CHAPTER 13

Future Arts, Media, and Entertainment: Seeds for 2020

The Tools of Aesthetics
Future Elements of Art, Media, Entertainment

Report on a Real Time Delphi Study

Executive Summary

The explosive, accelerating growth of knowledge in a rapidly changing and increasingly interdependent world gives us so much to know about so many things that it seems impossible to keep up. At the same time, we are flooded with so much trivial news that serious attention to serious issues gets little interest, and too much time is wasted going through useless information. How can we learn what is important to know to make sure that there is a good future for civilization? Traditionally, the world has gained access to most of its knowledge through the education systems, the arts, media, and entertainment. Today and into the future, information flow will be even more pervasive, with ever increasing communication technologies emerging on the landscape of experience. In 2007 The Millennium Project conducted a global assessment of some elements of the future of education and learning (see CD Chapter 10, Future Possibilities for Education and Learning by the Year 2030). This year The Millennium Project looked at the future of the arts, media, and entertainment. A distillation of the results is presented in this chapter, while the details are available in Chapter 13 of the CD.

Clearly the arts, media, and entertainment have an enormous influence on people's worldview and, as a result, on the future. Every day the average global citizen watches 3.4 hours of television, listens to 2.2 hours of radio, uses the Internet 1.7 hours, reads magazines and newspapers for 1 hour, and watches 8.5 minutes of cinema.[1] Our homes and workplaces are filled with art and various forms of media. And with the wireless revolution and smart phones, media is an ever-present reality for an increasing number of citizens. Not only can these powerful tools of transformation inform and influence humanity's understanding of itself, they can also aid in the evolution of society by inspiring visions, disseminating information, and catalyzing actions that address the 15 Global Challenges in Chapter 1 and other areas in need of change.

With thousands of global channels to choose from plus the Internet, social media, mobile phones, computer tablets, games, and a proliferation of new media technologies, it is essential that we become media literate and also create from a new socially beneficial awareness. While there has been tremendously powerful media created in the past, there is so much potential that we have yet to tap through the intentional use of these powerful creative tools to educate and address pressing issues facing humanity. The 15 Global Challenges and the solutions offered in the *2011 State of the Future* can inspire and inform artists, content creators, and those working in these fields to create art, content, and stories that transform when distributed to the masses.

Inspired by the Florentine Camerata Society, a sixteenth-century "think tank" responsible for the creation of the art form we know today as the European opera, The Millennium Project created a new Node, a Global Arts and Media Node. Under the leadership of arts and media professionals and educators dedicated to a more positive future, this Node is responsible for tracking and reporting on the latest trends in the arts and media as well as serving as a resource for artists,

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[1] *TGI Global Update*, Issue 3, Summer 2009 (http://globaltgi.com/knowledgehub/documents/TGIUpdate3.pdf)

content creators, and media makers interested in creatively advocating solutions to the 15 Global Challenges found in this report.

Futuristic innovators around the world were invited to suggest and discuss future elements or seeds of the future in the arts, media, and entertainment. After a month of online discussions, 34 elements were chosen and put into a Real-Time Delphi for an online international assessment. Several of the seeds chosen are new trends and technologies that are emerging in the media and entertainment landscape. Other seeds are topical and related to the use of the arts, media, and communications technologies. Writers, producers, performing artists, arts/media educators, and other professionals in entertainment, gaming, and communications were nominated by the 40 Millennium Project Nodes around the world to share their views. They were asked how likely it was that each element or seed might become dominate by 2020. They were also asked how important these seeds are for achieving the best for civilization and if they were or would be interested in developing the seed with other elements of the future. About 250 people from 33 countries signed on to the study. Of these, over 150 provided at least one response. This 60% response rate is fairly representative of similar studies.

An example of the questionnaire for 2 of the 32 elements:

The results are displayed on the following four pages, listed in order of likelihood of becoming a dominant form by 2020.

1. Multi-touch Displays

Likelihood: 91.18, Importance: 63.54
Example:http://www.ted.com/talks/jeff_han
_demos_his_breakthrough_touchscreen.html

2. Electronic Publishing

Likelihood: 89.09, Importance: 76.92
Example: http://shelf-
life.ew.com/2009/10/01/what-is-a-vook-and-
will-it-change-how-you-read

3. Augmented Reality: (Overlays & Geotagging)

Likelihood: 87.82, Importance: 68.85
Example:http://www.mirror.co.uk/news/tech
nology/2009/12/02/twitter-360-geo-tagging-
augmented-reality-app-released-115875-
21868106/

4. Geographical Information Systems (GIS) - Advanced geographic mapping, visualization & augmentation.

Likelihood: 87.80, Importance: 72.45
Example:http://www.ted.com/talks/blaise_a
guera.html

5. Convergence of Computer/Mobi Content on Television

Likelihood: 86.39, Importance: 60.54
Example:http://www.youtube.com/watch?v
=14hnh8yy_H4

6. Ubiquitous Computing (tracking tags embedded into everyday products/objects/appliances)

Likelihood: 85.70, Importance: 60.06
Example:http://www.youtube.com/watch?v
=2I3T_kLCBAw

