Aaron Marcus and Associates, Inc.
1196 Euclid Avenue, Suite 1F
Berkeley, CA 94708-1640, USA

Email: Aaron.Marcus@AMandA.com
Tel: +1-510-601-0994, Fax: +1-510-527-1994
Web: www.AMandA.com

AM+A

Experience Design Intelligence
User-Interface Development
Information Visualization

Fun! Fun! Fun! in the Mobile User Experience: A Brainstorming Workshop

Overview

Aaron Marcus and Associates, Inc. (AM+A), in conjunction with Bernard (Bernie) DeKoven, aka "the Funsmith," offers a powerful, effective, one-day brainstorming workshop in user-centered, user-interface development for mobile products/services specifically intended to foster innovation in how the user- or customer-experience can be imbued with "fun."

One objective is to improve centers of excellence in software development and product/service design. The course is superior to conference and touring courses because participants can refer to, review, discuss, and benefit from in-house, non-disclosable documents and projects that they may not wish to share externally. The presenters will sign non-disclosure agreements (NDAs) as appropriate prior to the workshop. By design, the course is customizable to the Client's needs.

This workshop will focus on gaining insights into the influence of fun, flow, and community on the user-experience of mobile devices.

In addition to the appeal of new functionality, whether subjective or objective, the *promise* of fun ultimately determines the popularity and success of any consumer product. The more fun, and the more thoroughly fun is integrated into product design, the greater the chance of the design's appeal and ultimate success. When designing for mobile devices, it becomes crucial to understand:

- What is fun? Funny? What's the difference?
- What are the design elements that prepare the user for fun? (how does the user know that something is for fun, as opposed to something is for functionality?)
- What inhibits the experience of fun (e.g., too many rules, too much complexity too early, too late, too costly, too little control)
- When is fun productive?
- What is the fun element in terms of the user's interaction with the device?
- What is the social/cultural context of the user's interaction with other users?
- What's the fun of competition? Collaboration? When does each become less than fun?
- What is the cultural context of fun?

The ability to play a computer game on a cell phone, although it may add to the user's experience of the fun inherent in the device, may do little to leverage the communication and information access capabilities that are unique to mobile media, and central to the user's experience. In this workshop, we examine factors that describe both the individual and social experience of fun.

A primary objective of the workshop is to provide participants with enough experiences and resources to make fun a more practical, functional criterion for the design of mobile devices and to provide a sound basis for further research, analysis, and design.

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The key components of the workshop are illustrated lecture, informal group discussions, and interactive games/play which allow participants to put the concepts in context and to have a direct physical, emotional, and cognitive experience.

Learning Objectives

Participants will acquire a usable, useful, and engaged understanding of the social and psychological dynamics of fun/enjoyment and their affect on the user's experience of mobile media. This understanding will prove useful to those interested in creating more diverse, more attractive, and more engaging experiences for users of mobile media, especially in a social network context.

In this workshop, participants will take part in several exercises, one of which is a "mobile-phone party game" in which people race to find everyone on their dance tickets. The game models a perspective on mobile media that will help participants effectively integrate mobile phone communication with the physical and cultural extensions of the communication experience. The game will also provide an opportunity for participants to assess and apply several principle concepts developed during the workshop (see Information Resources for bibliographic references in the Appendix to this proposal):

- User-interface components: metaphors, mental models, navigation, interaction, and experience (see Marcus citations in Bibliography).
- The experience of flow, as developed by Dr. Mihaly Csikszentmihaly.
- DeKoven's concept of "The Well-Played Game," and the application of Muska Mosston's Slanted Rope Theory to sustaining involvement in mobile-supported interactions.
- Viktor Turner's (see Bibliography) concept of "Communitas" and DeKoven's theory of " Coliberation" as applied to the social experience of mobile device use.
- Dimensions of culture, e.g., context, environment and technology, uncertainty avoidance, technological development, time perception, authority perception (see Marcus citations in Bibliography).

The workshop enables participants to improve their skills as thought- and action-leaders, who can train or assist their colleagues in planning, researching, analyzing, designing, evaluating, and documenting superior user interfaces within product/service software solutions that incorporate fun essentially, not secondarily.

Each person attending the workshop will be given a workbook with materials to be referenced during the workshop and used as an ongoing information resource afterwards.

