

NOAA Science On a Sphere Users Collaborative Network Workshop
NOTES

Day 3, INCREASING INTERACTIVITY WITH AND DESIGNING EXHIBIT SPACE FOR
SOS SYSTEM Break Out Group

'Imiloa Astronomy Center of Hawai'i

July 31, 2008

Hilo, HI

Steve B (Whitaker) – seems there is consensus that more interactivity is a good thing, letting guests control what they see. Is that true? Why do we think that is true?

Peter (Nauticus) – we are good with docent interaction, behind in interaction without docent. Visitors will stay 30 min with docent, but not when alone. Their stake in the sphere is greater with docent present. Peter is working on this disparity.

Gretchen (Lawrence)– This is ingrained in an institutional culture, for example our culture is “hands on.” We NEED interactive, no audience expectation that they will passively listen. Kiosk is minimum bit of interaction they offer.

Consensus point - Yes, everybody is into interactivity.

Mike (Tech) – For the kiosk, if it is not in use by a visitor then the sphere will go into auto mode.

Rick K (Wisconsin) - Is it too much to give them the ability to rotate the data? 4 year old controlling may lead to sea sickness? Is there a limit to interactivity?

Russ (Thunder Bay) – If someone at a kiosk switches the dataset when another visitor is viewing it, then they are interrupted. For us, it's cool they can interact with the data, but interruption of experience we need to solve, though.

Mike (Tech) - Good point. Can set up so no one can interrupt for a specified number of seconds. Value can be set to lock out other buttons.

Steve (Whittaker) –You could set it so that a dataset plays all the way to the end when selected.

Roberta (Maryland) – It depends on how you want your visitors to absorb the sphere info though.

Greg (McWane) – If we have a queue for the kiosk, how much interactivity do we want? For them, full autonomy of operation is too much, they may miss out on data. Short session perhaps, then a jukebox setup option, tells you what's playing.

Comment: Jukebox? Charge them! Ha ha

Gretchen (Lawrence) – SOS has a big visual wow, but the interactivity question is how to engage multiple people when one person is at the controls... Iowa did a jukebox format, but we don't

want a long line forming... don't want them to wait. (much agreement) What forms can multiple people use?

Doug (Fiske)– What are you trying to DO with the visitor? What do you want them to learn?

Gretchen (Lawrence) – we aren't clear on that either. We know we want interactivity, but don't know what we want them to do. What's the intersection between content and interactivity? This is where we want to hit.

Doug (Fiske) – You assume that learning improves with interactivity

Gretchen (Lawrence) – No, what is the intersection between interactivity and what they learn.

Jukebox playing passive stuff doesn't necessarily work.

Roberta (Maryland) – we will experiment with interactivity. Our interactive kiosks can allow visitor to choose and explore in indirect ways what they WOULD see on the sphere, not operate the sphere itself. There are things you lose when they interact with sphere. So which are best choices? If exploring science is goal then interacting with sphere directly may not be the best

Maurice (GSFC) – When you say “Interacting with sphere” I think of two things. One background for planet, but kiosk allows person to interact with the quadrant they see. Doesn't have to be a whole sphere, only one person interacting with them. Tricky part is “what's on the background” because it's not hard to set up to have some interaction in an area.

Maurice (GSFC) – Is there value in being able to measure things on the sphere? This is the second definition of interaction. Getting things from NEO website then getting temp values from the ocean for example... see the temp range along the coast... what is the temp as shown on sphere.... Using the sphere as the model tool.

Yes is consensus – we'd like people to measure things on the sphere.

Peter (Nauticus) – We have a different level of interactivity. Instead of moving the sphere, we have current events kiosks with a playlist on auto run of real-time data that is relevant to the current events. Maybe not direct control, but point of reference when looking at sphere. Understand what dots mean, etc on the sphere.

Bryan (SMM) – How many people you want to have an experience at the SOS at one time is important. One of our goals is to have a certain number of people through just to have the experience, at viewing time of X. Even 4 kiosks moves from experience for 20 people to experience for four individual experiences. Gotta get more creative when you move to getting 10 people having modal experience with sphere.

Doug (Fiske) – I like the kiosk not directly linked to sphere, hope that a large SOS open experience would lead to individual kiosk interaction desire.

Laura (AMNH) – they do that to allow people to interact at their own pace.

Roberta (Maryland) – making choice of content is good. Different people having that control is good and being able to have others see the “driver’s” choice.

Doug (Fiske) – one strength of clicker system is most of the students said “I didn’t know what other people were thinking” and when they see a diversity of opinion it is fascinating to the students. This inspires conversation as to why people chose different things. His vision includes presenter going through script and highlighting important stuff, but pausing to allow people to interact with clickers and voice thought.

Melanie (MSI) – In our facilitated shows we make sure that they audience guides the discussions, we don’t force a direction on where it has to go. They give probing questions, gauge what audience is thinking and then reshape thought. They encourage questions and participation, to think like scientists. Even if said wrong thing, it’s okay to talk... remove fear of speaking up.