7. Digital/Social Networking for Cultural Diplomacy & Change

Likelihood: 85.31 Importance: 82.68
Example: http://gephi.org/2011/the-egyptian-revolution-on-twitter/

8. User Generated Content Technologies providing Democratization of Content Creation

Likelihood: 82.58 Importance: 74.88
Example: http://www.lulu.com

9. Telepresence (virtual teleportation using immersive cameras and displays)

Likelihood: 81.49 Importance: 73.59
Example:
http://www.youtube.com/watch?v=rcfNC_x0VvE

10. Social/Global advocacy through storytelling

Likelihood: 78.65 Importance: 73.77
Example: http://www.grist.org/article/2011-01-27-how-to-get-tv-shows-to-tell-truth-about-climate-change

11. Interactive Displays (gesture-based user interfaces)

Likelihood: 78.35 Importance: 56.70
Example:
http://www.youtube.com/watch?v=GmqJr2ijKIo

12. Media/Arts for Cultural Diplomacy and Change

Likelihood: 77.17 Importance: 75.52
Example:
http://www.socialchangefilmfestival.org

13. Virtual and 3D Art Exhibits/Collections/Museums

Likelihood: 75.78 Importance: 56.28
Example: http://www.googleartproject.com

14. Photogrammetry and Gigapixel Panoramic Imaging; Extracting 3D models or ultra-high-resolution images of spaces

Likelihood: 75.08 Importance: 56.08
Example: http://www.photogrammetry.com/

15. Media literacy

Likelihood: 75.03 Importance: 76.41
Example: http://www.medialiteracy.com/

16. Multiplayer Online Virtual Worlds

Likelihood: 73.03 Importance: 48.67
Example:
http://www.virtualworldsreview.com/info/categories.shtml

17. Autostereo (glasses-free) 3D Displays

Likelihood: 72.79 Importance: 44.30
Example: http://www.magnetic3d.com/

18. Serious Games (Cyber games to educate & solve world problems)

Likelihood: 72.50 Importance: 74.39
Example: http://www.urgentevoke.com

19. Augmented Reality: Third-Person Augmented Reality

Likelihood: 68.95 Importance: 51.47
Example:
http://www.iphoneness.com/iphone-apps/best-augmented-reality-iphone-applications/

20. SciArt (art inspired by science)
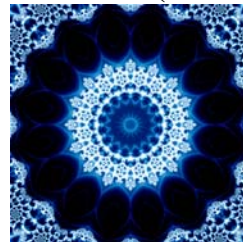
Likelihood: 64.81 Importance: 58.52
Example: http://artsci.ucla.edu/

21. Cyber-Techno Classical (Blending Classical Arts & Futuristic Technologies)

Likelihood: 64.49 Importance: 47.97
Example:
http://www.youtube.com/watch?v=D7o7Brl baDs

22. User-Based Content Creation (i.e. cinematography) within Virtual Worlds (called Machinima)

Likelihood: 64.29 Importance: 50.36
Example: http://www.machinima.com/

23. Media/Arts/Cyber Healing

Likelihood: 63.85 Importance: 62.45
Example:
http://www.uclartsandhealing.net/backgroun d.aspx

24. Location-based group interactive video games

Likelihood: 63.64 Importance: 47.42
Example:
http://www.youtube.com/watch?v=y6izXII5 4Qc

25. Domes, Planetariums and 360 Immersive Cinema

Likelihood: 61.79 Importance: 48.39
Example: http://vimeo.com/6988758

26. Augmented Reality: Architectural Projection Mapping

Likelihood: 60.82 Importance: 49.74
Example:
http://www.fuelyourcreativity.com/architectural-projection-mapping-the-future-of-motion-graphics/

27. Performance in Public Spaces/ Flash Mob Art

Likelihood: 60.42 Importance: 52.52
Example:
http://www.youtube.com/watch?v=SXh7JR
9oKVE

28. "Holographic" Performances (digital puppetry)

Likelihood: 58.34 Importance: 42.45
Example:
http://www.youtube.com/watch?v=G-
AhYnjKEzs

29. ARG: Alternative Reality Games and Experiences

Likelihood: 57.39 Importance: 44.05
Example:http://www.youtube.com/watch?v
=7iti8Ivy--s
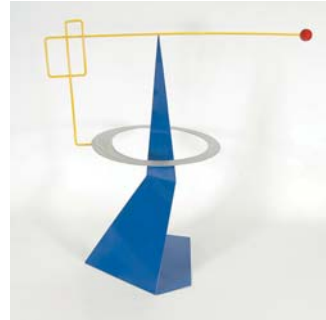
30. Kinetic Art

Likelihood: 54.93 Importance: 37.64
Example:
http://www.kinetica-
museum.org/new_site/home.php

31. Technoetic arts

Likelihood: 52.93 Importance: 47.02
Example: http://wn.com/Technoetic

32. Eyeware and Head-Mounted Displays (HMD)

Likelihood: 52.82 Importance: 37.94
Example: http://www.sensics.com/

TOP 6 SEEDS IN ORDER OF IMPORTANCE

Seed Topic	Importance		Likelihood	
	Rank	Average	Rank	Average
Digital/Social Networking for Cultural Diplomacy and Change	1	82.69	7	85.31
Electronic Publishing (Vooks or video books)	2	76.93	2	89.09
Media literacy (consumer awareness regarding media creation, content, language, business, etc.)	3	76.41	15	75.03
Media/Arts for Cultural Diplomacy and Change	4	75.52	12	77.17
User Generated Content Technologies providing Democratization of Content Creation (i.e. print on demand, do-it-yourself/DIY)	5	74.88	8	82.58
Serious Games (Cyber games to educate and solve world problems)	6	74.39	17	72.5

