



MAS.966 / 15.970

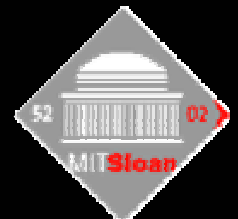
Digital Anthropology

Session TWO : Reality Mining & Experiment Proposals

21 February 2003

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50 YEARS OF DELIVERING
THE FUTURE

Experiment Proposals

Project Proposals

By Michael J. Osofsky

February 20, 2003

Self-Reflection

- **Problem:** Did I come on too strong? How did I look? Was I a bitch/jerk? In business school, we're here to learn as much about commerce as our own selves. But we lack tools for self-monitoring though. How can we reflect on what we do not observe about ourselves?
 - We can't see ourselves in situations we'd like to be able to
 - We can't hear ourselves either
 - We aren't aware of our behavior
- **Solution:** Convenient devices for self-recording and analysis. For example, video recorders, voice recorders, bio recorders (heartbeat, sweat detection), attention-level detectors.
- **Digital Artifact:** Eye-aRe, Digital Mirror, What Was I Thinking?, Reflexion, The I Sensed Series, Various other COTS devices, plus Day-to-Day Monitoring for e-Health and Movement for Life: A Movement-Reflecting System for the Elderly
- **Target Audience:** Students interviewing for jobs, negotiating (i.e. nego classes), networking, socializing, working in groups, making presentations, etc..

Creativity Booster

- **Hypothesis:** We can stimulate creativity by juggling more ideas in our minds because creativity is proportional to the number of ideas we try to combine.†
- **Experiment:** Compare number of new ideas generated from brainstorming with and without goggles worn by participants which flash random images or keywords.
- **Digital Artifact:** [MicroOptical glasses](#), [Google images](#), [Understanding Creative Acts](#), [What Was I Thinking?](#)
- **Target Audience:** MIT \$50K brainstorming events, IdeaExchange, Ideas Competition.

† *The Act of Creativity*, Arthur Koestler

Elimination of “HUH?”

- **Problem:** Not being able to hear a housemate frustrates everyone in the house.
- **Solution:** People in the house wear earpiece / microphone devices.
- **Digital Artifact:** Impromptu or Networked Ear or Spatial Aspects of Mobile Ad Hoc Collaboration.
- **Target Audience:** Married students, roommates.

Boredom Detectors

- **Problem:** Some professors might reenergize their classes if they only knew when people were bored.
- **Solution:** In a classroom, display to all the level of concentration of each student. Grade class participation based on cumulative attention. Evaluate professor based on same.
- **Digital Artifact:** [Eye-aRe](#) (Blink Detection), [Learning Companion](#)
- **Target Audience:** A course XV core class taught by a dynamic, open-minded professor.

Name That Tune

- **Problem:** You stand in front of the jukebox humming the melody of the song you want to hear but you just don't know what the song name is.
- **Solution:** A Jukebox enabled with "Melody Recognition System"
- **Digital Artifact:** Melody Retrieval on the Web and Kazaa on PC with quality sound system. Could be expanded to video by using talkTV. Also What Was I Thinking?
- **Target Audience:** Weekly Wednesday's at the Muddy Charles.

Read Between the Lines

- **Hypothesis:** Team dynamics and politics prevent people from contributing good ideas in a group.†
- **Experiment:** Compare team effectiveness with and without these tools.
- **Digital Artifact:** Conductive Chat, Second Messenger, Spark, SaySee,
Target Audience: Project teams.

† *The Fifth Discipline*, Peter Senge

Personal Projectors

- **Hypothesis:** Small wall projector digital devices (cameras, PDA's) would facilitate collaboration, or meeting scheduling at the very least.
- **Experiment:** Analyze the effects of personal projectors.
- **Digital Artifact:** Personal Projection
- **Target Audience:** Architecture students?

MIT / Preschool Dual Degree in Show N'Tell

- **Hypothesis:** Preschoolers would learn something from some of the Media Lab's projects.
- **Experiment:** Demonstrate a few projects at a local preschool and see what happens.
- **Digital Artifact:** [Animal Blocks](#), [Dolltalk](#), [Learning Companion](#), [Sam](#)
- **Target Audience:** Cambridge Montessori

Easier Group Decision Making

- **Problem:** Professor Shiba's tool for group decision making (called "Language Processing") is hard to use because of its heavy use of paper.
- **Solution:** A digital tabletop for collaborative Language Processing.
- **Digital Artifact:** [Sensetable](#).
- **Target Audience:** Students of 15.097 Breakthrough Management.

