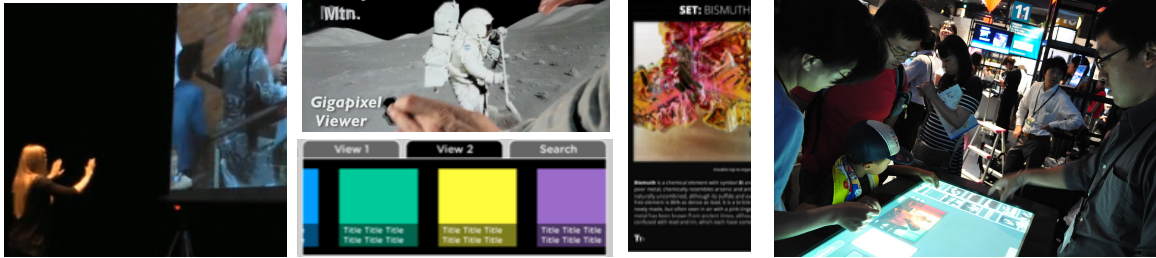

Evaluation Report

Summary of Open Exhibits Participant Interviews
and Analysis of Year One Participation Trends

FALL 2011

Rockman et al
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Introduction



Images from OpenExhibits.com. From left to right: a screen cap from a video featuring “Gigalinc,” an immersive photography exhibition posted by Sam Cox, top: an image from a video about the Gigapixel Viewer Module, bottom: a clip from an early mockup of the Collection Viewer template, and a photo of the “My Gallery” interactive installation at the Museum of Photographic Arts in Japan.

Evaluation Overview

Designed to complement ongoing research efforts, the evaluation effort during the first year of the Open Exhibits project focused on participant behavior and community development. The evaluation team conducted a variety of evaluation activities designed to explore emerging participation trends and study the formation and development of the Open Exhibit community, including a participant survey, participant interviews and ongoing monitoring of the Open Exhibits web-based forum for communication.

During its first year, more than 1500 people signed up to be a part of Open Exhibits. Participation ranged from reading blog posts, to trying a few software modules or using Open Exhibits software to develop actual exhibition components. This report highlights findings about the emerging community and trends in Open Exhibits participation.

Participant Characteristics

A participant survey was administered in February 2011. There were a total of 69 responses over a ten-day period. Specifically, the survey sought to determine how participants had learned about Open Exhibits, why they opted to join, what they had done since joining and how they intended to participate in the future. Registration data and participation logs were also analyzed to inform understanding of Open Exhibits participation.

