

PROGRAM DESIGNER WITH LEARNING & EDUCATION BACKGROUND

*offers experience in Design & Implementation of Interactive Systems;
Management of Educational Projects; and Leadership of Multi-Disciplinary Teams proven by:*

- Designing and implementing school and family education projects while at MIT. Projects were created for the purpose of being implemented in alternative educational spaces (i.e. science museums, children's museums).
 - Managing interpretive materials and interactive projects such as Collaboration Stations, Sensory Puzzle, and The Parent Trap.
 - Assisting in the development of curriculum materials for cognition course. Researching K-12 curriculum development and standards. Serving as teaching assistant at MIT for graduate and undergraduate seminars. Tutoring high school chemistry and mathematics students for 3 years and leading groups of pre-school children.
 - Completing a MS in Media Technology from MIT and holding a BS in Cognitive Science with a specialization in Computing. Masters projects include enhanced educational television (The Parent Trap, Video as Data); children's toys (Sensory Puzzles, Musical Fireflies); and collaborative spaces and tools (Collaboration Stations).
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EDUCATIONAL PROJECT DEVELOPMENT

Management of Interactive Projects

- Designed the educational content of the system, and demonstrated the system to sponsors. Researched the current state of digital, interactive, and educational television. Managed the design and implementation of a system (interaction and interface) to embed and deliver digital information into a broadcast stream.
- Managed overall organization, design, development, and subsequent update of an interactive musical puzzle in which users assemble a song by arranging blocks containing musical phrases. Collaborated with a team of 3 to purchase and build materials. Implemented software and hardware.

Corporate Communications / Project Presentations

- Met with corporate representatives from Lucent Technologies, McGraw-Hill Companies, and Nickelodeon to discuss research goals with respect to their marketing or corporate goals. Meetings resulted in discussions about the types of technologies that will fill their needs.
- Presented project at request of TOMY, one of the largest Japanese toy companies, at the Tokyo Toy Fair in March 1999 and also at the Association for Computing Machinery's Special Interest Group on Computer Human Interaction conference in May 1999. Published in the proceedings for conference.

INTERACTIVE LEARNING / USER CENTERED DESIGN

Collaborative Learning Environment Design

- Involved in all aspects of user centered design of interactive desks. Researched collaborative learning environments. Designed the collaborative workspace interaction. Updated existing educational software and integrated it into the new "physical" environment. Managed an undergraduate research assistant. Demonstrated the system to corporate sponsors such as Corporation for Public Broadcasting, Mattel Inc., and Johnson & Johnson.
- Integrated perceptual and cognitive principles into user interfaces, taking into account human visual perception and perceptual learning. Involved in studies and usability tests of several projects to determine the most effective designs.

User Interface / Usability Testing

- Worked on a geographically distributed system for electronically mediated collaboration. Responsibilities included prototyping user interface in Director, implementing look 'n feel and functionality in Java, researching audio compression standards, conducting survey to determine design guidelines for the representation of humans in cyberspace, demonstrating the system to internal management staff, external corporations and government agencies. A patent for the system design is in the process of being filed and a publication documenting the results of the guideline survey is forthcoming.

TEAM MANAGEMENT

Team Communication & Organization

- Managed interface design teams and deliverables for 3 projects. Managed research teams whose responsibilities included programming information architectures and interfaces. Due to prior experience with project tasks, effectively directed team's efforts, oversaw progress, and assisted in the implementation of project elements. Met regularly to establish the direction of the project.
- Served a member of both front and back end teams, working with technical staff and managers, as well as presenting projects to clients and corporate sponsors.

Proposal Creation / Document Design

- Developed an in depth look 'n feel prototype for a collaborative virtual meeting system. Researched and created ontology's and design rationales. Experienced with cognitive maps and neural network maps or sketches. Assisted in writing several proposals for grant money and recently completed a proposal for Master's thesis.

FUNCTIONAL DESIGN

Functionality of Digital Rhythm Toy

- Designed functionality and the look 'n feel of a digital rhythm toy that several corporate sponsors have interests in potentially marketing. Implemented software and hardware. Demonstrated the toy to corporate sponsors.

Research Project Management

- Managed research project, including research team, for a system designed to enhance children's educational television with digital technologies. Researched the current state of digital, interactive, and educational television.
- Designed a system (interaction and interface) to embed and deliver digital information into a broadcast stream. Designed the educational content of the system. Demonstrated the system to sponsors, several of whom have shown interest in either funding the project or collaborating on further development of the project.

Identification of Research Methods

- Designed and redesigned research methods to match projects. At UCLA, Delco, HRL, and MIT designed and conducted both quantitative and qualitative experimental studies.

Design of Questionnaires / Conduct Research Groups

- Conducted, designed, analyzed, and reported data for 12 research experiments and studies at UCLA and in the evaluation of projects at MIT Media Labs and HRL Laboratories, LLC.
- Designed questionnaires to determine the effectiveness of specific functional designs or representations. In one case, the questions were scenario based to determine the different types of reactions that a user might have when interacting with various functional designs. Involved in writing a questionnaire that was designed to reveal the professional opinions about the functionality of human representations in virtual spaces. The compiled responses to this questionnaire resulted in a set of guidelines for designing human representations in virtual spaces.

EDUCATION

M.S. Media Technology, Massachusetts Institute of Technology, June 2000

- MIT Media Lab, Graduate Research Assistant in Explanation Architecture Group
- Project areas include enhanced educational television (The Parent Trap, Video as Data); children's toys (Sensory Puzzles, Musical Fireflies); collaborative spaces and tools (Collaboration Stations).

B.S. Cognitive Science, Specialization in Computing, University of California, Los Angeles, June 1997

- Human Perception Lab, Undergraduate Research Assistant
- Developed and implemented research experiments to determine perceptual learning in visual categorization tasks
- Awarded the National Science Foundation Research Experience for Undergraduates (REU) Grant for research in visual perception and perceptual learning.

PROFESSIONAL EXPERIENCE

Research Staff Member, HRL Laboratories, LLC 1997-1998

Project: Collaborative virtual meeting system. Prototyped "look 'n feel" and function of graphical user interface using Macromedia Director. Java implementation of graphical user interface and functional user interface. Patent pending for GUI design and functionality.

Design Intern - Buzz Magazine Online, Buzz Enterprises 1996

Designed graphics for the Buzz Online website using Adobe Illustrator and PhotoShop.
Maintained and updated content of website.

Intern - Automotive Electronics Development, Delco Electronics 1996

Simulated visual, auditory, and tactile stimuli for the Collision Avoidance System. Conducted human factors studies of various perceptual and visual cues to determine the effectiveness of icons in a dashboard heads-up display.

PRESENTATIONS

Tokyo Toy Fair, Tokyo, Japan, March 1999

Exhibition and presentation of Sensory Puzzles toy project

ACM SIGCHI '99, Pittsburgh, PA, May 1999

Presentation of Sensory Puzzles toy project at the Association for Computing Machinery, Special Interest Group in Computer-Human Interaction conference

PUBLICATIONS & REVIEWS

Lackner, T.M., Dobson, K., Rodenstein, R., & Weisman, L. (1999). Sensory Puzzles. In CHI 99 Extended Abstracts (pp.270-271). New York: ACM Press.

Reviewer for American Educational Research Association 2000,
Special Interest Group in Advanced Technologies for Learning

PROFESSIONAL MEMBERSHIPS

Association for Computing Machinery, Special Interest Group on Computer Graphics