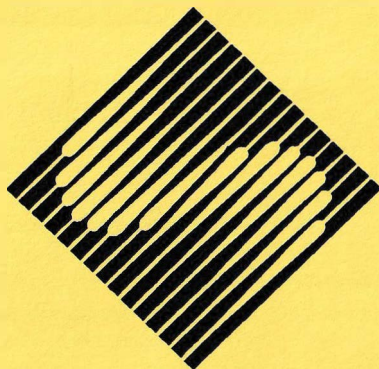

1993 SIGGRAPH

Designing Technology

Slide Set



Alyce Kaprow, editor

DESIGNING TECHNOLOGY SIGGRAPH 93

SIGGRAPH 93's inaugural designing technology program showcases the convergence of design and technology and explores how these disciplines have advanced functionality, communication, and usability. Emphasizing the designer's role in the development process, the program demonstrates how design has become an important consideration in the development of technology and communication/interactivity. This show highlights not only the product of this effort, but the process of collaborative work in engineering and design.

Designing technology presents work in the major areas of design and communication, including video (screen) graphics, interface design, and industrial design. It also features design solution for tool-making as well as tool use and communication, displaying examples that demonstrate design of software and hardware, and applications of these tools.

SELECTION CRITERIA OF DESIGNING TECHNOLOGY

The presentations in the designing technology show present work that demonstrates both design excellence and collaborative teamwork in the development effort. Each project speaks to the chief themes of this show in a different way; each echoes the ideals that designers contribute significantly to a product's functionality, usability, and overall excellence; and that multi-disciplinary collaborative teams are a necessity in the process of product definition and design.

Different disciplines and expertise must work together to design what a product is to become. Whether the presentation demonstrates hardware, software, interface, or strategic planning, the message is similar: The designer is a significant contributor in many ways and should be an integral part of the team from the beginning; and, we need to come together as a team with respect for all team members' expertise to insure collaborative, participatory design.

In choosing the work for the show, the focus was on design excellence and the collaborative process. The results of these efforts exemplify the meaning of design in its broadest definition. Design contributes to what makes a product rich and human. Design help synthesizes the disparate concerns and smooths the edges, bringing many disciplines together in the final product. Designers contribute beauty and excitement that enriches the process, and a magic that delights the user.

The collection of work in the show in part displays the delicate balance between process, tool, and final product. It also balances projects having to do with hardware design, software design, interface and multi-media design, and non-computer products. The work was chosen without quota; that is, we did not set out to present a certain number of examples in any of the above categories. We selected the exhibits based on their concern for the two main themes: design excellence and collaboration. From there we loosely collected the work into representative areas, though no such "map" exists in the show that might limit the viewer's interpretation of any individual presentation. The projects might be grouped as follows: a definition of process and strategy, interface design, volume design, interactive multimedia, and a peek into future products -- specifically that of computer interface and interaction. When viewing the work it is best not to narrowly focus on these groups, as most of the presentations fit into more than one category. Look at them as a collection of projects that individually demonstrate design excellence, and together champion the ideals of this show.

Alyce Kaprow, Chair
Designing Technology
SIGGRAPH '93

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exhibit design:

KEN SPRICK

i.e. Design

AGAINST ALL ODDS PRODUCTIONS
FROM ALICE TO OCEAN: ALONE ACROSS THE OUTBACK

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Against All Odds Productions
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415-383-8880

DESCRIPTION

The newly published *From Alice to Ocean*, an illustrated book packaged with an interactive PhotoCD disk, is used to demonstrate the power of combining new and traditional publishing technologies, and design.

SLIDES

- | | | |
|---|-----------------------------|---------------------|
| 1 | AGAINST ALL ODD PRODUCTIONS | ©Rick Smolan, 1993 |
| | Book Cover | |
| 2 | AGAINST ALL ODD PRODUCTIONS | © Rick Smolan, 1993 |
| | Example: CD-ROM Screen | |

ALBEN + FARIS & APPLE COMPUTER
MAKING IT MACINTOSH:
The Macintosh Human Interface Guidelines Companion

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DESCRIPTION

This installation traces the development of the "Making It Macintosh" interactive instructional product to illustrate the intersection of design and technology, and to show how the early commitment to design by putting designers and technologists together from the beginning produced a high-quality result through day-to-day collaboration.

