

Lauralee Alben

Defining the criteria for  
effective interaction design

## Quality of experience

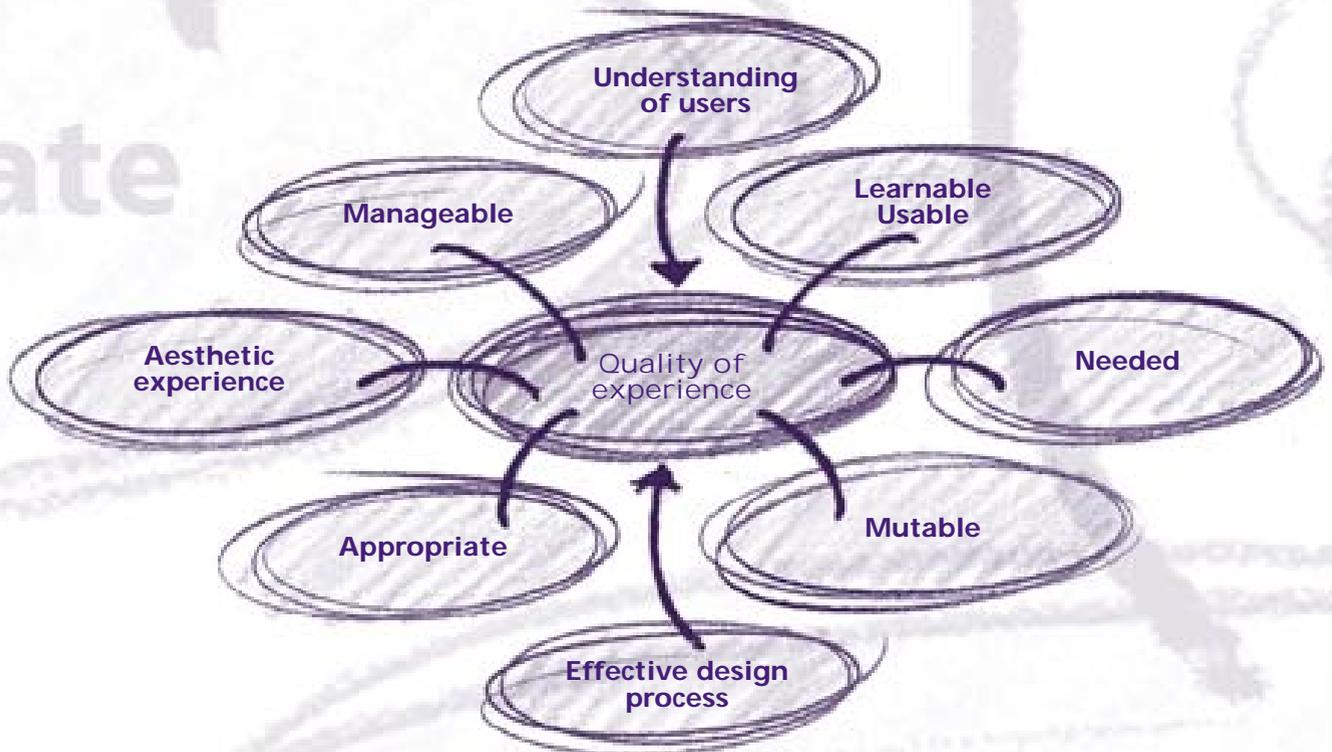
*This article appeared in a special issue of interactions magazine devoted to the first annual ACM interactions Design Awards. These awards are given under the auspices of the Association for Computing Machinery, whose Turing Award and Software Systems Award are widely respected marks of quality. The ACM interactions Design Awards are the first awards acknowledging quality in interaction design, as distinct from software engineering and research.*

## The ACM *interactions* design awards criteria

### Quality of experience

Taken together, the criteria raise one central question:

*How does effective interaction design provide people with a successful and satisfying experience?*



### **Understanding of users**

How well was the design team grounded in understanding the needs, tasks and environments of the people for whom the product was designed? How was that learning reflected in the product?

### **Effective design process**

Is the product a result of a well-thought out and well-executed design process?

What were the major design issues that arose during the process and what was the rationale and method for resolving them?

What methodologies were employed, such as user involvement, iterative design cycles and interdisciplinary collaboration?

How were budgeting, scheduling and other practical issues, such as interpersonal communications, managed to support the goals of the design process?

### **Needed**

What need does the product satisfy?

Does it make a significant social, economic or environmental contribution?

### **Learnable and Usable**

Is the product easy to learn and use?

Does the product communicate a sense of its purpose, how to begin and how to proceed? Is this learning easy to retain over time? Are the product's features self-evident and self-revealing?

How well does the product support and allow for the different ways people will approach and use it, considering their various levels of experience, skills and strategies for problem-solving?

### **Appropriate**

Does the design of the product solve the right problem at the right level? Does the product serve users in efficient and practical ways?

How did considering social, cultural, economic and technical aspects of the problem contribute to an appropriate solution?

