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OCA PAD INITIATION - PROJECT HEADER INFORMATION

08/30/96

Active

Project #: C-36-X98	Cost share #:	Rev #: 0
Center # : 10/24-6-R0091-0A0	Center shr #:	OCA file #:
		Work type : RES
Contract#: AGREEMENT DATED 960827	Mod #:	Document : AGR
Prime #:		Contract entity: GTRC
Subprojects ? : N		CFDA: NA
Main project #:		PE #: NA

Project unit:	COMPUTING	Unit code: 02.010.300
Project director(s): KOLODNER J L	COMPUTING	(404)894-3285

Sponsor/division names: APPLE COMPUTER	/ CUPERTINO, CA
Sponsor/division codes: 200	/ 098

Award period: 960901 to 970831 (performance) 970831 (reports)

Sponsor amount	New this change	Total to date
Contract value	10,000.00	10,000.00
Funded	10,000.00	10,000.00
Cost sharing amount		0.00

Does subcontracting plan apply ? : N

Title: LEARNING BY DESIGN: IMPROVING MATH & SCIENCE EDUCATION THROUGH INTEGRATION...

PROJECT ADMINISTRATION DATA

OCA contact: Ina R. Lashley	894-4820
Sponsor technical contact	Sponsor issuing office
APRYL LANE (408)974-1588	APRYL LANE (408)974-1588
APPLE COMPUTER, INC. MS: 301-4C ONE INFINITE LOOP CUPERTINO, CA 95014	APPLE COMPUTER, INC. MS: 301-4C ONE INFINITE LOOP CUPERTINO, CA 95014

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

NONE PROPOSED.

Administrative comments -

INITIATION OF ONE-YEAR "COST-REIMBURSEMENT RESEARCH PROJECT AGREEMENT".
*NOTE: SEPARATE LICENSE & CONFIDENTIALITY AGREEMENT ARE IN PLACE.

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SR 205

Closeout Notice Date 26-JAN-1998

Project Number C-36-X98

Doch Id 39510

Center Number 10/24-6-R0091-0A0

Project Director KOLODNER, JANET

Project Unit COMPUTING

Sponsor APPLE COMPUTER/CUPERTINO, CA

Division Id 3625

Contract Number AGREEMENT DATED 960827

Contract Entity GTRC

Prime Contract Number

Title LEARNING BY DESIGN: IMPROVING MATH & SCIENCE EDUCATION THROUGH
INTEGRATION

Effective Completion Date 31-AUG-1997 (Performance) 31-AUG-1997 (Reports)

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

Comments

Distribution Required:

Project Director/Principal Investigator	Y
Research Administrative Network	Y
Accounting	Y
Research Security Department	N
Reports Coordinator	Y
Research Property Team	Y
Supply Services Department/Procurement	Y
Georgia Tech Research Corporation	Y
Project File	Y

NOTE: Final Patent Questionnaire sent to PDPI

C-36-x98
#1

TOOLS FOR CONSTRUCTION OF COMPUTER-SUPPORTED COLLABORATIVE LEARNING ENVIRONMENTS

Janet Kolodner

Mark Guzdial

Principal Investigators

EduTech Institute, College of Computing, Georgia Institute of Technology

FINAL REPORT

Our research over the last year has focused on both Computer Supported Collaborative Learning (CSCL) environments and tools for constructing such environments. We've explored a variety of options and have had several important successes.

We did explore use of SK8 for our environments and construction kits, but decided that the cost in memory and processing power was too great. While the cost of using SK8 is diminished by placing it only on the server, the schools we've been working with have little Internet connectivity, which requires us to play a server within the school. High-powered machines that can run SK8 are not frequently available to use as servers in our projects.

We instead used a couple of different paths:

- We made extensive use of a Macintosh-based tool called Frontier (<http://www.scripting.com/frontier/>) Frontier has allowed us to create a variety of Web-based CSCL environments quickly, such as Mac-based version of CaMILE (<http://www.cc.gatech.edu/gvu/edtech/CaMILE.html>) and Web-SMILE (<http://www.cc.gatech.edu/gvu/people/Faculty/mark.guzdial/WStour/tour.html>). These tools have been instrumental in helping us to understand how to scaffold collaboration by integrating process guidance.
- We have developed a new, cross-platform tool called the Pluggable WebServer (<http://www.cc.gatech.edu/fac/mark.guzdial/squeak/pws/>) which is based in Squeak, originally developed in Apple Research. The Pluggable WebServer has allowed us to very quickly create a variety of customized

collaboration spaces, including spaces for teachers, spaces for faculty, and domain-specific classroom spaces.

We've published extensively on this research, including the following

Guzdial, M. (1997). Information ecology of collaborations in educational settings: Influence of tool. In R. Hall, N. Miyake, & N. Enyedy (Eds.), *Proceedings of Computer-Supported Collaborative Learning'97* (pp. 83-90). Toronto, Ontario, Canada.

Guzdial, M., Hmelo, C., Hübscher, R., Nagel, K., Newstetter, W., Puntambekar, S., Shabo, A., Turns, J., & Kolodner, J. L. (1997). *Integrating and Guiding Collaboration: Lessons learned in computer-supported collaboration learning research at Georgia Tech.* In R. Hall, N. Miyake, & N. Enyedy (Eds.), *Proceedings of Computer-Supported Collaborative Learning'97* (pp. 91-100). Toronto, Ontario, CANADA.

Kolodner, J. L., & Schwarz, B. (1997,). *Roles of a Case Library as a Collaborative Tool for Fostering Augmentation.* Paper presented at the *Computer-Supported Collaborative Learning (CSCL) 1997 Conference*, Toronto, Ontario, Canada.

Puntambekar, S., & Kolodner, J. (1997). *Learning by Design: Developing children's understanding of science by engaging them in solving design problems* : Symposium presented at the *American Educational Research Association Annual Meeting*, San Diego, CA. April.

Puntambekar, S., Nagel, K., Hübscher, R., Guzdial, M., & Kolodner, J. L. (1997). *Intra-group and intergroup: An exploration of learning with complementary collaboration tools.* In R. Hall, N. Miyake, & N. Enyedy (Eds.), *Proceedings of Computer-Supported Collaborative Learning'97* (pp. 207-214). Toronto, Ontario, CANADA.

Shabo, A., Nagel, K., Guzdial, M., & Kolodner, J. (1997). *JavaCAP: A collaborative case authoring program on the WWW.* In R. Hall, N. Miyake, & N. Enyedy (Eds.), *Proceedings of Computer-Supported Collaborative Learning'97* (pp. 241-249). Toronto, Ontario, CANADA.