Using Games in HCI

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CHI 2004 had a few panels focused on videogames. Of these, a couple of ideas were particularly innovative and really point to how games are leading the way in the field of HCI: Uncle Roy All Around You and The ESP Game.

Uncle Roy All Around You

http://www.unclestrylandandyou.co.uk

The idea to integrate a game into life and into your mobile phone is not new. Ever since the Michael Douglas movie "The Game", developers have thought about the possibility of creating games which blur the boundaries of reality and play.

Uncle Roy is a game which involves two sets of players: the street players and the virtual players. Street players carry a handheld device and try to locate Uncle Roy. Virtual players move around in a virtual rendition of the city.

In my one attempt at playing as a virtual player, I eventually found out from Uncle Roy that there was a postcard awaiting pickup. I roamed the virtual city and soon found the location. Then I had to try and convince a street player (all of whom I could track and communicate with) to go to pickup this physical postcard. The street players, however, are often bombarded with directions and suggestions from many virtual players at a time and must decide whose instructions to follow.

The game's interaction is interesting in that it enforces co-operation between two parties by limiting each of their information such that a co-dependence exists. In this manner, the street players are like smarter versions of autonomous robots - a partner and team mate but also completely independent. Although the intent here is to deliberately obscure information between two parties, many real life scenarios are similar.

Space projects, autonomous robot control or even simple CSCW (Computer Supported Collaborative Work) applications all operate with two or more parties attempting to convey information between each other in a useful and accurate manner. As David Brumner or the Idaho National Laboratory indicated in a separate CHI presentation about Human Robot Interface, the interfaces currently in use, while functional are certainly not optimal. Whether games like Uncle Roy can reveal new ideas in presenting and interacting with remote parties will be interesting to see.

The ESP Game

http://www.epsgame.org

People view and label images differently. If you look at an image (be it graphic or photograph) the words you use to describe it are invariably different from the next person's. This discrepancy and inability to standardize on labels is exactly why Google


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Images ends up bringing the strangest results for the most innocuous searches.

The designers of the ESP game claim to have a way to label all images on the web accurately within 30 days. Sounds unbelievable.

The concept of the game is simple. Two players log on and are shown an image. For each image, they must try to find a word to describe the image which coincides with their partner's guess. No communication is permitted between the two players, of course. Bonuses are awarded for matching a certain number of images and for speed. In addition, "Taboo" words exist - words which cannot be used - in order to increase the difficulty and also remove the most obvious keywords already identified.

Combine this system with high scores, a labeled rank system (I recently graduated from "Novice" to "Golfer") and you have an addictive game with accurate results.

The problems I have noticed thus far: 1) I tend to use the simplest words possible. That means if I see a picture of ancient Hieroglyphics, I will likely try "Brown", "Stick", "Figures", "Egypt" well before the one word which perfectly describes the image because I don't have faith that my partner will know the word. 2) The character limit similarly prevents complex words to be used. 3) Some sort of consensus seems to be happening where some words, such as "Gay" are used for images regardless of the content.

None of those problems are particularly significant and the effectiveness and accuracy of the labeled images is still impressive. What's most important here is that this community driven data is like the human version of distributed computing programs like the SETI@Home project.

Another example of "stealing brain cycles" is MoodLogic. MoodLogic detects what songs are on your system based on the signal of your song (imagine a fingerprint for your song) thus negating the need to manually label your songs. Then it applies any information it has on the song such as the genre(s) the song belongs to, the tempo and even the overall mood of the song. However, in order to get all your songs profiled, you need credits and to get credits, you need to do some profiling of your own.

All of a sudden, MoodLogic has an army of song profilers profiling song tempo, genre, mood, whether it's "yearning", "surreal" or "elettic". The way they create consistency is done differently from the ESP game and is worth an article of its own.

Both of these products, using a distributed user base with a common goal, are achieving what previously seemed immensely time consuming or even impossible.

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