SLIDES

- | | | |
|---|---|------------------------|
| 3 | ALBEN+FARIS & APPLE COMPUTER
Title Screen | © APPLE COMPUTER, 1993 |
| 4 | ALBEN+FARIS & APPLE COMPUTER
Symbols | © APPLE COMPUTER, 1993 |
| 5 | ALBEN+FARIS & APPLE COMPUTER
Contents Screen | © APPLE COMPUTER, 1993 |
| 6 | ALBEN+FARIS & APPLE COMPUTER
Example Screen | © APPLE COMPUTER, 1993 |
| 7 | ALBEN+FARIS & APPLE COMPUTER
Example Screen | © APPLE COMPUTER, 1993 |
| 8 | ALBEN+FARIS & APPLE COMPUTER
Example Screen | © APPLE COMPUTER, 1993 |

**DESIGN EDGE:
COLLABORATIVE DESIGN AND DEVELOPMENT FOR SURGERY
EQUIPMENT**

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Design EDGE
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Washington Crossing PA 18977-1139
(215) 321-6840

DESCRIPTION

An interactive multimedia display describes the processes, steps, and tools used by Design Edge, highlighting the skills and roles of the team members and the tools used to produce new surgery equipment, instructional videos, and manuals.

SLIDE

9

Design EDGE

© Design EDGE, 1993

DESIGNWORKS / USA
COMPOSITAIR MOUNTAIN BIKE PROJECT

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DESCRIPTION

Designers and engineers collaborate on the design and creation of a prototype mountain bike using surface rendering and three-dimensional design software, in order to meet an ambitious deadline with a critically acclaimed result.

SLIDE

10 DESIGNWORKS / USA © Designworks / USA 1993

IBM
DICK'S WORLD

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DESCRIPTION

A demonstration multimedia interface shows the value that graphic design brings to the interface design process. By following basic design principles, a wealth of information can be displayed and arranged so that the viewer does not get confused, and can navigate through it without menus, dialog boxes, etc.

SLIDES

11	IBM / DICK'S WORLD	© IBM / DICK'S WORLD 1993
12	IBM / DICK'S WORLD	© IBM / DICK'S WORLD 1993
13	IBM / DICK'S WORLD	© IBM / DICK'S WORLD 1993
14	IBM / DICK'S WORLD	© IBM / DICK'S WORLD 1993
15	IBM / DICK'S WORLD	© IBM / DICK'S WORLD 1993

IBM - T.J. WATSON RESEARCH CENTER
THE IBM GUEST SERVICES SYSTEM AT EXPO'92

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DESCRIPTION

An interactive kiosk from the EXPO '92 World's Fair in Seville, Spain demonstrates the highly successful system designed by a team of graphics designers, programmers, psychologists, and others at the IBM Watson Research Center.

SLIDES

16	IBM / EXPO	© T.J. WATSON RESEARCH CENTER 1993
17	IBM / EXPO	© T.J. WATSON RESEARCH CENTER 1993
18	IBM / EXPO	© T.J. WATSON RESEARCH CENTER 1993

IDEO - DANCALL
Logic MOBILE TELEPHONE DESIGN PROJECT

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IDEO
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DESCRIPTION

A multi-disciplinary team uses a six-step, user-centered design process to design a family of portable telephones. By developing representative user characters, the team designs the abstractions of events, processes, and actions as well the tangible products.

