Painterly Rendering for Video and Interaction

This topic reminded me of the relatively recent commercials featuring people providing some sort of testimony for some financial firm (I forgot which one). It was obvious that the video was recorded along with the audio like any other film, but the video was re-rendered with some sort of drawing or painting filter applied. The only movie I can remember that uses this style is A Scanner Darkly which might not have gotten too much exposure or advertising because of its perhaps limited appeal. They may have been using slightly different techniques and algorithms because from what I recall, they looked a bit different from either of the methods in figures 2 and 3. Living paintings is a good way to describe such animated pieces. They weren’t quite cartoon drawings but still weren’t simple reproductions of what we see in real life. However, it was easy to tell that they had been obtained by manipulating a series of photographic frames. Maybe this just goes to show that the technology hasn’t been perfected yet or that (as the authors pointed out) artists can’t be replaced by computer renderings.

I was surprised at the fact that 30 Hz video did not work well for this style of animation, but I suppose there’s no better explanation than the authors’ conclusion that it becomes “too real” since we’re used to watching movies and most other types of live-action video at that rate. Just as interactive systems look better and smoother at much higher frame rates while those same rates make movies appear strange, perhaps there is a naturally proper slower frame rate for painterly animations. Maybe this is why the aforementioned commercials and movie did not seem as fluid as they could’ve been.
Telemurals: Linking Remote Spaces with Social Catalysts

Telemurals was featured in a previously-read paper about social catalysts as well as in many class discussions. My opinions on the implementation, installation, and post-exhibit analysis can be found in a previous critique. The main area least mentioned in those previous discussions was probably the design aspect from our point of view.

I’m guessing that it would be obvious to most people who saw Telemurals that it wasn’t (and wasn’t meant for) realistic synchronous audio-video transmission. The abstract representation of people meant that they were not completely exposed to the other side of the conversation. This was a success in preserving privacy and encouraging interaction, but it may have limited appeal for people who were simply passing by. From what I previously read, the lounge areas seemed like they would’ve worked better than the locations shown in figure 3 of this paper. While the hallway corner would allow people in either stretch to see people interacting with the system and possibly attract more participants, the site next to the elevator seems like it would only receive as much input was allowed before the elevator arrived and the users left. This one could have been moved to another corner or lounge area and likely have proven more successful in terms of participant retention.

In addition to my comment above, the design improvement suggested in the “Future Directions” section of the paper is a simple but effective change that would provide much more information with little work. The only wording I didn’t like was for one person to “tower over” another; this may actually be off-putting and make the “smaller” participant(s) feel unimportant or overwhelmed by the other side.

My thoughts are still the same regarding possible future setups: fix it up with the said improvements, and try it again since the initial reactions were positive. If it helps out the dorm atmosphere, the housing department of schools could invest in such a system for permanent use.
Non-Photorealistic Rendering

This was an intriguing read because I had never seen this type of rendering before. The geograftal-enhanced examples really produced drawing-like representations of 3-dimensional models and made them “believable” as hand drawings (especially the truffula trees).

It was a shame line drawing was not demonstrated on overlapping graftals where the flattened output showed identical colors on adjacent elements. Such little details can sometimes make a big difference. To cite an example, characters in South Park (since Cartman was featured) sometimes have a black line drawn between their eyes, occasionally on the wrong “paper” layer:

![Figure 1. Kenny’s left eye is the one that receives the stroke, but it appears that his right eye is on top layer-wise and should have received the extra black line.](image)

Of course, this is done by hand so an automatic system which does the calculations algorithmically and mechanically should be consistent.

What interests me most about this technique/technology is the potential for more realistic methods of “painting” digitally. There are many video demonstrations of virtual painting using software like Photoshop but the entire process appears too tedious for the results, and the rendering effects discussed in this paper could allow for better, faster, and more flexible painting and/or drawing.