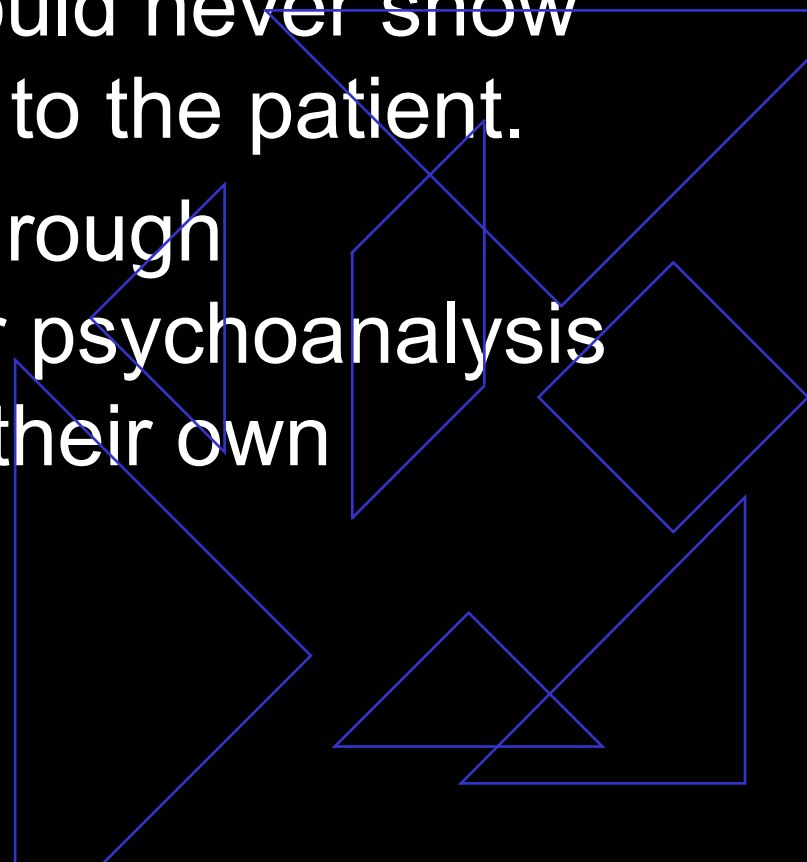
Sensors and Psychoanalysis

Juan Carlos Barahona



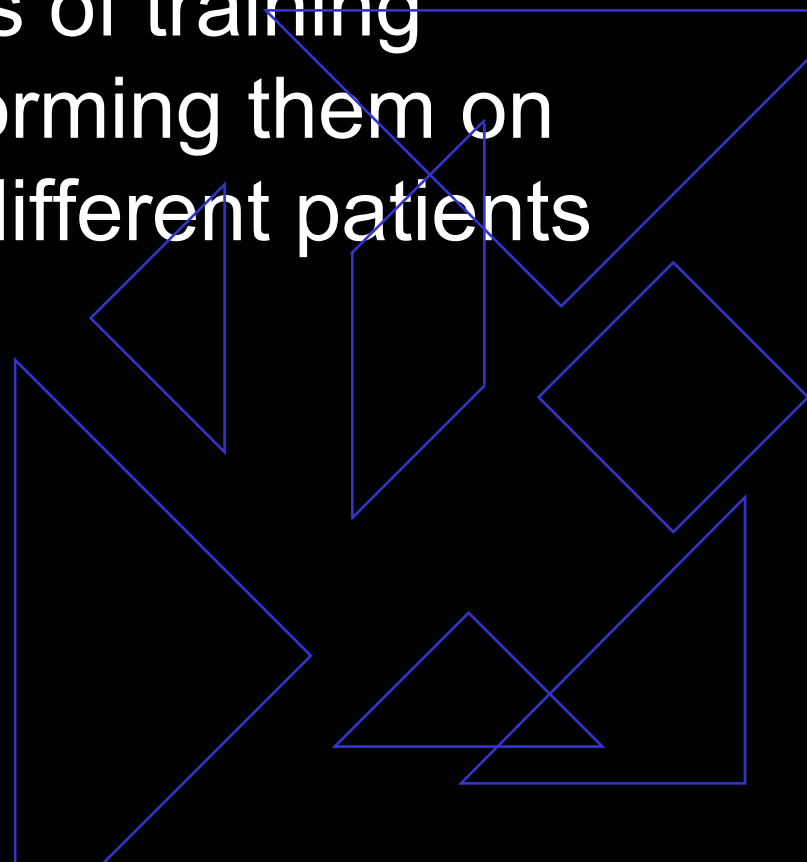
Sensors and Psychoanalysis

- An important principle in psychoanalysis is that the therapist should never show an emotional response to the patient.
- Therapist are trained through supervision from senior psychoanalysis (ex-post) and through their own experience as patients



Sensors and Psychoanalysis

- Biometrics can provide complementary feedback in the process of training future therapists by informing them on their reactions toward different patients or topics.