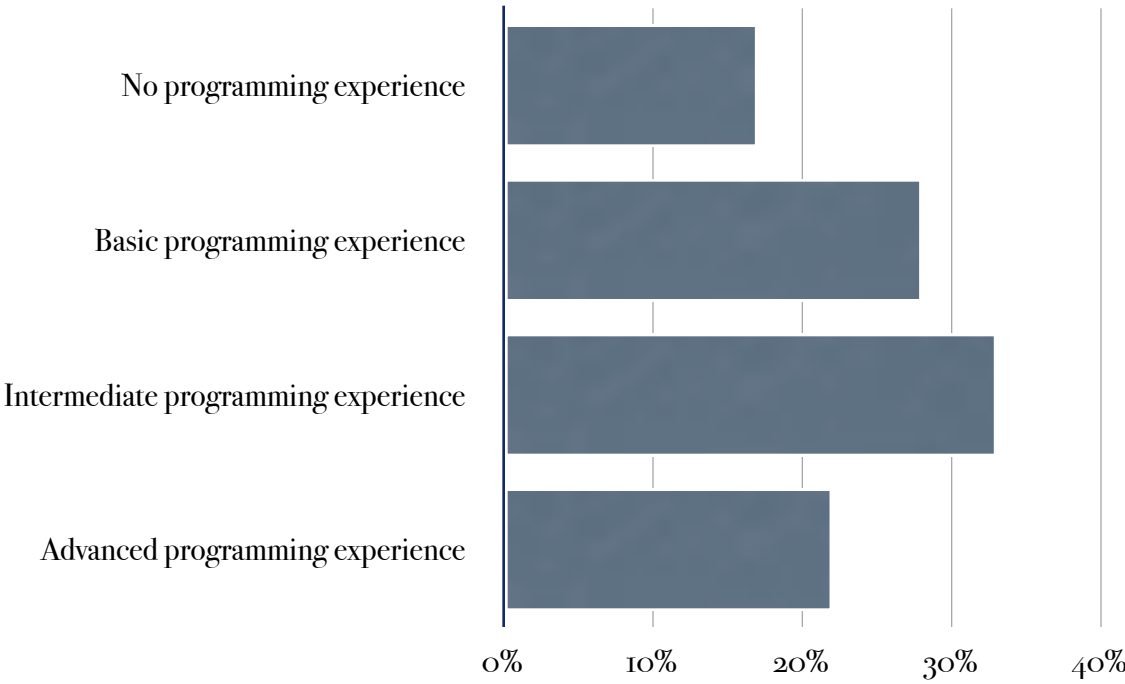
GETTING INVOLVED

Despite widespread efforts to promote Open Exhibits on the web through on related forums and via email through various listservs and newsletters, the most frequent mode of finding out about Open Exhibits was via search engines, i.e., people looking for resources to support efforts to create multi-touch and other interactive exhibitions. Eighty-nine percent of respondents indicated that they had decided to become a part of the Open Exhibits community because they were “interested in multi-touch/multi-user experiences.” Seventy-two percent said they were “interested in innovative exhibit design,” 68% said they were “interested in open source initiatives.” Other reasons included: “joining a collaborative community” (51%) and having a “broad interest in developments in the field including innovative design and/or research (57%).

PARTICIPANT CHARACTERISTICS

We asked participants to indicate their level of technical expertise. Table 1 below summarizes their responses.

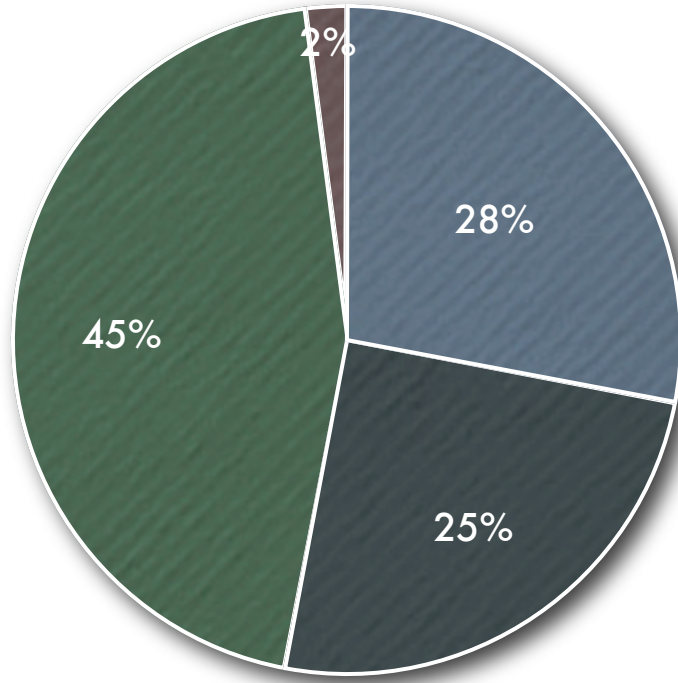
Table 1: Participants' Level of Technical Expertise



In addition to the participant survey, we also analyzed registration data. Based on responses to a member intake survey, a breakdown of participants' institutional affiliation in March of 2011 is presented in Figure 1.