When analyzing the results of the seeds in terms of "how important these seeds are to humanity" versus the "likelihood that they would happen," it is critical to note that of the top six seeds participants felt were important, only one seed was in the top 10 of those most likely to become popularized. While the other five were considered important for the future, they were also considered less likely to become popular. The study and subsequent studies like it are important in that they helps us identify areas of the arts and media that are deemed important to humanity but are in greater need of attention, visibility, or support. These seeds include:

- Digital/Social Networking for Cultural Diplomacy and Change
- Media Literacy
- Media/Arts for Cultural Diplomacy and Change
- User Generated Content Technologies providing Democratization of Content Creation (i.e., print on demand, do-it-yourself)
- Serious Games (cyber games to educate and solve world problems).

Of these, Media/Arts for Cultural Diplomacy and Change, Media Literacy, and Serious Games received the lowest likelihood ratings, indicating that they are fertile areas most worthy of support.

In reviewing the top six seeds in order of importance, "social networking for cultural change" has by far the highest ranking, indicating a need to more thoroughly evaluate this methodology for its ability to influence future trends. Also of high value is the interest in more-accessible digital content (e.g., published books) and content that is user-generated. Media literacy places high enough in the rankings that consideration should be given to enacting strong evaluations of how we are teaching it both in the classroom and to adults. Serious gaming and socially beneficial storytelling/content creation are both at high importance value as well, indicating that intentional use of these technologies is likely to yield a greater degree of societal change. Societal change can be maximized by a concerted effort to strategically design media and the arts to be effective tools of personal, social, and global transformation.

Narrative Inputs

One distillation of the many views by the participations about the future of arts, media, and entertainment is that it will be global, participatory, tele-present, holographic, augmented reality conducted on next-generation mobile smart phones and immersive screens that engage new audiences in the ways they prefer to be reached and involved.

For each of the 32 seeds, respondents were asked to provide reasons for their quantitative responses and to describe the extent of their current or future involvement in the various seeds/items presented in the questionnaire.

Nearly a hundred pages of comments were received. The complete text of all the responses appears in Chapter 13 of the CD. This section provides a distilled flavor of them in italics:

> *"Merging of technology and art appears a given. The quality will be in proportion to the genius applied.… I already compose with collaborators via the Internet and want to be part of a virtual choir like Aurumque! It makes room for the spiritual/energy connection between participators, since there is no physical contact to color the relationships. Of course singing in a choir or making music in person with others is the ultimate oxytocin rush and very satisfying as an artist, but virtual performances and concerts are definitely exciting and I can't wait to be involved in one.*

Not only will use of futuristic technologies keep the art forms relevant, they will add a fresh experience to the existing body of work created by artists. With older audiences dying out, creating experiences that will attract newer, younger audiences is important to keep creative companies thriving. And these new technologies can also make it possible for us to collaborate and create with artists globally. Use of holographic characters and performers may be a novelty and passing fad, but imagine if you could teleport a real-time performer, speaker, singer, dancer, and so on into a performance space in real-time?

> *We should develop this flash mob further for "achieving the best for civilization" because these flash mobs bring people together and create a sense of well-being, a sense of happiness. One could argue that it is a shallow sense, however in these hard times where disasters and inhumanity are frequent and will probably become more frequent, I am convinced that these quick, small gatherings where everyone is connected by movement, across language borders and across cultural borders, even for 10 seconds are of essential meaning for our future.*

> *Electronic Publishing is fabulous and definitely here as the new way to read and interact in different mediums. I love the way you can link to others while reading and watching videos of scenes etc. This was all science fiction not long ago, and we've finally brought it into being. The only problem with electronics is that there is more unrecyclable waste, even though it cuts down on tree usage…we are now poised to see a second wave of enlightenment inspired by the twenty-first-century version of the Guttenberg Press, the Internet and e-publishing…Achieving the best for civilization when it comes to electronic publishing I feel is a two-edged sword. As long as the current copyright regulations are in place, the west is well served with all sorts of knowledge. But how about access to knowledge in other countries? This is already a problem now, because e.g. libraries in third world countries have a hard time paying the licenses. If this is not improved, the*

electronic publishing will go ahead but it will not be achieving the best for civilization worldwide!

Games could assist in sensitizing people to alternative realities and ways of working towards those realities... So much of game-play is based on eliminating "the other;" to solve world problems, we will need to change that view into "each other as our self." …Quite likely in the not so distant future a game developer will win the Nobel prize for peace…

Advances in neuroscience will allow a growing understanding about triggering specific mind states and hence develop the field of media/arts/cyber healing. This is already being used for neurofeedback devices to teach people how to entrain specific brain frequencies and has recently broken into the consumer market with the Jedi mind games for kids...Arts-based healing equals deeper-faster compared to traditional talk-based therapy (both are needed, however).

