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Transcript of "How to Interact with Data Visualizations" video

Hey everyone so in this screen recording I'm going to show you some basic aspects of the visualizations so this is kind of like the starter video for any of the other videos.

So if you want to dive deeper you're welcome to, but you can at least get a sense of what I've done just by looking at this video in terms of the data.

So I'm going to show you a couple of things about how to navigate to start off. If you'll notice for each one of these visualizations there's an iframe and that iframe allows you to do some things. You have all these icons down here, and if you touch on one of them.

I'll show you what they can do in a moment, but they will essentially isolate that ecology into one of those modalities. So from left to right you have home black, caption tag black, cognitive light bulb (light blue), you have the visual eye in fuchsia, you have the AZ icon in purple which represents text/alphabetic, you have the neon green speaking icon for oral, you have red ear/hearing icon, which represents aural, you have the orange hand icon for touch/tactile, blue running icon for kinesthetic/movement, and green map for spatio-temporal. So again you can isolate to see within any visualization what modalities are present or how it connects between nodes.

The other key thing you'll see is that for each visualization there's nodes and then there's links, which are the colored lines. If you hover over the nodes you'll bring up a text caption for the tool or practice. You can see I'm hovering over the face to face node. Chief Burke is noting that he might have a face to face conversation with a crew to pass on or gather information. We can see that this is visual and oral and its scaffolding communicative activity.

Additionally, if we go down here there are some other aspects of the ecology that we can explore. One point about the links that I'd like to explain is some of them are solid (which represent communicative activity) and dashed (which represent mediational activity). It designates whether this work is more mediational or more communicative in nature. Spinuzzi, Hart-Davidson, and Zachry have written a bit about the differences between communicative and mediational work and I've cited that in this webtext so if you want to see more about that I really recommend that you check that article out.

The key takeaway is that communicative links are more transactional and interpersonal, and mediational links are more personal or intra-personal and it's work that isn't necessary circulating. The other thing you can do is you can turn on all of the caption labels by clicking on the black tag button next to the home button. Or you can turn them off by clicking home. If you are in label mode, you can click through the colored icons and continue to keep those tag captions on. If you want to turn them off and return to hover mode, you need to click home and navigate back through those

colored icons. I'm going to start with hover mode to talk about one additional aspect of the Chief Burke's (ecologies).

You'll see this is how the Orderville visualization has been built. What I've done is there is a key central node. And in Chief Burke the central node is incident management. And, off of that node there are three key segments of practice: we have a planning segment, a communication segment, and an observation segment. Those three segments represent segments of practice. I've brought those segments together because I have only selected to visualizations for this webtext and I wanted to show you robust visualizations, but the ecologies are easier to work with....by looking at the segments instead of combining them. because when there are too many nodes together it gets a bit overwhelming. We can go back and look at this and go like wow there's a lot going on there and it's going to take some time to work through it and that's ok.

What I want to do now is that I've given you some of the basic how to interact and work with these visualizations, I want to show another example of how the visualizations are structured and organized. This is a segment from Lt. Lamb from the Orderville ecology. So you can break these into smaller segments and analyze them this way. And, I find that to be actually the most helpful way to interact with them. And, then you can put them back together to get a bigger picture of things, so zooming in and zooming out is how you can approach showing the data. As we see from a center node and we move out, in this visualization the center node is Lt. Lamb and from that there is a radio communications segment that has additional activity going off of it, and then we have managing accountability that has additional nodes off of it.

Another way of thinking about the visualizations is that there are hierarchies and so the further away you go from a center node, you're getting into deeper practices that are more nested. So if we get way down here, this connects to here in some way. So from Lt. Lamb out to managing accountability, we see some mediational work going on, it's cognitive and visual, he's thinking about and looking at visual tags in order to manage the accountability of the crews. And, he's using a specific tool to manage accountability, that tool is the accountability board. Now what we also see is that there is this other node here and what has happened is that I've misspelled accountability so it's not connecting as it should. Also this is a textual, text based node, so we see that Lt. Lamb has his own tag with his name on it on the accountability board. And from that board we also have team 2, so team two consists of or the tags that are there represent the crew so we have FF Larimore's tag, FF Linn's tag, FF Ennis's tag.

Working back the other way, when firefighters arrive on the scene they organize into a crew or are assigned into a crew and they put their tags on the board that allows that incident manager to keep track of who is where. And, in this case it's LT Lamb. So we moved it out and back in to show how that part of practice is organized. We can also see that Lt. Lamb is doing some other tasks besides managing accountability. When we zoom back into that center node and the cluster of links around it, here's the key things that Lt. Lamb can be seen doing during this evolution. He's supervising the drill and making sure everyone is doing things safely. He's using cognitive frameworks and visual observations. He's reading smoke, spatio-temporal mediational link and visual mediational link. He's monitoring the scene, he's listening and watching as he's. He's monitoring crews on the inside and

monitoring crews outside and note again he's listening for oral communications (radio) and looking for visual cues. And, Lt. Lamb is also engaging in radio communications.

Finally, he's looking at his watch in order to keep track of time for the incident, and perhaps, in some cases, he's monitoring how long has this crew that's doing a search been exposed to hazards.Are they getting near the point where they might run out of air? Are they getting to the point where I want to call for a personnel accountability report to check in on the crew? So off the radio comms, we have giving orders, receiving crews' messages, and monitoring radio traffic: here we see mediational and communicative links. This offers a quick sense of what's involved in the links and the nodes. So that you can apply them. And work through the visualizations in your own way.

Last thing I'm going to touch show you. I'm going to navigate back to Chief Burke's ecology. So you also have some other choices to make while you are working. You can zoom in and you can hover over nodes to get a sense of what is there. I want to remind you that you can turn on all the labels or turn off the labels with these two icon buttons. By breaking them into the simple stand alone icons that are mode based you can get a sense of what is going on.

It can take some time dwelling with the visualizations to appreciate the complexity that is here. The additional thing that you can do is that if you want to look at isolate that visualization in its own browser window you can do that by clicking in the caption. And, I've also offered a verbal walkthrough of the data structure, as a transcript so there's a number of ways to interact with the visualizations. It makes them more accessible, but it also offers a number of ways to think about how we might interact and work with visual data in a range of ways. I think that by manipulating the data in all these different ways, one of the cool things is we can get a better sense of the data itself. Making these recordings, helps me to become more aware of how I might consider certain aspects of practice.

Thank you for your time.