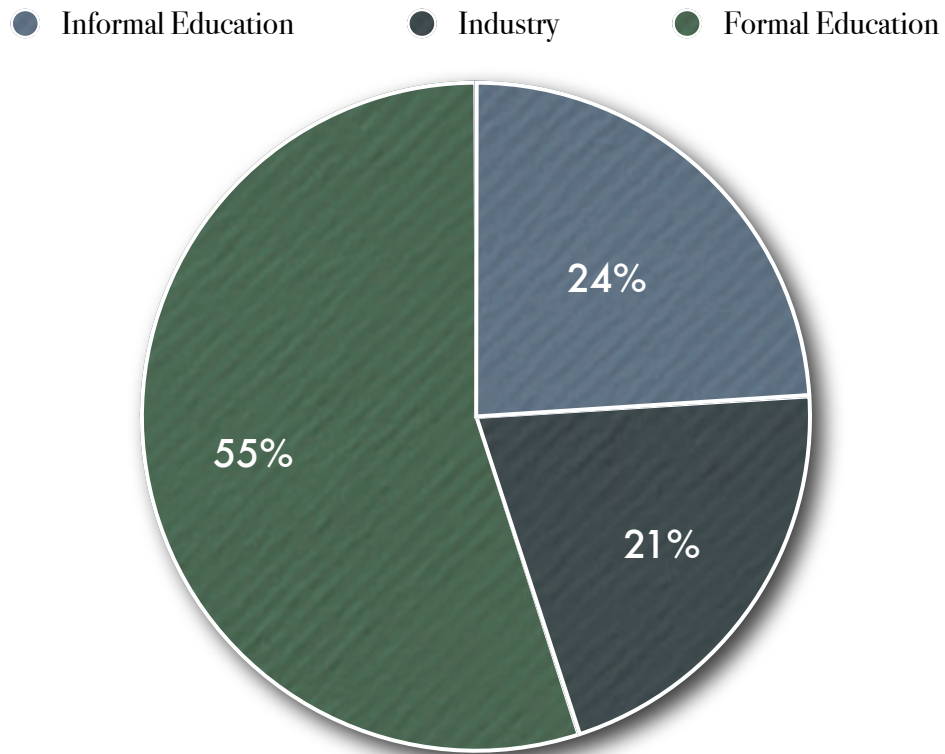
Figure 1: Participant Distribution by Category, March 2011

- Visitor-Oriented Institutions
- Design and Tech Firms
- Education-Oriented Institutions
- Other



Slightly different categories were used to categorize the affiliation of participants in June of 2011. Based on data from the 1128 participants registered in June 2011, the overall distribution stayed relatively similar. The formal education category in the figure below includes university faculty, staff and students, and research lab personnel; The informal education category includes staff from museums, aquariums, zoos, parks and other visitor-oriented institutions. The industry category includes all other institutional and professional affiliations.

Figure 2: Participant Distribution by Category, June 2011



While participants in the formal education category made up the bulk of participants at this stage, it is important to note that they will be producing technology and resources that can be used by participants in the informal education sector. In other words, while there seemed to be more producers than consumers, arguably that should be the case in the first year of a grant of this nature.

GEOGRAPHIC DISTRIBUTION

As of June 2011, just under half of Open Exhibits participants (i.e., 42% or 472 out of 1128) participants were based in the United States. However, 84% of participants from museums were from the U.S. (65% the Informal Science Education category were from the U.S.). Again, the majority of participants at this stage could be categorized as "producers" of new technology and new resources. Of the participants who might readily be classified as "consumers" or "users" of Open Exhibits resources, a majority are based in the United States.

Participant Involvement

A majority of spring survey respondents (78%) had downloaded Open Exhibits software. Only 66% had used it, but 32% noted that they planned to use it. Thirty-nine percent of respondents had actually implemented modules (without modification) and an additional 51% indicated that they planned to do so. Somewhat fewer, i.e., 36%, indicated they had modified the code, while 44% said they planned to do so. Additional data from the spring participant survey is presented in Appendix A.