Skype can already allow a certain amount of "telepresence" at little or no cost. By 2020, driven by the costs of travel and the rapid deployment of new tools and capabilities in networking and display systems, this will be highly developed. Some offices and homes in 2020 will have rooms in which large-screen projectors line the walls and create a "holodeck" feel ala "Star Trek" (not that complete immersion, but a representation of it) and you can "transport" yourself to Hawaii or talk to grandma 1,000 miles away, visiting as if she's in the same room with you. We have the technology now to do this, but it's too expensive for consumer adoption...this form will be critical for building more peaceful relations among peoples.

Not only does telepresence technology provide businesses and organizations the ability to meet virtually, it is a technology that artists and creators can explore for group collaboration. Imagine attending a global orchestral performance of the greatest musicians from around the world performing virtually? The World Opera and You Tube Orchestra have been doing work that leads to greater experiments in this effort. This also provides a great opportunity for experiences that encourage cultural diplomacy.

The primary breakthrough in new eyeware and head-mounted displays will be contact lenses with nanobots creating overlay. Current HMD are still clunky and only appropriate for specialty use. Such contact lenses have already been developed in first gen experiments.

"Dumbing down" the user interface makes it less useful to power users who are most likely to be able to innovate and invent new things if they continue to have the most latitude possible. While there's no doubt that multi-touch displays have an advantage because they are intuitive, they can never possibly gain the nuances of control we already experience through current methods of accessing computing power in our large and small devices. Apple and other companies are using software and hardware design to move consumers into a realm in which they will be app-dependent, and while some applications will be "free," most will cost people something every time they choose to use them. The world is moving from freely available information on computers hooked up to information networks to a world of controlled appliances for which they must pay and pay and pay and pay. Apple's latest OS update, nicknamed Lion, is the company's move to get

consumers into that controlled world and build up the company's profit-margin. This does create new jobs for applications developers, and monetizing the Internet in more direct ways creates more revenue flows, but the act of monetization politicizes the act of creation and drives people to impose more rules and build more bottlenecks and can cut the poor and uneducated out of the invention and innovation equation.

Many of these seeds of the future raise the question about what is really true. Will we be able to identify true history from reconstruction? When there are competing histories, who will be able to tell which is authentic?

We are seeing the collapse of the distribution system, allowing artists to enter the field as they will. Copyright issues notwithstanding, we are seeing a democratization of art.

Storytelling is the most powerful way to elevate human consciousness. If the story is engaging, people remember it forever and are changed as a result. We have scientific measures in published literature of the profound impact of TV health storylines on viewers' knowledge, attitudes, and behavior. These stories reach up to 20 million viewers in a single hour and up to 80 million viewers in the first week. The episodes later reach up to 400 million viewers in over 100 countries worldwide. When the content has social value, it is a service to humanity.

The way to partner with scriptwriters and producers is NOT through advocacy or "product placement." That is an old paradigm, and Hollywood's writers are allergic to it. I would change the wording of this question to "Social/Global enlightenment through storytelling (partnering with writers/producers to inspire and inform them to address topics of social concern accurately) and to link traditional media and new media in innovative and interactive ways."

In the realm of this Delphi, augmented reality will have quite a high impact compared with other choices. Just-in-time or real-time information can be life-saving in some situations, and it will certainly make a huge difference in informing people, providing them with needed economic, social, and political information on which to base decisions as they move from moment to moment in their daily lives.

The final column asked the question "Are you or would you like to be involved in developing this seed with other futuristic seeds?" The full text of the responses without attribution is in the Appendix of the CD. Here is a short distillation:

I am extremely interested in facilitating the merger of cyber-techno and classical arts; I believe the blend serves as an essential "bridge" between the real world and the cyber world; a bridge necessary to our continual evolution... definitely would like to be involved, as a director, in creating holographic experiences coupled with movion-based (Swedish equal shares), group interactivity with the projections...Being a composer, there are already a couple of songs I'd love to use in a flash mob. When workshops begin for the new musical I'm writing, which is about tapping into the abundant, positive, and powerful energy available to all humans, I'll be looking for volunteers. ...Would like to participate in an event, especially in at-risk urban communities and in senior centers...Would love to participate in developing, participating, or tracking these flash mob seeds because I believe that anything we can do to foster bring people together is important for our future...there's an obvious link to social media.

Aesthetic experience of global interdependency and harmony requires telepresence – happy to help get the arts more involved in this medium for simultaneous performances on a global basis... ubiquitous computing will be the tech support for the evolution of global consciousness. How well this evolution works will be dependent on how well mystics and technocrats cooperate to make it enlightening... I am leading this work now and urge the UN and others to partner with us. It is critical to separate advocacy of a particular governmental agency in the media from accurate portrayal in entertainment media of some of the most important issues of our time: health, climate change/environment, human rights, humanitarian aid, global leadership, peace/conflict transformation, spirituality, freedom of creative expression, global monetary systems.