Rick Kohrs (Wisconsin) – more people experiencing – could multiple kiosks have cursors to point and click on globe? Not moving the globe, but kiosk interaction. Just an idea, no idea on feasibility.

Steve (Whittaker) – different visitors want different interactivity levels. Kids want lots of interactivity. It’s a challenge to meet all needs.

Peter (Nauticus) – they want to just watch at our facility. When giving control to others, it can frustrate other viewers. Small kiosk on the side may help.

Bryan (SMM) - Don’t discount low tech solutions – give people flashlights to shine where the answer on the sphere is rather than laser pointers. Instead of clickers, use red and green paddles. Have themed plush toys to engage little kids. Easy to overlook low tech solutions...

Gretchen (Lawrence) – Our current interactivity is pencil paper exercises. They are looking into moving answers on the sphere, (walking with flash lights to guess daylight)... something that resembles active participation in data collection and analysis – does this make the learning more meaningful. Losing floor staff and budget cuts make it hard to expand on this.

Dia (Oregon?) – using ocean datasets... a lot of activities can be unmanned... kids create ocean current model using straw water and food coloring... having exercise on the side in the room they will have fun with that. Or have microscope and they can switch out diatom or dinoflagellate slides and sphere shows where these items are... we will use low tech, we don’t have money for kiosks.

Mike F (Magic Planet) – lets say you can use actual laser pointers, would you give them out??

NO is consensus. People would shoot eyeballs out or they’d walk away with the lasers.

Bryan (SMM) You could mount laser pointers on the railings, but no other way.

Melanie (MSI) - What are some of the interactivities' people do with their docents?

Peter (Nauticus) – We have tabletop activities for turtle and shark migration looking at what they eat, why they migrate, etc... simple stuff. Earthquake data sets have slinkies, and wooden blocks to model another way. We roll tables in and out of the sphere area.

Melanie (MSI) – We use turtle dataset too, have a live leopard tortoise we bring in and show the temperature determined sexes lesson. Live animal really brings the message home.

Beth prompt - Other sites that do activities with the sphere?

Maurice (GSFC) – for our star parties, we will show images on SOS and will have party's attendees locate the items they will look for that night on the sphere and where they should be looking for that object in the sky, reaffirm how to use the sky wheel.

Dia (Oregon?) - For those of you who have a sphere, how would you set up the room to make it more visitor friendly? Lessons learned

Maurice (GSFC) – There are two space arrangements: one theater style – open and close doors possible. The other is where docents keep people in by engagement but no doors at all. Different answers for different spaces.

Melanie (MSI) – sphere is glassed in for us. So you can walk past on outside and still see it, but those who want to go in and have a seat can do so as well, this allows high viewership but no interruption for those who are there.

Terry Rasor (NC Aquarium) – We plan to have carpeted boxes and benches available. Outside movable tables will be placed too, to have activities possible in the room, but flexible arrangement. Will have autoplay but activities going on concurrently.. Is this viable???

Gretchen (Lawrence) – We're experimenting with the same thing. Our space is visible and open, but main flow is outside the space.

Rasor (NC Aquarium)– We were going to put the sphere in the center of our big room, but seeing Imiloa we are now thinking of moving the sphere to the side.

Rick K (Wisconsin) – Here is an example of interactivity that you could have on a kiosk to supplement what visitors see on the sphere. Hurricane applet is available, 2D online. Slide hurricane around, see how it changes with sea surface temp and changing seasons. On computer next to sphere. Java based. <http://profhorn.meteor.wisc.edu/wxwise>

Bryan (SMM) – It is interesting to see if artist program museums could do some art programs with the sphere. Artistic visualizations. Liked the “here's how much water fits in sphere”

exercise from the Bishop. Crowd sourcing – get a bunch of people to do something better than a computer. How about a “how many balls could fit in the sphere? Jellybeans?”

Doug (Fiske) – We have dodge ball to represent sun, marble to represent earth. They funnel in marbles to fill the “sun” and doing this on the sphere would be great.

Joe (NREL) – “what is one in 1 million?” Wallpaper for the sphere idea.

Gretchen (Lawrence)- Blue Planet has something like that.

Mike F (Magic Planet) – need a “powers of ten” that runs on the sphere.

Move over to see Rick’s Applet re hurricanes. He demos the site, the model. Fully drag and watch the effect. Nauticus has used this in conjunction with hurricane stuff on the sphere. <http://profhorn.meteor.wisc.edu/wxwise> is main page. Everyone loves the tornado one, too. They can adjust tunnel width and core pressure. Then they have to guess what EF scale level the tornado was.

Mike F (Magic Planet) – how hard would it be to send the map to us? (no answer) He gets asked for this ALL the time.

Peter (Nauticus) – This is tool is self explanatory, kids haven’t needed extra help. It's great

...out of time