We found that participants in the education category were slightly more likely to have downloaded Open Exhibits software, with an average download rate of 1.09 modules as compared to museum professionals with a .88 download rate, and a .97 rate among those in design/tech industries. Participants from the education category were also more likely to contribute (i.e., post information, comment, view posts, etc.) with an average contribution rate of 22.70, as compared to that of museum professionals (16.82) and design/tech professionals (17.73). Additional findings are summarized in slides from our presentation at the Open Exhibits Summit - presented as Appendix B.

Interviews with participants also provided insight into experiences with Open Exhibits during the projects' first year. In September 2011, we spoke with ten Open Exhibits participants affiliated with museums or institutions offering other types of educational experiences for visitors in North America.

Interviews with participants offered validation for the underlying goal of Open Exhibits, i.e., to provide support and resources to visitor-oriented institutions that might not otherwise have the resources to provide innovative technology-based exhibitions.

Given the focus on specific multi-touch technologies, we were curious to learn if the cost of this technology was prohibitive. Respondents acknowledged the costs associated with multi-touch technology, but indicated that most sites would prefer to purchase new technology rather than repurpose older technology that may be challenging to support, and shared a belief that multi-touch technology is the direction most institutions are going as they replace technology or look to purchase new technology for exhibitions. Participants seemed to share the opinion that *“The most expensive part of a lot of these exhibits is the programming not the hardware,”* or *“Its not the price of software that’s prohibitive, its the cost of someone’s time to program something, someone’s time to design it,”* thus highlighting the value of the Open Exhibits project.

REASONS FOR PARTICIPATION

Participants expressed a variety of reasons for coming to the Open Exhibits site, ranging from general curiosity about new types of interactive exhibitions to having a specific project or exhibition-related need in mind. The following is a summary of participants’ reasons for getting involved with Open Exhibits, as expressed during interviews.

Getting a head-start or leg-up on a specific project:

- *“Whenever I do something I see if someone else has done it before.”*
- *“We were looking at possibilities for a multitouch framework for the table...there were a lot of useful features that I really liked about it so we ended up using Open Exhibits.”*

Curiosity was piqued:

- *“Saw a video of [MT Kinect] and that’s what got us interested in the idea...One of my coworkers found the video and asked, ‘oh is it possible to do this?’”*

Greater ability to create things quickly in-house:

- *“The thing that I’m interested in with Open Exhibits is to be able to get an exhibit that’s compelling out relatively quickly so the malleable nature of it is really interesting to me...By the time we are able to do an exhibit any kind of current event is long-gone.”*
- *“We don’t have programmers in house to do those kinds of interactives, so when we’ve done them in the past they’re expensive and we don’t have as much control over what it is as we would would like. Hopefully having something that’s easy to use in-house is a big deal for us.”*

KEY BENEFITS OF OPEN EXHIBITS

Participants expressed the a variety of benefits for using Open Exhibits resources or being a part of the Open Exhibits project in general. Interview comments are categorized and summarized below.

Open source nature of the products and overall initiative:

- *“Its open source so you can do tweaking and customizations to further enhance the interactiveness of the programs.”*
- *“If we know we can put a collections viewer on the floor just by purchasing hardware, using Open Exhibits software right off the bat, that’s a big thing...it definitely re-shapes thinking about what’s possible.”*
- *“I’m a big proponent of open source and the idea that you can create a program that can benefit, across the board, multiple institutions.”*
- *“Lots of possibilities with limited funds.”*

Community:

- *“I did see the list [of comments] growing...seeing this is a current topic, seeing a lot of members contribute to this. That’s what got us all interested in starting off with using Open Exhibits from the get go.”*