Storytelling is the oldest form of education known to humanity, we must use it to tell the crucial stories of our time... certainly climate change is one of those. My research in the area of "evolutionary guidance media" suggests the importance of including data across 10 dimensions of human activity in our story & media creation if we are to more quickly promote planetary consciousness... Yes – this is one of my ultimate goals, to create and direct entertaining social/global advocacy and education media utilizing a number of the Delphi-listed media technologies in convergence.

The participants were also asked if there were any additional media/arts technologies, genres, or modalities that they feel are important that we should be tracking.

Transmedia – the combining of multiple creative practices on a diverse range of platforms for an interactive experience – is increasing ...Babel Fish Smart phones...Perhaps the biggest transformation of the future will be started from the demise of the language barrier.

These media technologies have two important attributes: they make possible the construction of realistic alternate histories and others enhance the ability to persuade. Both are potentially dangerous. They lead to confusion about what is or was really true.

When artificial constructs are very good and indistinguishable from reality there will be two possible disasters. First, the constructs may be seen as good or better than the true world, and people, including poor people, may choose to live there and avoid reality. This happens now with Second Life. Could this become even more addictive when jobs are scarce and free time weighs heavily? Second, perhaps even more disturbing is the possibility of using these media technologies to construct artificial histories that are indistinguishable from real truths. Imagine the holocaust deniers building a Nazi history which omits the holocaust, or Apollo deniers building a site that shows how the lunar landing was faked in Utah: a fake of a fake.

In this era, who could say what was or is really true? Maybe there could be an incorruptible NGO that acts as a global authenticator.

Each of these technologies is fascinating in its own right, and each has the potential for beneficial impact. I believe what will be most interesting are the "mash-ups"–the convergence of a number of these technologies into singular media events/environments. Herein lies my primary focus – both as a forecaster and, mostly, as a creator.

And last, participants were asked if they would like to participate in future productions that integrate some of these seeds into new global arts/performances. A brief distillation:

I would love to participate in groups via cyber space to feed or review or suggest content from the 15 Global Challenges to arts/media groups...Flash Mob Art against poverty using Twitter and Facebook...I would like to participate in these global challenges... What we need are exchange programs, mentoring and coaching for artists, creative producers of contents, students and children. We need labs, beta areas, digital and virtual test-playgrounds to apply new ideas and concepts, to exploit the digital power to bring people closer together. Thanks for this great Real Time Delphi which really makes a difference!

Conclusions

As creativity and self-expression are inherent desires for all individuals, we will continue to see trends toward more immersive experiences, audience participation, fan-based contributions, smart gaming, socially beneficial storytelling, innovative ways to use the newly emerging technologies, and DIY and independently created intellectual properties that are developed through a more technically democratized system of distribution. New screens and portals for delivering stories, media, and interactive experiences will continue to emerge, and a more "transmedia" approach to narrative development and distribution is emerging to exploit these new platforms.

Social media and digital media will continue to catalyze the expansion of "free speech" and be a tool to expose human rights violations and unjust governments, as we have seen in the Arab Spring-Awakening this year (using Twitter). With the proliferation of more media than ever, there should be an emphasis on media literacy being taught from an early age up into adulthood.

Traditional media will continue to evolve into and through new media platforms, but a solid "story" and narrative will always be at the heart of these experiences. Transmedia strategy will become the norm during development stages of media content, as the core intellectual property or story worlds will be developed with new distribution models and emerging portals of entry offering media makers and artists new access for expression and concertizing their concepts and creative properties. Cinemas will likely evolve to become local place-based transmedia distribution centers allowing greater immersion in visitors' favorite stories through immersive cinemas, video game tournaments, immersive gaming pods, and regional alternate reality games. Electronic publishing and the nature of the book will evolve, and new authors will have the ability to become popular based on the quality of their content and their marketing efforts. Niche subject matters and audiences will proliferate as the Internet offers exposure for any topic or experience.

Games will continue to become a more popular platform for education and other applications in addition to serving as an entertainment art form.

As creator of the smart game EVOKE, author Jane McGonigal writes in her new book, *REALITY IS BROKEN– Why Games Make us Better and How they can Change the World:*
Gamers want to know: Where, in the real world, is that gamer sense of being full alive, focused and engaged in every moment? Where is the gamer feeling of power, heroic purpose,

and community? Where are the bursts of exhilarating and creative game accomplishment? Where is the heart-expanding thrill of success and team victory? While gamers may experience these pleasures occasionally in their real lives, they experience them almost constantly when they're playing their favorite games.

> *The truth is this: in today's society, computer and video games are fulfilling genuine human needs that the real world is currently unable to satisfy. Games are providing rewards that reality is not. They are teaching and inspiring and engaging us in ways that reality is not. They are bringing us together in ways that reality is not.*

The traditional, folk, indigenous, and classical arts will also benefit by combining new media technologies with traditional art forms in an effort to reach diverse new and global demographics. As an example, note that opera has reached new audiences through the digital distribution into theaters and the video projection accompanying it; classical music is also becoming popular and drawing in more diverse and younger audiences. With mobile technological advances, economically challenged individuals and cultures are also able to create content using mobile video cameras so that their culture and stories can also be expressed in a global audience space.

Music, media, and the arts remain powerful tools for bridging cultures, sharing diverse values and perspectives, addressing conflict, educating, and ultimately creating new visions for a more evolved and peaceful civilization.