Evolving Implementations

By Leonardo Villarreal

February 20, 2003

Problems

- Credit Cards Stolen / Credit Card Fraud
- Lost Items/Property/Children
- Overall Home Security

Hypothesis

- There is a higher rate of technology acceptance when the end user makes no investment, but less acceptance as privacy decays.

Evolving Implementations

- Instead of using Credit Cards
 - Use fingerprints + pin numbers (or use all 3)
- Electronic Labels on Items (I think it got developed here at MIT)
 - Photograph Shopping
 - Label pets, children's clothes (to be electronically found)
 - Cars, so that pieces & components cannot be sold
 - Weapons
 - FedEx buys labels for security, Labs too
 - Problems with privacy

Security

- **Security Robots**
 - Not Exhausted
 - Can be linked to house security systems
- **Sensitive Floor** (Project from Context Aware Computing Group)

Digital Anthropology

Ideas: Fede & Tim

Project Proposals

- Digital transcription- what happens when group conversations are automatically transcribed to text?
 - In team settings?
 - In ABP or the Sloan Lobby?
 - In a classroom?

An example project... assign a stenographer to a group area to record conversational snippets to show on a public wall for all to see. How do room dynamics change? What happens to team productivity – time/quality ratio?

Ubiquitous Projectors

- How do team efforts change when team meeting areas are equipped with projection equipment?

Mentoring Dynamics

- Can people learn better with a ubiquitous wireless chat session available with a mentor?

Remote Team Members

- Can teams with remote members bridge the performance gap using easy-to-use, free distance collaboration tools?

Brainstorming from 2/14

- Powerful portable devices
- Hearing implants, audio support systems
- Medical intervention support system
- WiFi “cellphone”
- Medical ailment tracking, e.g. snoring
- Combining Zaurus with Senge’s “Left-Hand Column” – what’s really going on in mind
- Social anonymity
- Challenge of distinguishing multiple voices – one person’s voice in a cocktail party
- Trading desk application – talk at a distance without shouting – OmniPresent conversations
- Location ID with permission
- Accelerating team-formation & meeting-making
- Different medium provokes different messages

More ideas

- Audio-enabled IM for class & social settings
- Subtle-tech – minimally intrusive artifacts
- Enabling effective side-conversations
- Anti-blather bot
- Negotiation class enhancement
- Handicapped-experience enhancing – e.g. translating from one mode to another, sound to picture?
- Location-knowledge
- Custom-audio, personalized audio-environments
- Match-making – tags to connect with most useful folks; telling who knows what
- Recruiting faire, conference-wear
- Serendipity-maximization
- Tightly linked, geographically distributed teams
- Physio-connection w/ PDA, much more than heart monitor

Project Mercury

- Case example of Tech Testbed “big-idea”
- A Wireless “Project Athena”
- Campus-wide broadband wireless networking

- Latest terminal devices
 - PDAs, padPC, wearable computers, watches
- Tracking Social & Applications Usage
 - Location, Communication, Collaboration, Games

- Multi-MIT Lab Collaboration
- Social Systems Experiment

Go Dramatically Beyond Our Boilerplate IT Infrastructure

- We expect Laptops, Ethernet, WiFi 802.11b
- How about ReallyWiFi 802.11a, quivers of computers, wireless power, etc?
- Advanced applications
- Paperless workplace
- ...

More Examples

- Pool Companion
- GameSpaces
- OmniPresent Conversations
- Minimalist Badges
- Kendall Conference Center
- Showcase Sloan

Brainstorming!

Brain!

Let's make MIT the
Premier Tech Testbed

Benefits

- (a) Boosting MIT campus & student experience,
- (b) Envisioning the future by experiencing it,
- (c) Basis for cross campus research collaboration,
- (d) Prototype testbed for inventive developers to fast iterate the next generation artifacts,
- (e) Experimental anthropology via predictive microcosms,
- (f) Inspiring entrepreneurial new product and venture development,
- (g) Capturing intellectual property for truly novel Project-related inventions, and
- (h) Great PR around this “really MIT idea”.

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