- *“If the community continues to grow and more apps are built by other members and more contribution occurs than I’m pretty sure that a nice sustainable community will be created and people will give input and help others.”*
- One participant expressed a desire for more inter-participant communication: *“I tried to interact with people on the online forums...where I went first...but I didn’t receive a response.”* He suggested putting up lots of examples and filling out the documentation a bit more, things that will “help future users figure it out.”
- *Mix of people like us, never going to be great programmers...getting help from people who spend more time programming...Big institutions can probably afford a programmer.. but smaller places like us won’t be able to have that so we’re looking for the community to provide some of that information, that would certainly be very useful.”*

Staying abreast of new technologies:

- *“I’ve been made aware of the possibility of a lot of different things going on especially with the flexibility of Open Exhibits platform...more of an open minded attitude in terms of what’s possible with multi-touch interactives in particular.”*
- *“After going to the conference it turned my mind on to what’s possible with the Open Exhibits software.”*

Recommendations

Continue offering responsive and timely tech support. Participants with whom we spoke were generally pleased with the quality and timeliness of responses to questions or feedback on technical issues. Some commented on a desire to see more involvement from the community at large, in addition to the feedback given by staff members at Ideum. Participants also noted that documentation and supporting features have been evolving over the past few months.

Keep offering modules for different technologies - Kinect/Hands-free interfaces appeal to participants. Many participants indicated that they were interested in Kinect and hands-free technology that offers interactivity without more elaborate and costly hardware installations. Some participants specifically mentioned the fact that table-top installations have not, or would not work well in their institutions: *“Here in the museum people really vandalize the installations. Things with buttons or joysticks really get hit hard. We have destroyed things that are industrial. Interfaces like Kinect where people aren’t touching anything are very good for us,”* noted one participant.

Provide step-by-step instructions that enable quick launch, easy modifications, and basic troubleshooting tips. Most interviewees desired more plug-and-play functionality and the ability to quickly or easily make basic modifications. There were some obstacles to initial startup, especially for those with less programming knowledge. Even participants with extensive programming experience sometimes encountered problems or steps that were missing from implementation instructions, however, not being able to quickly get modules up and running was a bit of a deterrent for would-be users who were less technologically-skilled. Having to acquire the correct version of flash seemed to be the biggest technological/logistical obstacle.

Provide more examples on the web - i.e., show and tell participants what they can do.

Participants like seeing specific examples or “best practices” of what can be done with different modules. Less technically-minded participants indicated a desire for more information about what Open Exhibits can do: *“it doesn’t really tell me the power of Open Exhibits - for the person who doesn’t work with SDKs or flash...doesn’t tell me what to do,”* suggested one participant. The videos on the site are extremely helpful but participants also want to see and hear about actual exhibitions that are created. This will likely come with time, but continued encouragement for participants to post updates about modules they’ve implemented or updated is definitely recommended.

Encourage meaningful and more exhibit-focused use of technology. One participant pointed out a concern that cool new technologies might drive exhibits instead of exhibit-based needs driving the development and use of new technological resources, *“Oh we have this cool technology lets make an exhibit out of it!” instead of, ‘let’s make a cool exhibit; What technology can we enlist to get our thing done?’* He suggested an effort to drive technology and software design in a direction that will best serve the needs of participants - a comment that aligns well with efforts toward the end of the project’s first year to develop and release a collection viewer module.

Continue fostering community development. Participants look for and desire a strong and active community that invites a variety of professionals to come together to share information, opportunities and resources. Continued efforts to encourage community participation and communication will definitely enhance the project. Participants who attended the Open Exhibits Summit also felt that there was a great deal of benefit to meeting other participants face-to-face.

Actively match participants together for synergistic partnerships. Participants suggested matching museum professionals with programmers, students or other technically-savvy members of the community to develop modules. Museum professionals also saw value in more actively seeking partnerships with peers from similar institutions, seeking to develop similar exhibitions, especially in instances where content knowledge or resources can be shared.

APPENDIX A: SPRING SURVEY RESULTS

Open Exhibits Participant Survey Spring 2011

During a ten-day period from February 18-February 28th, 2011, 69 surveys were gathered from Open Exhibits participants. Our survey sought to determine how participants had learned about Open Exhibits, why they opted to join, what they have done since joining, and how they intend to participate in the future, as well as anything that would facilitate or enhance their participation experience.