SLIDES

- | | | |
|----|--|-----------------------|
| 19 | IDEO / DANCALL | © IDEO / DANCALL 1993 |
| | Dancall's Logic range of mobile telephones | |
| 20 | IDEO / DANCALL | © IDEO / DANCALL 1993 |
| | Early concept sketch for the hand-portable cellular phone | |
| 21 | IDEO / DANCALL | © IDEO / DANCALL 1993 |
| | Photographic storyboards of refined telephone concepts | |
| 22 | IDEO / DANCALL | © IDEO / DANCALL 1993 |
| | Engineering prototype of mounting bracket for hand-portable cellular phone | |
| 23 | IDEO / DANCALL | © IDEO / DANCALL 1993 |
| | Interactive simulation of telephone user interface | |
| 24 | IDEO / DANCALL | © IDEO / DANCALL 1993 |
| | Tooling drawings, molded prototype parts and finished mechanical components of the Dancall Logic hand-portable telephone | |
| 25 | IDEO / DANCALL | © IDEO / DANCALL 1993 |
| | Tooling drawings, molded prototype parts and finished mechanical components of the Dancall Logic hand-portable telephone | |

IMAGEWORKS

EVOLUTION OF THE NeXT STEP INTERFACE DESIGN

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DESCRIPTION

This presentation outlines the evolution of the NeXTstep Graphical User Interface through mockups of early designs, animations, sounds, and text displays. These are presented in an interactive environment on a NeXTstep based computer system.

SLIDES

- 26 **IMAGEWORKS**
 © IMAGEWORKS / NeXT COMPUTER 1993
 Mail application user-interface
- 27 **IMAGEWORKS**
 © IMAGEWORKS / NeXT COMPUTER 1993
 Pixelist application, the icon editor created to do icon and UI design
- 28 **IMAGEWORKS**
 © IMAGEWORKS / NeXT COMPUTER 1993
 Interface Builder, program for creating user-interface

IN CONTEXT

VOICES OF THE 30's: A CASE STUDY IN INTERFACE DESIGN

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DESCRIPTION

This presentation provides hands-on access to a HyperCard / videodisc system for teaching about John Steinbeck's *The Grapes of Wrath*. A custom interface describes the design process from the first prototype to the finished product.

SLIDE

- | | | |
|----|---|-------------------|
| 29 | IN CONTEXT | © IN CONTEXT 1993 |
| | Voices of the '30's: Abbe Don & Nathan Shedroff
example A - before | |
| 30 | IN CONTEXT | © IN CONTEXT 1993 |
| | Voices of the '30's: Abbe Don & Nathan Shedroff
example A - after | |
| 31 | IN CONTEXT | © IN CONTEXT 1993 |
| | Voices of the '30's: Abbe Don & Nathan Shedroff
example B - before | |
| 32 | IN CONTEXT | © IN CONTEXT 1993 |
| | Voices of the '30's: Abbe Don & Nathan Shedroff
example B - after | |
| 33 | IN CONTEXT | © IN CONTEXT 1993 |
| | Voices of the '30's: Abbe Don & Nathan Shedroff
example C - before | |
| 34 | IN CONTEXT | © IN CONTEXT 1993 |
| | Voices of the '30's: Abbe Don & Nathan Shedroff
example C - after | |
| 35 | IN CONTEXT | © IN CONTEXT 1993 |
| | Voices of the '30's: Abbe Don & Nathan Shedroff
example D - before | |
| 36 | IN CONTEXT | © IN CONTEXT 1993 |
| | Voices of the '30's: Abbe Don & Nathan Shedroff
example D - after | |

MIT MEDIA LAB

SKETCHING LAYOUTS OVER TIME

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DESCRIPTION

An electronic sketching system allows designers to visualize ideas by creating objects on a "page" which are managed by software that recognizes the implications of the designer's strokes.