Key Features and Benefits

- We approach the challenges of user-interface design as a comprehensive, integrated process. Our workshop emphasizes both visual design and usability analysis, disciplines typically covered by other companies in different courses by people with very different skills and oriented to different groups. One might describe the workshop as one oriented to the "whole set of challenges, the whole person, the whole brain, both left and right hemispheres, and the person in context with the whole family, the whole community," We emphasize usability, but also point the way to usefulness and appeal as vital objectives for computer-based products and services.

- Our workshop accounts for user-interface development of mobile applications on many platforms. We emphasize strategies that account for the differences and similarities of these deployment platforms.

- A significant benefit of our workshop is that, by gathering together potential leaders of user-centered, user-interface development from across business organizations, these key personnel can learn about shared challenges and resources, improving company-wide practices. An additional outcome is a strengthened leadership group that significantly increases knowledge transfer back to people's desks, out to colleagues, and into action plans. Our "graduates" can help initiate or augment existing centers of excellence. We account for this action planning within the course through specific discussions.

Attendee Background

Attendees should be key design, usability, software-engineering, and product development professionals who want/need more practical know-how regarding fun related to user-interface development. Other attendees who will benefit include usability analysts, content analysts, and visual designers. The participants are likely to be researchers and developers of phone, PDA, vehicle, music, video, and other mobile devices, appliances, and consumer electronics.

Historically, mobile devices were designed to give us access to certain product functions: make a photocopy, answer a phone call, take a picture. More recently there has been resurgence in design and design research targeted at facilitating user experience. Particularly for mobile products, the context of use, the community and the culture strongly influence what the product should/could do, rather than the other way around. More than merely putting the fun back in to functionality, fun means business. For those involved in the development of mobile devices, a comprehensive vision of the nature of fun, as a psychological and social phenomenon, is central in the development of more popular and more integrated technologies. This workshop provides attendees with conceptual and experiential framework to help them attune to the principles of fun as embodied in mobile device design.

Biographies of Presenters

Aaron Marcus, President, Aaron Marcus and Associates, Inc.

Mr. Marcus is the founder and President of Aaron Marcus and Associates, Inc. (AM+A). A graduate in physics from Princeton University and in graphic design from Yale University, in 1967 he became the world's first graphic designer to be involved fulltime in computer graphics. In the 1970s he programmed a prototype desktop publishing page layout application for the Picturephone (tm) at AT&T Bell Labs, programmed virtual reality spaces while a faculty member at Princeton University, and directed an international team of visual communicators as a Research Fellow at the East-West Center in Honolulu. In the early 1980s he was a Staff Scientist at Lawrence Berkeley Laboratory in Berkeley, founded AM+A, and began research as a Co-Principal Investigator of a project funded by the US Department of Defense's Advanced Research Projects Agency (DARPA). In 1992, he received the National Computer Graphics Association's annual award for contributions to industry. He was the keynote speaker for ACM/SIGGRAPH 1980, the organizer and chair of the opening plenary panel for ACM/SIGCHI 1999, and the closing keynote plenary

speaker for UPA 2005, the Usability Professional's Association's annual conference. In 2007, he was named an AIGA Fellow by the AIGA Cross-Cultural Design Center. He is the Editor-in-Chief of *User Experience* (UX), *Editor of Information Design Journal*, and is a regular columnist of *Interactions*. He is also on the Editorial Boards of *Visible Language*, *Universal Access Journal*, and the *International Journal of Human-Computer Interaction*.

Mr. Marcus has written over 250 articles; written/co-written five books, including (with Ron Baecker) *Human Factors and Typography for More Readable Programs* (1990), *Graphic Design for Electronic Documents and User Interfaces* (1992), and *The Cross-GUI Handbook for Multiplatform User Interface Design* (1994) all published by Addison-Wesley; and contributed chapters/case studies to five handbooks of user-interface design, information appliances, and culture. Mr. Marcus focuses his attention on the Web and wireless communication, mobile devices, helping the industry to learn about good user-interface and information-visualization design, providing guidelines for globalization/localization, the challenges of "baby faces" (small displays for consumer information appliances) of ubiquitous devices, and cross-cultural communication. Mr. Marcus has published, lectured, tutored, and consulted internationally for more than 35 years and has been an invited keynote/plenary speaker at conferences internationally. He is a visionary thinker, designer, and writer, well-respected in international professional communities, with connections throughout the Web, user interface, human factors, graphic design, and publishing industries.