1. How did you find out about Open Exhibits? (check all that apply)

#	Answer	Response	%
1	Email	7	10%
2	Twitter	3	4%
3	Facebook	4	6%
4	Linked In	5	7%
5	Blog Posts	9	13%
6	Search Engines	31	46%
7	Professional Organization	6	9%
8	Colleagues	14	21%
9	Conferences	2	3%
10	Other	6	9%

2. If you found out about Open Exhibits in other ways, please explain:

Text Response
Previous customer of Ideum
internet forums
web
NUI group
Sorry don't remember.

3. Why did you join Open Exhibits? (check all that apply)

#	Answer	Response	%
1	I'm interested in open source initiatives	44	68%
2	I'm interested in multi-touch/multi-user experiences	58	89%
3	I'm interested in innovative exhibit design	47	72%
4	I'm interested in joining a collaborative community	33	51%
5	I have a broad interest in developments in the field including innovative design and/or research	37	57%
6	Other	2	3%

4. If you decided to join Open Exhibits for other reasons, please explain:

Text Response

A family tradition of anthropology and archaeology, also some past associations with science centers.

i am experimint with my Kinect.. so looking for stuffs that can support my kinnect on PC.. i dont have any dev knowledge..

5. What is your level of technical expertise?

#	Answer	Response	%
1	No programming experience	11	17%
2	Basic programming experience	18	28%
3	Intermediate programming experience	21	33%
4	Advanced programming experience	14	22%
	Total	64	100%

6. Have you downloaded the Open Exhibits software?

#	Answer	Response	%
1	Yes	50	78%
2	No, but plan to	13	20%
3	No, don't plan to	1	2%
	Total	64	100%

7. Have you used the software?

#	Answer	Response	%
1	Yes	33	66%
2	No, but plan to	16	32%
3	No, don't plan to	1	2%
	Total	50	100%

8. Have you read any of the documentation?

#	Answer	Response	%
1	Yes	40	82%
2	No, but plan to	8	16%
3	No, don't plan to	1	2%
	Total	49	100%

9. Which documentation have you read? (check all that apply)

#	Answer	Response	%
1	Issue Tracker	15	38%
2	Manual	32	80%
3	API reference	23	58%
4	FAQ	29	73%

10. Have you implemented any of the modules with without modification?

#	Answer	Response	%
1	Yes	19	39%
2	No, but plan to	25	51%
3	No, don't plan to	5	10%
	Total	49	100%

11. Have you looked at the code?

#	Answer	Response	%
1	Yes	30	60%
2	No, but plan to	15	30%
3	No, don't plan to	5	10%
	Total	50	100%

12. Have you played with or modified any of the code?

#	Answer	Response	%
1	Yes	18	36%
2	No, but plan to	22	44%
3	No, don't plan to	10	20%
	Total	50	100%

14. What other things do you intend to do with the Open Exhibits project and its resources?

15. Have there been any obstacles or challenges in doing what you've wanted to do on the Open Exhibits site so far?

16. Is there anything that Open Exhibits can do or provide to make the experience more beneficial to you?

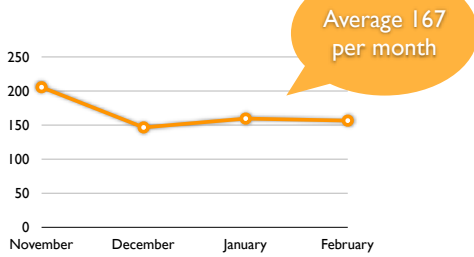
APPENDIX B: SUMMIT PRESENTATION

State of the Open Exhibits Community

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When?