SLIDES

- | | |
|----|---|
| 37 | MIT MEDIA LAB
© Karen Donoghue, MIT MEDIA LAB 1993 |
| 38 | MIT MEDIA LAB
© Karen Donoghue, MIT MEDIA LAB 1993 |

Both slides represent a time-lapse view showing the result of interpreting a rough thumbnail sketch and replacing it by successively finer granularity information. Figure 37-a shows a rough thumbnail sketch. Figure 37b shows the same sketched components replaced by canonical type and image objects. Their visual qualities such as weight, transparency and color are expressed through the way in which the sketches were made with the input stylus. Figure 38a shows the layout from Figure 37b, with real type and images replacing the canonical type and image forms. The red arrow is a visual remnant of a sketching gesture indicative of how an object on this page should behave over time, changing its qualities (e.g. - boldness) according to the way in which the arrow was sketched. Figure 38b shows the dynamic behavior of the object over time. The grey translucent trail indicates how the object has moved its position and visual qualities according to how the sketched arrow was made.

Images in Figures 38a and 38b are courtesy of Adobe Systems, Inc.

NICOGRAPH COMPUTER DESIGNICS

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DESCRIPTION

Design systems from Sharp, Shiseido, and Sony illustrate the importance of having members of product design teams have visual design experience, as shown by the design and development of products such as video camcorders, cosmetic bottles, or digital video tape decks.

SLIDES

- 39 NICOGRAPH
© COMPUTER DESIGNICS 1993
- 40 NICOGRAPH
© COMPUTER DESIGNICS / SONY 1993
On-screen simulation of operation process
- 41 NICOGRAPH
© COMPUTER DESIGNICS / SHISEIDO 1993
Computer rendering of products
- 42 NICOGRAPH
© COMPUTER DESIGNICS / SHISEIDO 1993
Actual product
- 43 NICOGRAPH
© COMPUTER DESIGNICS / SONY 1993
Actual product

ROYAL COLLEGE OF ART
DESIGNING A VISUAL DATABASE FOR FASHION DESIGNERS

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DESCRIPTION

This project addresses the need of large garment manufacturing and retailing companies to reduce the time to develop new garments within tight cost and quality constraints, through research and the creation of a prototype system.

SLIDES

44	RCA	© ROYAL COLLEGE OF ART 1993
		Visual Database for Fashion Designers
45	RCA	© ROYAL COLLEGE OF ART 1993
		Visual Database for Fashion Designers

ROYAL COLLEGE OF ART
COMPUTERS FOR THE REST OF US

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DESCRIPTION

Interdisciplinary student groups describe designs for computer products that represent three levels of power and complexity in a "scalable computing" system, including networks and software agents.

SLIDES

46	RCA	© ROYAL COLLEGE OF ART 1993
		Computers for the rest of us
47	RCA	© ROYAL COLLEGE OF ART 1993
		Computers for the rest of us
48	RCA	© ROYAL COLLEGE OF ART 1993
		Computers for the rest of us
49	RCA	© ROYAL COLLEGE OF ART 1993
		Computers for the rest of us

VENT DESIGN
APPLE ADJUSTABLE KEYBOARD

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DESCRIPTION

The evolution of the Apple adjustable keyboard illustrates the stages that a concept passes through, from early sketches to the finished product. The exhibit stresses the need for involvement of designers throughout the process, and the value of patience and respect for all skills in a collaborative effort.

SLIDES

50	VENT	© VENT DESIGN / APPLE COMPUTER 1993 Apple Adjustable Keyboard
51	VENT	© VENT DESIGN / APPLE COMPUTER 1993 Apple Adjustable Keyboard

VIRTUAL SPACE EXPLORATION LAB

DesignSpace

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DESCRIPTION

DesignSpace is a design environment that combines real design space with virtual, computer-based design tools such as an instrumented glove and a projected virtual window shared by other designers.

SLIDES

- 52 VIRTUAL SPACE LAB © VIRTUAL SPACE LAB 1993
 DesignSpace: Virtex Cyberglove and Virtual hand
- 53 VIRTUAL SPACE LAB © VIRTUAL SPACE LAB 1993
 DesignSpace System
- 54 VIRTUAL SPACE LAB © VIRTUAL SPACE LAB 1993
 DesignSpace Remote Participant
- 55 VIRTUAL SPACE LAB © VIRTUAL SPACE LAB 1993
 DesignSpace Interaction