As we continue to explore and create these new emerging technologies and hybrids, let us combine this innovation with intelligent awareness, a passion for meaning, and global collaboration toward a more enlightened humanity. Let us discover and create a new "opera" in the spirit of a twenty-first-century Camerata and a better future for all.

1. Introduction

Between April 4, 2011 and May 6, 2011, the Arts/Media Node of the Millennium Project conducted a Real Time Delphi study of the future of the arts. This study is designed to collect judgments about future elements or seeds of the future of Arts, Media and Entertainment. These seeds of the future were identified by an initial group of futurists, media and arts professionals from a variety of fields; this initial group submitted suggestions about emerging trends, technologies, and art genres or formats, which form the basis for this study. The scope was quite broad: geographically it encompassed the world; temporally, it extended two decades into the future, although it was recognized that the effects of some of the seeds might be felt far beyond that time period. The substantive scope was intentionally broad as well and included topics such as giant screen and digital dome theaters, new uses for internet and social networks, live theater, opera, personal communicators, future media, virtual reality or speculation on whatever comes beyond; in other words, everything that might be called an element of future art, media, or entertainment. The focus was on imagination about what might evolve in these fields.

The respondents were assured of their anonymity in the sense that none of their answers would be attributed to them, although they were told that their names would appear in a list of participants. (See Appendix B).

2. Methodology

Once the respondents had signed in, they were taken to a page that contained the questionnaire itself. Instructions appeared first, as shown in Figure 1 below, and then the questions, as shown in Figure 2.

As show Figures 1, 2, and 3, the respondents saw both the quantitative and qualitative answers of the group, a feedback technique common to Real Time Delphi studies.

Figure 1: The Instructions

Figure 2: The Questionnaire

This design had several novel features. First, all of the entries in the rows of the questionnaire were illustrated with a sample of the medium being discussed. Further to deepen the understanding of the respondents about the item several hyperlinks were provided to show the medium "in action." In most case the hyperlinks took the respondent to a video clip. Columns two and three of the questionnaire called for two quantitate judgments about the medium:

- Please enter the probability that this seed of the future will grow into a dominant form in popular media by 2020

- How important will this be in achieving the best for civilization?

These judgments could be entered by means of a "slider."
The final column asked about the potential for personal involvement of the participant in the seed.

- Are you or would you like to be involved in developing this seed with other futuristic seeds? Please explain.

To provide reasons for their answers to judgments of columns two and three and to answer the question about personal involvement, respondents were directed to a second page of the sort shown below in Figure 3 which provided a space for their entries and a listing of all of the reasons given by other respondents.

Figure 3: Reasons Form

3. The Sample

About 250 people signed in to the study and of these, over 150 provided at least one response. This 60% response rate is fairly representative of other Real-Time Delphi studies conducted by The Millennium Project. The rates of participation are shown in Figures 4 and 5 below.

Figure 4: Number of Sign-Ins and Answerers
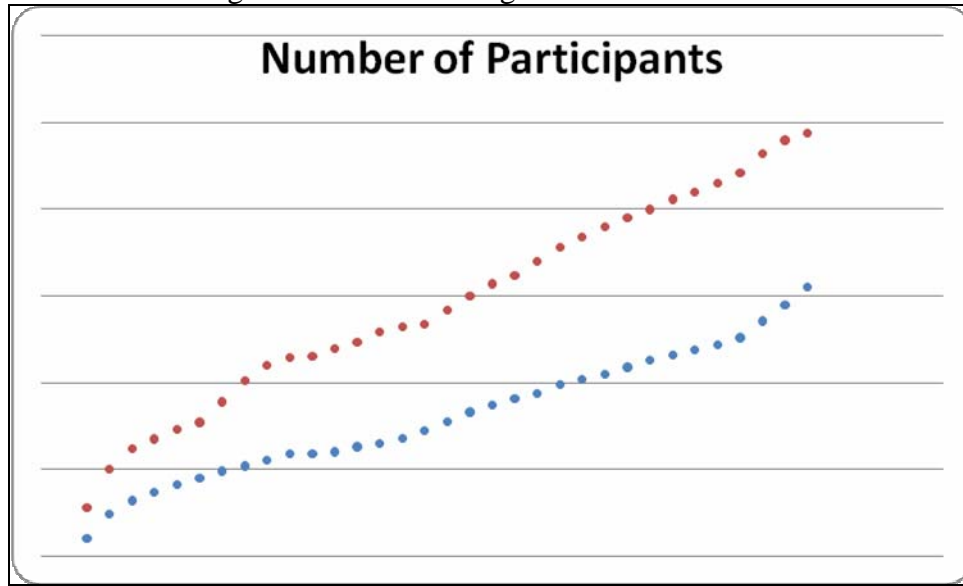
The total number of narrative and quantitative responses was about 6,000, as shown below in Figure 6.