Mr. Marcus has also been a professional cartoonist on a humor magazine and for one of his own books about improving C-program visualization, a visible-language poet, a graphic artist, a conceptual artist, and an award-winning graphic designer.

Bernard DeKoven, Principal, DeKoven and Associates

Bernard (Bernie) DeKoven, aka The Funsmith, is the author of *The Well-Played Game*, and developer of the New Games Training program. With New Games, Bernie's innovative work was disseminated world-wide, and is now incorporated into most physical education and youth programs. Bernie's most recent book, *Junkyard Sports*, has received praise from physical educators and recreation planners.

Bernie's work in theater, education, game design and group facilitation led him to the development of the New Games Training program. Through his consulting practice, seminars, and his publications on his DeepFUN.com, Junkyardsports.com and Majorfun.com Websites, he helps people from all over the world learn how to make things more fun. He works/plays with government and charitable organizations, businesses, and individuals.

Bernie DeKoven's lifelong belief that things can be made more fun led him to develop and implement new ways of playing, new games for groups of all ages and sizes, from singles, couples and families to schools, communities and cities, and, most recently, to his book "Junkyard Sports."

He is a lifetime member of The Association for the Study of Play and recipient of the Iffny-Raynolds award for Outstanding Achievement in the Field of Fun from the North American Simulation and Games Association.

Brainstorm Workshop Schedule

Following is the approximate course schedule, which may be customized per on-site requirements. Topics covered in each day's lectures are identified. Exercises accompany most of the lectures.

Schedule of Events

08:30   Participants assemble for coffee.

09:00   Workshop begins: Introductions of people, Introduction to Workshop.

09:30   Initial fun/play exercises (specific examples TBD).

Ex: People in groups of three take turns adding parts to a group drawing of a face, as quickly as possible.

Ex: People in groups of three, after the experience of the previous exercise, draw faces again and notice the increased detail and richness; lesson/take-away: practice at play creates expertise, muscles, skill, wisdom.

Ex: People in groups of four invent sounds, needs, products, and slogans, as quickly as possible.

Ex: People take a letter of the alphabet and invent a game based on the letter and its associations, as quickly as possible.

10:00   Lecture: Mobile UI, Fun, Games, Trends (Marcus).

10:30   Coffee Break

10:45   Lecture: Continues

11:15   Brainstorm Session (2 Topics TBD)

Focus: What are definitions and issues of mobile UI, Culture, Fun, Games, Play, Appeal, Engagement?

12:00   Lunch

13:00   Lecture: Principles of Flow and Fun (DeKoven)

13:30   Lecture: Designing for fun (DeKoven)

14:00   Exercise: The Numbers Game

15:00   Coffee Break

15:15   Lecture: Communitas and the Well Played Game

15:30   Exercise: The Mobile Phone Game

16:00   Brainstorm: The Elements of Fun: What did We Discover?

16:30   Brainstorm: Where do we go from here?

17:00   Workshop ends

Discussion of Schedule

In offering a "fun brainstorm" workshop, we recommend beginning with exercises and carrying out an actual game or two. Afterwards, a brief lecture on the psychology and sociology of fun adds perspective. We also recommend that we use a computer and projector to capture the "live" results of the brainstorming, perhaps prioritizing ideas into those that seem to have the most possibility for short- and long-range objectives.

We shall introduce some ideas to demonstrate possibilities and stimulate collective creativity. Among possible ideas for fun in the mobile user experience:

- Animated text to add emphasis and fun to texting.

- Games, like Telephone Pictionary: (http://www.deepfun.com/2007/02/telephone-pictionary.html) in text only or text and graphic versions. These are variations of a surrealist game called "Exquisite Corpse" in which one correspondent leaves a story, the next receives only the last part of the message and continues the story from there, etc, etc.

- For GPS-enabled cell-phones, a service that would allow the user to call up and find out about the history of the place in which the user is standing (like an audio tour in a museum).

- Karaoke: ideas building upon song and joke karaoke.

- Use of the phone when one is in physical proximity to the people with whom one is playing.

- A means of exchanging humorous business cards, cartoons, avatars, or other humorous documents.

- Simon-Says-like instructions (raise your left arm, point your thumb to the left), and, if you see anyone else performing those same acts, you'll know they're playing the same game.

- Building on the "Big Game" phenomenon, usually involving a whole city, that might be relevant here. See, for example, Yellow Arrow: http://yellowarrow.net/index2.php . This phenomenon is related to smart mobs, uses mobile phones and mixes human interaction with geographic interaction.