### **Aesthetic experience**

Is using the product an aesthetically pleasing and sensually satisfying one?

Is the product cohesively designed, exhibiting continuity and excellence across graphic, interaction, information and industrial design? Is there a consistency of spirit and style?

Does the design perform well within technological constraints? Does it accomplish an integration of software and hardware?

### **Mutable**

Have the designers considered whether mutability is appropriate or not?

How well can the product be adapted to suit the particular needs and preferences of individuals and groups?

Does the design allow the product to change and evolve for new, perhaps unforeseen, uses?

### **Manageable**

Does the design of the product move beyond understanding "use" merely as functionality and support the entire context of use?

For example, does the product account for and help users manage needs such as installation, training, maintenance, costs and supplies? Have these needs and others been considered in an individual as well as an organizational sense?

Does the design of the product take into account issues such as negotiating competition for use and the concept of "ownership," including rights and responsibilities?

## Evaluating interaction design, an emerging conversation

At the heart of the ACM *interactions* design awards are the people who explore, learn from, play with, and respond to interactive products. Evaluating their experiences, as they use a range of products from PDAs and games to medical diagnostic equipment and off the shelf software, is what these awards are all about.

By “experience” we mean all the aspects of how people use an interactive product: the way it feels in their hands, how well they understand how it works, how they feel about it while they’re using it, how well it serves their purposes, and how well it fits into the entire context in which they are using it. If these experiences are successful and engaging, then they are valuable to users and noteworthy to the interaction design awards jury. We call this “quality of experience.”

### Awarding comprehensive solutions

We believe that the kind of quality experience we are seeking comes about when the design of a product is undertaken and developed as a whole. The *interactions* awards differ from other industry competitions, which tend to reward certain aspects of design (such as industrial and graphic design) as distinct from the whole problem and separate from the user’s experience.

Our intent is to acknowledge comprehensive design solutions which satisfy eight criteria we have described. The criteria, when taken together, are our attempt to define successful interaction design, design that leads to quality user experiences. An award-winning entry would excel in most of the criteria, and exhibit competence in the rest. A product that represented excellence in only one or two facets of its design would not be considered for an award.

This year’s finalists, profiled in this issue of *interactions*, stand out in several areas or are exceptionally strong in one specific area. A diagram illustrating how the judges thought the criteria were or were not met by each finalist accompanies each product review. The judges were unable to determine in some instances whether or not a product met certain criteria. Therefore, a blank criterion oval sometimes reflects insufficient information. Although we

received a great deal of information in the entry kits (products, documentation of process and endorsements) we did not receive as much documentation about actual “interaction,” or what kinds of experiences users had. Such documentation could have come from usability testing data or customer feedback.

When we began to evaluate the products, we first searched for feedback from the people using the products. We looked from the user’s point of view to find the answers to the questions we pose in the criteria. Did the people using a product find it fulfilled their needs? Did they like using it?

### Defining the criteria

Great interaction design is complex and difficult to define. But in creating the awards criteria, we are attempting to do just that. We aim to set high standards, which reflect the goals and aspirations of the interaction design community and stimulate discussion, if not agreement, about a definition of effective interaction design. We debated many issues and we expect that this discussion will continue within our profession and help us refine the criteria.

The criteria serve as a foundation for this competition. They also insure against the competition becoming a fashion show or solely a reflection of the personal biases or interests of jurors. On the other hand, we don’t assume that the criteria are definitive or permanent. It is possible that we have left something out. For example, one criterion that we eliminated, after much consideration, is “originality.” We would want to acknowledge a product that introduces a new paradigm or exhibits an innovative approach. On the other hand, interaction designs which derive from or reference predecessors are prevalent and practical. These designs can deliver quality experiences without being original.

In defining the criteria, we have tried to avoid clichés, jargon and vague terms such as “intuitive,” “beautiful” and “user friendly.” (Even the use of the word “user” was hotly debated by the jury, with one side arguing that it was too broad and impersonal and the other side endorsing it as a useful distinction.) We have attempted

to be specific, to emphasize certain qualities and to include everything we believe has an impact on quality interaction experience. As a result, the criteria are, in some cases, not mutually exclusive. They interweave and blend.

The criteria fall into two categories. Those in the first group make a *direct* contribution to the user experience. For example: was the product easy to learn and use? The second kind of criteria concern the development process used by the product's designers, which *indirectly* affect the user. There are just two of these: was the product grounded in an understanding of its intended users and was the product a result of an effective design process? All the criteria we describe are factors either contributing to or components of the user's experience of the product.

We're not implying that there is a right or wrong way or even a preferred way to fulfill a criterion. For example, we don't believe that there is just one "effective design process." We do assert that the effectiveness of the process plays a role in the effectiveness of the product. In addition, there are specific things we would expect to see in an effective design process, including user involvement, iteration, and multidisciplinary collaboration. The development of each product engenders its own unique process. In an emerging profession like ours, we can all profit from sharing this knowledge.