Figure 5: Numbers of Answerss
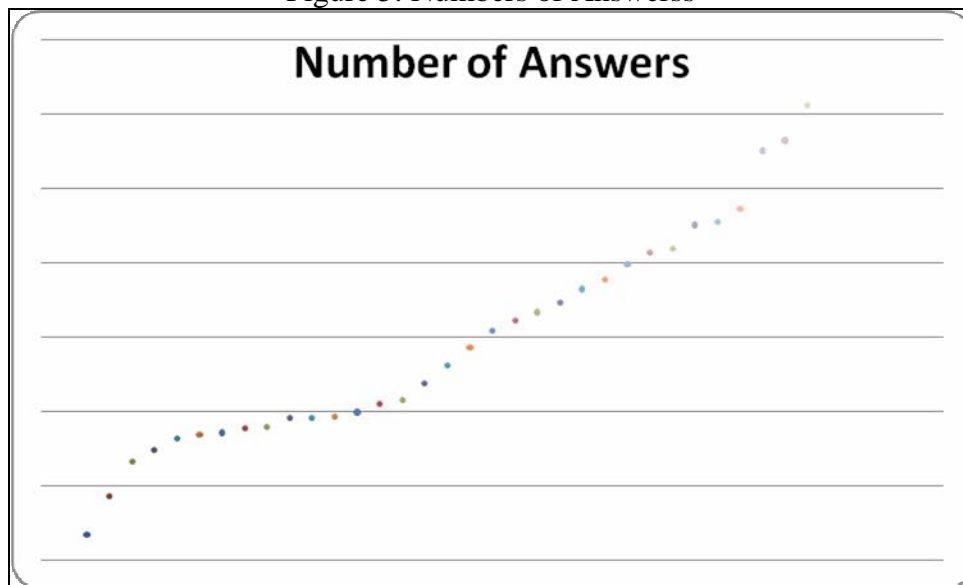
The jump in number of responses in the last few days before the deadline appears to have resulted from returning respondents who added to their earlier inputs. The average number of answers per participant was about 40.

At time of sign in, respondents were required to provide two types of information about themselves: their country and the nature of their association with the arts/media/entertainment fields. The shares of responses by country are shown in the table below:

1	Argentina= 2.09 %		18	Mexico= 7.11 %
2	Australia= 3.77 %		19	Netherlands= 0.42 %
3	Austria= 0.84 %		20	New Zealand= 0.42 %
4	Bhutan= 0.42 %		21	Republic of Korea= 0.42 %
5	Brazil= 0.42 %		22	Romania= 0.42 %
6	Canada= 2.09 %		23	Russian Federation= 0.84 %
7	Chile= 0.42 %		24	Slovakia= 0.42 %
8	China= 2.09 %		25	South Africa= 0.42 %
9	Finland= 1.67 %		26	South Korea= 7.12 %
10	France= 0.42 %		27	Sweden= 0.42 %
11	Germany= 7.95 %		28	Switzerland= 0.84 %
12	India= 0.42 %		29	Taiwan= 0.42 %
13	Iran= 2.09 %		30	Turkey= 0.42 %
14	Israel= 0.84 %		31	United States= 42.26 %
15	Italy= 4.60 %		32	United Arab Emirates= 0.42 %
16	Korea (South Korea)= 3.77 %		33	United Kingdom= 4.60 %
17	Malta= 0.42 %		34	Venezuela= 2.51 %

The data provided by the participants about their association with the arts/media/entertainment fields are summarized in the table below.

Entertainment Industry Professional = 14.29 %
Communications/Media Professional = 18.89 %
Internet/Web Professional = 6.45 %
Gaming Professional= 1.38 %
Performing Artist =3.23 %
Fine Arts Professional = 10.14 %
Publishing = 4.61 %
Design and Fashion = 2.30 %
Arts/Media Educator = 7.83 %
Arts/Media/Entertainment Critic =0.46 %
Other=30.41 %

4. Summary of Results

4.1 Quantitative Results
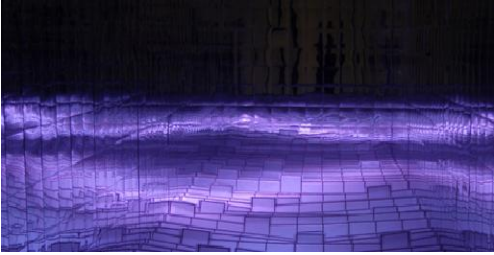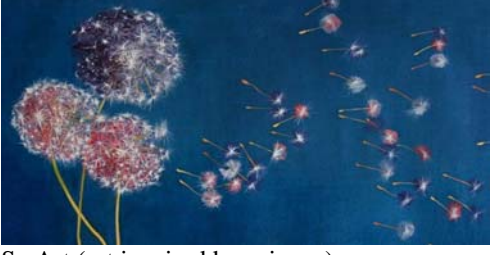
Summary Table
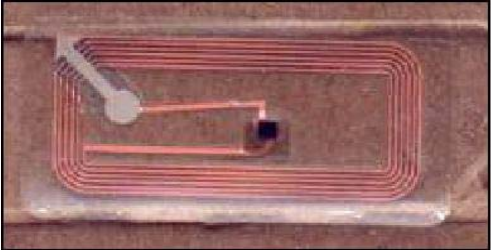
	Seed	*Likelihood*	*Importance*
1	 Cyber-Techno Classical (Blending Classical Arts and Futuristic Technologies)	Average: 64.49 Respondents: 136	Average: 47.97 Respondents: 126
2	 "Holographic" Performances (live performance of virtual characters - digital puppetry)	Average: 58.34 Respondents: 115	Average: 42.45 Respondents: 108
3	 Performance in Public Spaces/ Flash Mob Art	Average: 60.42 Respondents: 114	Average: 52.52 Respondents: 109

