

## Mediated Faces

*Imagine you are designing a new interface for mediated communication. You must use faces to represent people, but how you use them is up to you. The face can resemble the person's real face or an imaginary face. The face can be still or in motion. It can change with time, or not. It can be realistic or abstracted. It can indicate gaze or emotion.*

*Describe your interface. What does it look like? How does the participant choose - and most importantly, change - the face? Is the input via keyboard or affective sensor or video, etc? Discuss why you made the choices you did. What are your interface's advantages and drawbacks?*

I am having a great deal of difficulty coming up with something that i feel comfortable with, primarily because of my reservations about using faces. So i am going to start by explaining my reservations in the hopes that this sparks an idea in someone else, and maybe myself.

Everything that i have read has proved to me that faces are crucial and convey so much depth and meaning to any event. But i also agree with the reading when it said that people are not as adept at conveying information visually as textually. Certainly, we have figured out how to control our face and our body language (back to issues of performance) but i don't think that we know how to control "avatars" or other images to convey what we would convey through our bodies. This is exactly the power i see of many artists, particularly cartoonists.

What i imagine i would like in a face-based design:

- caricature - in order to emphasize the information conveyed, magnify it. This would allow for people to really read the information, but it makes subtle stuff much more difficult.
- movement of imagery - one of my favorite psychology experiment showed dots moving and that people could tell in under a second whether or not it was human motion. Unfortunately, recent research also showed that people immediately knew that it was computer movement instead of human movement (Georgia Tech) so i am not certain if such a system is feasible.
- indication of gaze - one of the crucial things about conversational interfaces is to understand who is being watched and interacted with. For this reason, some form of gaze indication is crucial. Although, what happens when you are talking with multiple people at once and want to watch both of them (i.e. quasi-synchronous spaces like IM). Our minds are multi-tasking much more effectively with online spaces.

One thing is certain about faces - they allow for people to devise an immediate stereotype about a person, faster than any other image. This is both advantageous as well as problematic. For example, it makes it easier to put someone into a mental structure, devise meaningful information, etc. The problem is that this relies on a picture or computer capture of a face, something that can either be doctored or not as revealing. For example, when i see my friend through their webcam, i realize how easily i would misread them based on when i see them in RL. So, if we classify people based on their faces in RL, we probably use the same classifications online. If the information is wrong, we are much more likely to misclassify someone, meaning that our likelihood of being wrong grows. I believe that contradictory information is more problematic than non-existent information.

So, the one facial image that i always like is the one that is both rough and caricatured. So, i imagine a type of comic image that is pixelated or blurred or otherwise roughened, maybe by

making it a collage of information. This effect allows the user to not try to focus on what is real but what is implied, requiring a change in idea of what classifications to use. I remember how effective ASCII art was at showing general image without forcing people to make blatant assumptions. I want to bring that effect in. Another idea along those lines would be to use meaningful text to make up the image so that a person's face is made up using the text that describes them.

The major problem that i run into is that i don't know how a user should interact with such a representation of themself.

One of my favorite talks was a ?1999? SIGGRAPH talk by an artist at Pixar who criticized recent work done in facial representation, suggesting that facial expressions often precede language. As a result, they either negate the text (i.e. sarcasm, or lying) or magnify the intended expression. The speaker suggested that work where the user manipulates their expression is usually a failure because it doesn't help the conversation (citing ComicChat and Ken Perlin's work).

As a result, i don't know what the answer is - can you have people manipulate their own image or should it happen without them? Can the system presuppose what the person is about to say and convey that accurately? I don't think so. Thus, i am not sure what should be done.

I guess i have more criticisms than useful suggestions or ideas... but i will keep thinking.