This paper describes an algorithm for rendering a video as if it were painted. In essence, each frame from the video is converted into a painting looking image. Then each painted frame are stitched together to form a “painterly” rendered video. This process adds several challenges over single frame rendering.

The static images in the paper are all very impressive. Unfortunately, a paper is really not able to demonstrate how well the videos form. A video does not necessarily look good even if every individual frame is formed well. The second aspect of a video is how each frame relates to one another. Is there a seamless transition from one frame to the next? This was an issue that the algorithm in the paper attempts to smooth. The solution to flickering is to have each frame paint over the one previous to it. In this way, there is an averaging that takes place between successive frames and reduces unnaturally flickers.

In addition to painting over previous frames, this algorithm detects the motion of objects in the video and attempts to use this information to update simulated strokes accordingly. The previous frame is warped to the new image and then the current frame is rendered on top of the warped previous frame.

The paper describes what frame rate they chose for their painterly rendered videos. Instead of sticking with the traditional 30 Hz, they chose a lower frame rate. I believe this is a good idea. Without seeing the final product, I believe this algorithm needs something more to separate it from real video. With a lower frame rate, the transition from frame to frame will be slightly noticeable. This will in effect make the video look like “moving pictures”. Since paintings are normally single images, a painterly rendered video, in my opinion, should appears as many single paintings presented one after the other. If the frame rate is too high, then it would lose this effect.
Nigel Ray

Telemurals: Linking Remote Spaces with Social Catalysts

Authors: Karahalios and Donath

This paper describes a technique for promoting social interaction through computer mediated spaces. It was prominently presented in Professor Karahalios’ dissertation. Previous work in this research has created complications in terms of user privacy. Users feel that these types of systems are eavesdropping on public spaces. Telemurals attempts to mitigate these concerns by rendering individuals as caricatures of themselves. This set-up uses a level of indirection to avoid eroding the users’ privacy. The aim of this project is to create a “social catalyst”. Under normal circumstances, people will generally not start a conversation with a stranger. The goal of this project is to create an environment where two or more random people will strike up a conversation. In order to facilitate this type of interaction, a conducive and non-threatening environment is needed. Telemurals is designed to create this environment.

This specific project went through several design iterations. It linked dormitory public spaces from two separate dorms at MIT over the course of two months. At first it was a straight video/audio feed. This evolved to a comic looking video feed. Eventually the final release represented people as partially illuminated shades. The longer a person interacted with the device, the more shaded in that person became. Each of these stages of the products evolution added a missing feature to the device. When it first was put up, people were hesitant to use it, and some people avoided it altogether. The comic rendering made the application more approachable and “fun” to use. This was improved with the interactive shading. The shading promoted longer use of the device and this in turn promoted social interactions. Each design change added more to the “social catalyst” aspect of the project.

I believe this an ambitious project. Besides the initial novelty of the setup, I do not know if people would continue to use it. Getting people to extravert themselves is an incredible challenge. People are just not apt to socialize with strangers. Society has almost bred this idea in people. From a very young age, people are taught to not talk to strangers. This is a state of paranoia.