Dear Mr. Matt Ericson,


I was actually in Manhattan 9/11/01 and was able to see the World Trade Center on fire and I want to thank you for implementing this interactive visualization. The information you presented allowed for much more understanding and insight into the events of the day and tells an extremely humbling and moving narrative.

The interactive visualization and presentation of the 9/11 audio tapes was very informative and helped narrate a powerful story that highlighted many insights into the events that morning. The site was easy to learn and navigate, intuitive for a wide range of users. Nevertheless, the site had fairly limited exploration capabilities (zoom, filter, etc.) that would be helpful especially for users who would like to delve deeper for additional understanding.

Some interactive exploration could potentially add value to the visualization and perhaps give the user more insight into what was going on that day, especially if the user wanted to review some of the events after the general overview. For example, providing links or mouse-over definitions for critical phrases could be helpful. Defining terms such as “rocking his wings” or “mode 3”, would provide the user greater insight into the situation and what people were talking about.

In addition, there were some limitations of the linear narrative presentation, especially during auto-scrolling mode. The breaks between event clips did not provide enough time to read the summaries, especially during the faster event transitions. Furthermore, placing the active dialogue at the top of the webpage made it difficult to understand the context of the dialogue. Instead of having the active dialogue placed at the top, it might be helpful to shade the active dialogue clip and place it in the center of the screen (see example on the right). This would allow users better situational awareness of what has just happened, what is happening and what will happen. Also, the stacking of events on the left, didn’t give users a sense of the time between events. Including a timeline to the left of the events can help users understand how the events unfolded in time (see example). In addition, a timeline will help users appreciate simultaneous conversations, such as at 9:28 and 9:32, and better understand the confusion and chaos.
One of the insights brought out by this visualization was the extent of the coordination disconnect between the various agencies. However, sometimes it became difficult to memorize who said what and where just based on the identifier. This is especially true when more agencies got involved and the communication increased in pace and complexity. To reinforce the communication patterns between organizations, it might be helpful to have a network visualization of the organizations, highlighting the active communication as the events unfold (see example on the right). Showing the agencies mapped out will provide users another way to mentally map the audio voices, leading to easier recognition rather than recall. It would also be helpful to have a small pulsing radio button at the location of the person speaking (see example). These suggestions could help with information coding and allow the users to more easily follow and understand the events as they unfold.

I am very grateful for the work of your team in developing this information visualization and interactive site. Although the visualization could potentially benefit from additional interaction and visualization capabilities, I found the site to be extremely helpful in better understanding and attaining insights into the events of that morning. Thank you.

Sincerely,
Allan Fong
Appendix

“Large issues”
- Intuitive interaction and easy to learn
- Very limited range of exploration
- Temporal visualization misleading
- Need to support the general public’s understand of domain specific jargon

“Medium issues”
- Consistent color theme
- Simplicity of the site limits distractions
- Advantages and limitations with auto-scrolling
- Zooming capabilities in map would be helpful especially around 8:42-8:47
- Opportunities to better display communication patterns, geographically and between agencies
- Need to reference complete data source and how much of it was omitted

“Small issues”
- Didn’t provide indication of how long the audio clip would be...2 hours or 10 minutes? Didn’t know it was only 33:50 minutes
- If you scroll to the bottom, the timeline on the left bleeds into the bottom navigation bar
- Latency in loading audio
- Location of the map is sometimes lost when rapidly scrolling between events, especially on smart phones
- No volume control on the site
- Pointer on the left timeline is confusing in managing the flow of the site
- Static audio clip upon loading