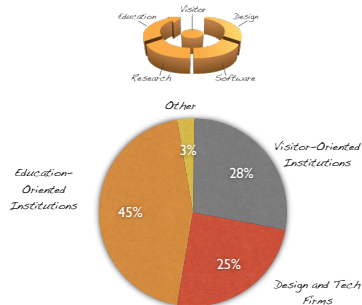


* Based on Data from 688 Community Members (November 2010-February 2011)

Where?



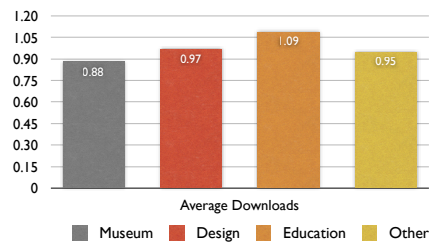
Who?



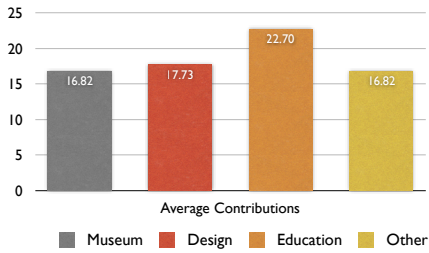
* Based on Data from 688 Community Members (March 2011)

What?

Downloading Software

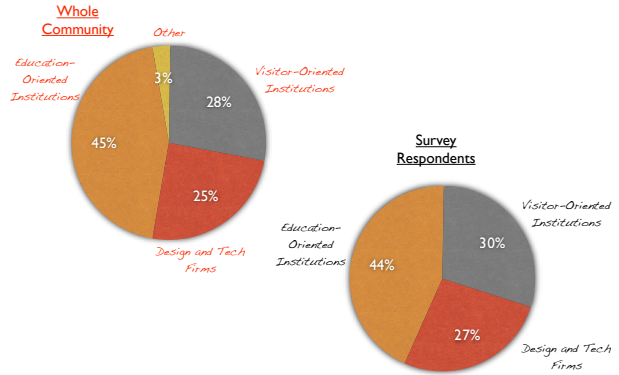


What? Online Contributions



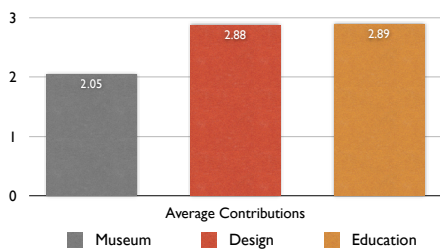
Member Survey:

Sixty-four members of the community responded to an online survey that explored members' goals for participation and assessment of their experiences thus far.



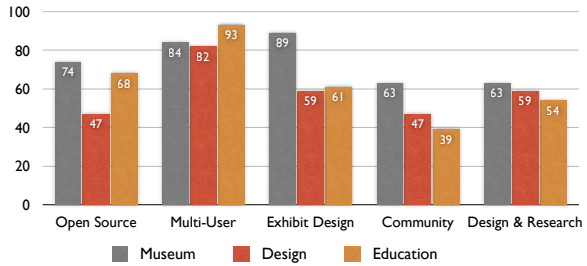
Who?

Average Technical Expertise of Respondents by Type



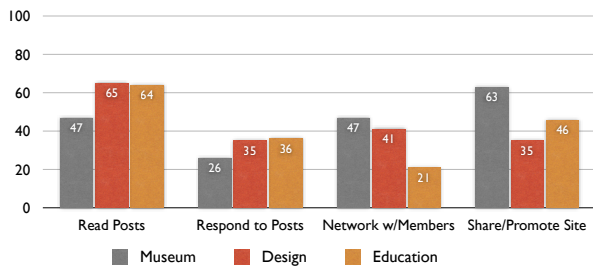
Why?