- Word processing with music attached like the Apple Macintosh Music Jam program of the 1980s, so one can make/affect music as one thinks and types.

Lecture Descriptions

Introduction to instructor and tutorial (15 minutes)

This period will introduce the presenter, the tutorial schedule, procedures and objectives.

Mobile UI Components and Trends (60 minutes)

Concept designs for mobile devices include: smart watch channel concepts, Locos, m-YouTube, My Music Buddies, cross-cultural communication concepts,

Exercise: Brainstorming Session (45 minutes)

Lecture: Principles of Flow and Fun (30 minutes)

This lecture introduces key concepts and terminology related to the psychological dimensions of fun, drawing heavily from the work of Dr. Mihaly Csikszentmihalyi and the presenter's exploration of "Deep Fun." After the concept of Flow is defined, the lecture focuses on how a dynamic relationship between challenge and abilities is key to the experience of fun. Participants then relate their experience in the Numbers Game to the dynamics of challenge and ability. The lecture concludes with a discussion about Flow and fun as elements of the experience in the use of mobile devices

Exercise: The Numbers Game (20 minutes)

Participants engage in a simple game, derived, in fact, from a popular drinking game.

Lecture: Designing for Fun (30 minutes)
This lecture focuses on the Slanted Rope principle as developed by Dr. Muska Mosston, and how that principle is expressed in successful toys and games.

Lecture: Communitas and The Well-Played Game (20 minutes)

This lecture explores the social dimensions of fun, focusing on Dr. Viktor Turner's concept of Communitas and the lecturer's concepts of "Coliberation (beyond collaboration, when synergies augment skills), "The Well-Played Game" his work with the New Games Foundation (large-scale public games) and his book Junkyard Sports.

Exercise: The Mobile Phone Game: (20 minutes)

Participants are invited to experience a simple "frame game" in which they use their cell phones to find 4 other people whose cell phone numbers they have been given. The goal is to avoid being the last group to assemble all of its members together in one place. Participants must use their phones to find each other and to establish a meeting place. Since this all takes place in the room, participants are able to augment their mobile phone communication with physical gestures.

Brainstorm: the Elements of Fun (30 minutes)

Participants discuss what they found fun about the games and exercises and how they could be changed and elaborated upon to make them yet more fun. They also reflect on their experiences of flow, fun, coliberation, Communitas, and how the game structure contributed to each. Finally, they discuss how all this reflects on the design of mobile media devices and mobile user experiences.

Brainstorm: Where do we go from here? (30 minutes)

Participants will suggest and consider follow-on activities in planning, research, analysis, design, evaluation, documentation, and training, as appropriate.

Handouts

The handouts will include

- Reprint of DeKoven's article on Fun and Flow - http://www.deepfun.com/funflow.htm and a brief bibliography
- AM+A articles about culture and mobile UI design
- AM+A bibliographies about culture and mobile UI design

Workshop Letter of Commendation

Visa's manager of corporate training provided this letter of commendation for a five-day workshop about user-centered design AM+A developed and presented:

From: "Aiken, Larry" laiken@inovant.com
To: 'Aaron Marcus' Aaron@AMandA.com
Subject: UI Design Class
Date: Fri, 11 Jul 2003 09:09:10 -0700

Aaron -

I would also like to take the opportunity to thank you for the excellent job AM+A has done in preparing and delivering an effective, useful, and enjoyable Advanced User Interface Design class for Visa and Inovant staff.

The class participant comments were highly favorable, which leads me to believe that we achieved our goals of level-setting the User Interface Designers in the organization, raising the bar for consistent and usable interfaces, and providing a forum for our staff to network and meet with others who have complementary experiences to round-out design efforts.

I appreciate the time taken in the class to provide the class members with time to discuss and begin forming a center of excellence in user interface design. This group, under your guidance, coalesced in to a unified group that will be a critical component in project management within the Inovant and Visa organizations.

Thanks to you and your staff for using our comments and suggestions to customize the class agenda and contents to ensure that the materials were applicable to our circumstances, organized according to RUP best practices, and included sufficient hands-on experience for the group to expand their understanding of the concepts.

And finally, thank you for the candid comments regarding the class participants. This information will enable us to ensure that staff participants receive the support and assistance necessary in their future efforts.

As we move forward in institutionalizing the User Interface Center of Excellence, I look forward to your comments and feedback.

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Thanks - Larry

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