Are single images sufficient to communicate qualities of texture-rich products?

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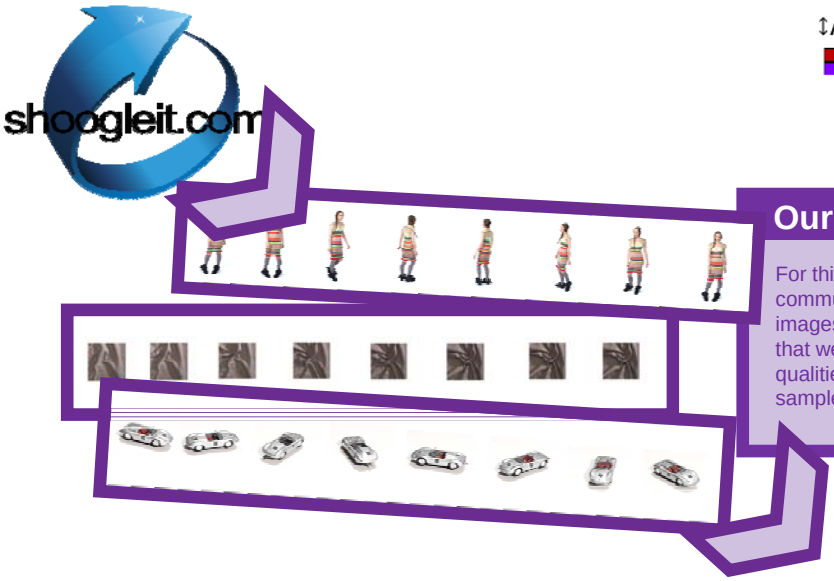
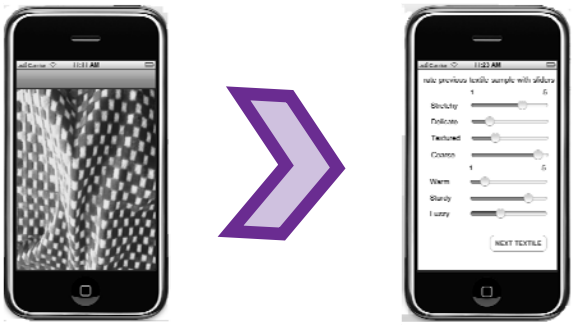
The Main Question

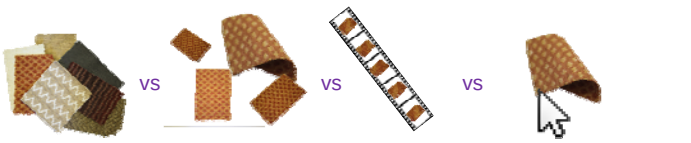
Single, still images have been used extensively over the last decade to present texture-rich products on the web. However, the interpretation of these images is ambiguous and many product properties are difficult to discern. Recently the short video clip and interactive animation have started to change the way we view and perceive these products. *The question is do they communicate texture qualities more reliably than single still images?*



Our Study

For this study we decided to investigate how reliably we can communicate eight qualities of textiles using the real material, single images, multiple images, movies and interactive multi-touch animations that we call 'shoogles'. Twenty-one participants were asked to judge eight qualities (*hard, furry, rough, textured, crisp, flexible, soft, smooth*) of a sample for each presentation mode.





Observations

We found that humans perceive qualities more accurately if presented with multiple views of textiles compared to single images and that perception was further improved using movies. It would seem natural that adding observer control (by using multi-touch shoogles that imitated 'pinching' of the fabric) would further increase engagement and hence perception over straight video.

However, our results showed no such improvement, indeed observers seemed to become more confused. A possible explanation for these results is in correspondence to the "modality appropriateness" interpretation, were touch is more predominant than vision when using multi-touch interfaces. *Even though multi-touch adds noise to our perception, observers were still able to more accurately perceive qualities of textiles than when using viewing single images.*

Applications

Given the apparent increased observer engagement it is likely that this form of digital presentation of materials will find increasing use *in e-retail / e-marketing* and may be particularly attractive for digital presentation of important archives.

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