Panel Position Statement: The Future of CMV

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Abstract

While coordinated views have gained acceptance in wide ranging environments, there remains the issue of how to effectively deal with coordinated views in new devices. For instance, multiple monitor setups are gaining ground. Does this change the way in which coordinated views behave? Does the distance the user's visual focus and cursor control have to move change the way in which coordinated views must be interacted with? Similarly, the extensive use of mobile devices for computing, such as PDAs, cell phones, music payers, etc. will require new thoughts as to how to integrate coordinated views. The small screens, ability to rapidly switch between views, and touch based interaction will all drastically change the way coordinated views are integrated. The extent to which such devices are used and the complexity of the software running on them requires such a level of sophistication; typical mobile devices are more powerful than desktops from a decade ago.

As coordinated views technology continues to develop we must validate their effectiveness through quantitative user studies and formal analysis. Most user studies to date have been qualitative (i.e. subjective) in nature. A formal validation provided by quantitative analysis will strengthen the long standing argument that coordinated views improve the effectiveness of visualization environments.

Finally, putting on my forensics hat, we need to consider the metaphors by which analysts interact with visualization environments. With coordinated views it can become much more challenging to explain to a jury how results were acquired when coordinated views are integrated into the environment. How can we simplify the metaphor and the comprehensibility of the analysis activity? Forensic analysis, however, does provide an enormous opportunity for the CMV community. When attempting to validate activity, analysts must often correlate activity across multiple disparate data sets. This may include hard drive data, network traffic data, web access logs, ISP logs, bank records, etc. Clicking on one time period would need to show correlations and anti-correlations in all other records. Consider this on a massive scale for dozens or hundreds of potential suspects with terabyte+ datasets and the analysis challenge becomes enormous. The opportunity for the CMV community to contribute to this field should not be missed.