transfer, based on the premise that MINTO has great potential for classroom use, for courses in integer programming, and great potential for industrial use, for the solution of real-life planning problems.

For this technology transfer to be successful, there was a clear need for documentation and tutorials. These materials have been developed in the form of an updated and improved functional description and a short course. The short course illustrates most of MINTO's capabilities and teaches the basic MINTO customization process through a set of exercises.

The short course has been used as part of a Ph.D. level course in integer programming. The response has been positive and helpful. It has led to improvements in both the functional description and the short course. Although we have not had a chance to use the short course in a workshop specifically designed for industrial users, we are confident that it will also be successful in that environment.

PART IV -- FINAL PROJECT REPORT -- SUMMARY DATA ON PROJECT PERSONNEL

(To be submitted to cognizant Program Officer upon completion of project)

The data requested below are important for the development of a statistical profile on the personnel supported by Federal grants. The information on this part is solicited in response to Public Law 99-383 and 42 USC 1885C. All information provided will be treated as confidential and will be safeguarded in accordance with the provisions of the Privacy Act of 1974. You should submit a single copy of this part with each final project report. However, submission of the requested information is not mandatory and is not a precondition of future award(s). Check the "Decline to Provide Information" box below if you do not wish to provide the information.

Please enter the numbers of individuals supported under this grant.
Do not enter information for individuals working less than 40 hours in any calendar year.

	Senior Staff		Post-Doctorals		Graduate Students		Under-Graduates		Other Participants ¹	
	Male	Fem.	Male	Fem.	Male	Fem.	Male	Fem.	Male	Fem.
A. Total, U.S. Citizens	1									
B. Total, Permanent Residents	1									
U.S. Citizens or Permanent Residents²:										
American Indian or Alaskan Native										
Asian										
Black, Not of Hispanic Origin										
Hispanic										
Pacific Islander										
White, Not of Hispanic Origin	2									
C. Total, Other Non-U.S. Citizens	0				1					
Specify Country										
1. <i>China</i>					1					
2.										
3.										
D. Total, All participants (A + B + C)	2	0	0	0	1	0	0	0	0	0
Disabled³	0									

Decline to Provide Information: Check box if you do not wish to provide this information (you are still required to return this page along with Parts I-III).

¹ Category includes, for example, college and precollege teachers, conference and workshop participants.

² Use the category that best describes the ethnic/racial status for all U.S. Citizens and Non-citizens with Permanent Residency. (If more than one category applies, use the one category that most closely reflects the person's recognition in the community.)

³ A person having a physical or mental impairment that substantially limits one or more major life activities; who has a record of such impairment; or who is regarded as having such impairment. (Disabled individuals also should be counted under the appropriate ethnic/racial group unless they are classified as "Other Non-U.S. Citizens.")

AMERICAN INDIAN OR ALASKAN NATIVE: A person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition.

ASIAN: A person having origins in any of the original peoples of East Asia, Southeast Asia or the Indian subcontinent. This area includes, for example, China, India, Indonesia, Japan, Korea and Vietnam.

BLACK, NOT OF HISPANIC ORIGIN: A person having origins in any of the black racial groups of Africa.

HISPANIC: A person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race.

PACIFIC ISLANDER: A person having origins in any of the original peoples of Hawaii; the U.S. Pacific territories of Guam, American Samoa, and the Northern Marianas; the U.S. Trust Territory of Palau; the islands of Micronesia and Melanesia; or the Philippines.

WHITE, NOT OF HISPANIC ORIGIN: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.