#### **Beginning a dialog**

The criteria form a basis for judging competition entries. In addition, they are intended to contribute to the discussion of how interaction design adds value to products and to people's lives. Ideally, designers of interactive products will use the criteria in their work and share them with colleagues and clients; those who teach will present the criteria for discussion and exploration with students.

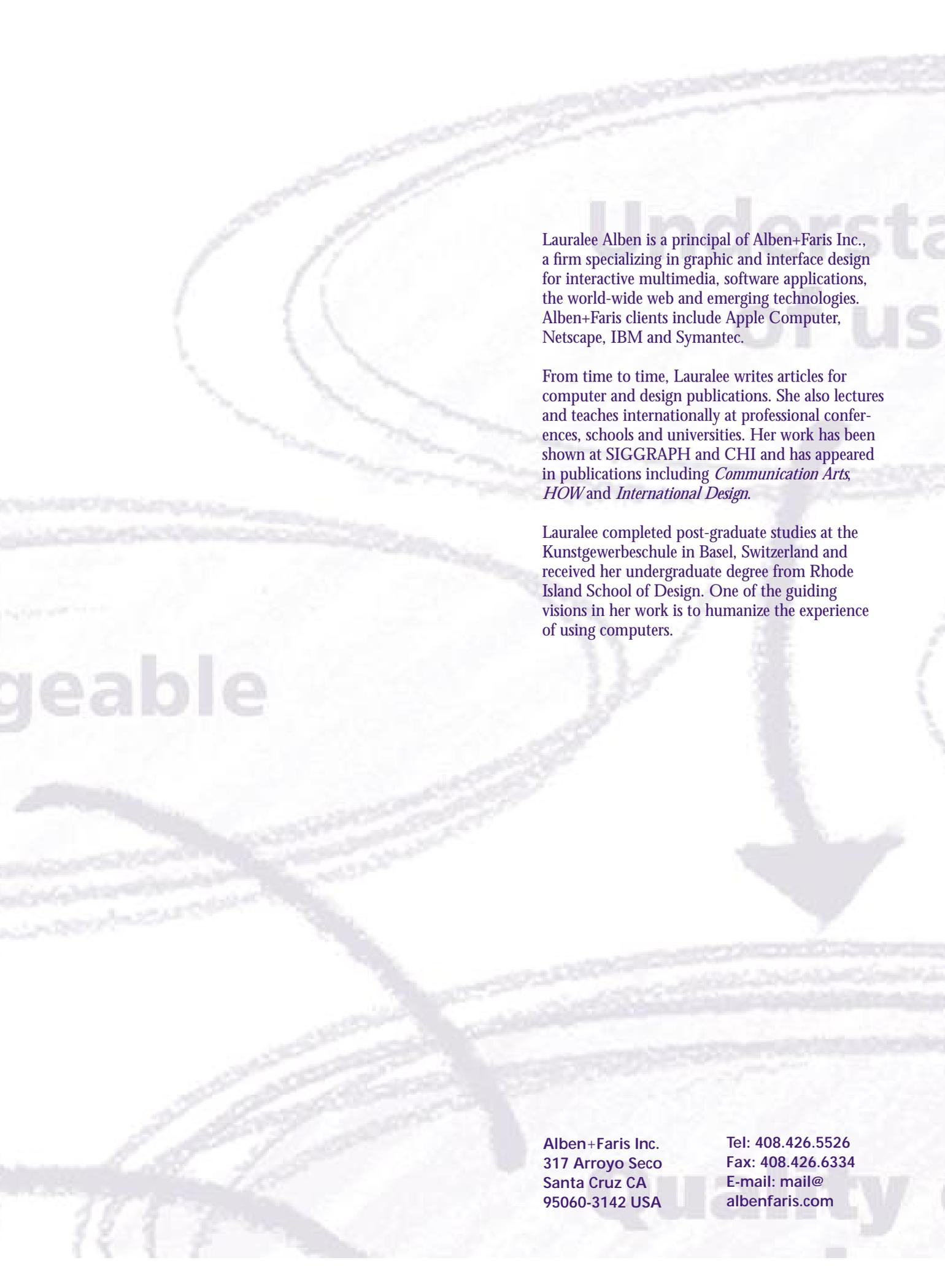
We hope the *interactions* design awards criteria will spawn new ideas and debate in *interactions*, at CHI, in our workplaces. Join the conversation. After all, these awards reflect our aspirations for the future of interaction design and will help us build recognition for the work we all do.

*Thanks to the jury members and committee advisors who contributed their ideas and thoughts to the development of the awards criteria.*

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From time to time, Lauralee writes articles for computer and design publications. She also lectures and teaches internationally at professional conferences, schools and universities. Her work has been shown at SIGGRAPH and CHI and has appeared in publications including *Communication Arts*, *HOW* and *International Design*.

Lauralee completed post-graduate studies at the Kunstgewerbeschule in Basel, Switzerland and received her undergraduate degree from Rhode Island School of Design. One of the guiding visions in her work is to humanize the experience of using computers.

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