Respondents' Reasons for Involvement by Type (Percentage)



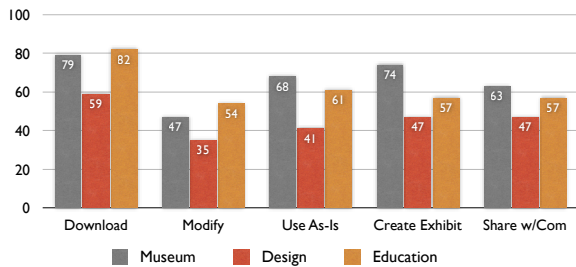
Why?

Respondents' Intended Activity by Type (Percentage)



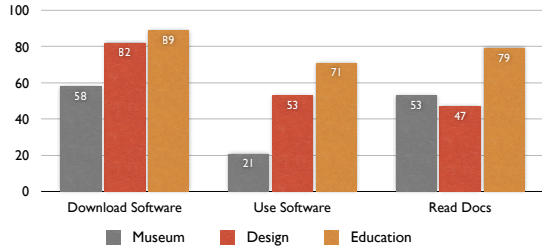
Why?

Respondents' Intended Activity by Type (Percentage)



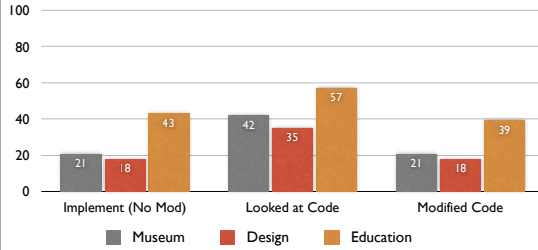
What?

Respondents' Activity by Type (Percentage)



What?

Respondents' Activity by Type (Percentage)



Visitor Institution Staff

I'm not sure I have the expertise to do anything with Open Exhibits.

I plan on implementing an exhibit or two. I assume it will involve light modification of existing templates - but obviously I won't know for sure until I dig in!



Tech and Design Firms

I just need to make more time to check out Open Exhibits.



Educational Institution (Faculty & Students)

Research for peer reviewed journal articles, book chapters, technical papers, extend into the classroom.

We plan to introduce graduate students into the field of interaction design and exhibit design, work with artist associations and museums in the area to develop new interaction initiatives and collaborative research.



Visitor Institution Staff

Characteristics:



Tech and Design Firms

Characteristics:



Educational Institution (Faculty & Students)

Characteristics:



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NUMBERS

Number of Open Exhibits Community Members as of July 1, 2011:

1303

Percentage of Community Members from Museums or other Visitor-Oriented Sites:

25%

Percentage of Members from Museums and Visitor-Oriented Sites based in the US:

84%

Open Exhibits Community Member Interviews

METHOD:
For this round of interviews, we selected the top museum collaborators and partners from among more than 1300 Open Exhibits community members. Ratings were based on online participation levels and contributions to the Open Exhibits community as of July 1st, 2011. Our sample ultimately included more than 20 of the top museum-based contributors (primarily in the U.S. and North America), along with known collaborators and implementors.

QUESTIONS:

1. How did you first discover or find out about Open Exhibits?
2. What types of info or resources have you gotten from Open Exhibits thus far? (for example: ideas, contacts, software, etc.?)
3. What, if anything, have you done in your museum/institution with those ideas or resources?
 - PROMPT: If nothing yet, is there anything that you plan to do in the future?
 - PROMPT: Is there anything holding you back from implementing the things you've seen or heard about through Open Exhibits? (Time? Staff? Funding? Technical limitations?)
 - PROMPT: Do you currently have multitouch hardware at your museum or institution - or do you have a good understanding of what you would need to do to develop a hardware installation to support content delivered on a multitouch platform?
4. Is there anything else that you plan to do, or would like to do in your museum/institution with the ideas or resources available through Open Exhibits?
5. Have there been any other obstacles to implementing ideas or resources you've found on Open Exhibits?
6. Are there other resources or features that aren't currently available on the site that would be helpful or useful for you?
 - PROMPT: What resources would you most want to see or be most interested in using if they were available through Open Exhibits?

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