4	Location-based group interactive video games	Average: 63.64 Respondents: 109	Average: 47.42 Respondents: 103
5	Domes, Planetariums and 360 Immersive Cinema	Average: 61.79 Respondents: 105	Average: 48.39 Respondents: 102
6	Virtual and 3D Art Exhibits/Collections/Museums	Average: 75.78 Respondents: 105	Average: 56.28 Respondents: 103
7	Electronic Publishing (Vooks or video books)	Average: 89.09 Respondents: 112	Average: 76.92 Respondents: 103

8	ARG: Alternative Reality Games and Experiences (participatory games played in real life places and situations)	Average: 57.39 Respondents: 99	Average: 44.05 Respondents: 94
9	Media/Arts/Cyber Healing	Average: 63.85 Respondents: 95	Average: 62.45 Respondents: 93
10	Media literacy (consumer awareness regarding media creation, content, language, business, etc.)	Average: 75.03 Respondents: 96	Average: 76.41 Respondents: 96
11	Telepresence (virtual teleportation using immersive cameras and displays)	Average: 81.49 Respondents: 103	Average: 73.59 Respondents: 96

12	Autostereo (glasses-free) 3D Displays	Average: 72.79 Respondents: 97	Average: 44.30 Respondents: 89
13	Eyeware and Head-Mounted Displays (HMD)	Average: 52.82 Respondents: 89	Average: 37.94 Respondents: 84
14	Multi-touch Displays (touch screen displays with multiple-touch control features)	Average: 91.18 Respondents: 95	Average: 63.54 Respondents: 92
15	Interactive Displays (gesture-based user interfaces)	Average: 78.35 Respondents: 94	Average: 56.70 Respondents: 91

16	 Augmented Reality: Third-Person Augmented Reality (video camera captures user and augments scene with 3D elements that track scene - user views augmented reality on flat panel, projector, laptop or computer screen)	Average: 68.95 Respondents: 91	Average: 51.47 Respondents: 87
17	 Multiplayer Online Virtual Worlds	Average: 73.03 Respondents: 90	Average: 48.67 Respondents: 86
18	 User-Based Content Creation (i.e. cinematography) within Virtual Worlds (called *Machinima*)	Average: 64.29 Respondents: 86	Average: 50.36 Respondents: 80
19	 Augmented Reality: Architectural Projection Mapping	Average: 60.82 Respondents: 82	Average: 49.74 Respondents: 78

20	 Technoetic arts	Average: 52.93 Respondents: 82	Average: 47.02 Respondents: 81
21	 Kinetic Art	Average: 54.93 Respondents: 80	Average: 37.64 Respondents: 77
22	 Sc Art (art inspired by science)	Average: 64.81 Respondents: 91	Average: 58.52 Respondents: 87
23	 Convergence of Computer/Mobi Content on Television	Average: 86.39 Respondents: 90	Average: 60.54 Respondents: 84
24		Average: 82.58 Respondents: 90	Average: 74.88 Respondents: 86

	User Generated Content Technologies providing Democratization of Content Creation (i.e. print on demand, do-it-yourself/DIY)		
25	Ubiquitous Computing (computers and tracking tags embedded into everyday products/objects/appliances)	Average: 85.70 Respondents: 86	Average: 60.06 Respondents: 82
26	Social/Global advocacy through storytelling (influencing writers/producers to utilize mainstream media stories to advocate information awareness and actions; ie. Behavioral/philosophical/ethical "product placement").	Average: 78.65 Respondents: 88	Average: 73.77 Respondents: 86
27	Serious Games (Cyber games to educate and solve world problems)	Average: 72.50 Respondents: 88	Average: 74.39 Respondents: 84

28	 Digital/Social Networking for Cultural Diplomacy and Change	Average: 85.31 Respondents: 88	Average: 82.68 Respondents: 84
29	 Media/Arts for Cultural Diplomacy and Change	Average: 77.17 Respondents: 89	Average: 75.52 Respondents: 87
30	 Photogrammetry and Gigapixel Panoramic Imaging; Extracting 3D models or ultra-high-resolution images of spaces, terrain or objects based on multiple 2D photographs	Average: 75.08 Respondents: 74	Average: 56.08 Respondents: 76
31	 Geographical Information Systems (GIS) - Advanced geographic mapping, visualization and augmentation.	Average: 87.80 Respondents: 82	Average: 72.45 Respondents: 83

| 32 | Augmented Reality: Environmental Overlays and Geotagging (Use of mobile device camera to recognize geographic locations and overlay with informational text, photos, videos, messages, contextual advertising, etc.) | Average: 87.82 Respondents: 83 | Average: 68.85 Respondents: 86 |

The table below shows a rank-ordered list by importance:

	Seed	Likelihood	Importance
28	Digital/Social Networking for Cultural Diplomacy and Change	85.31	82.69
7	Electronic Publishing (Vooks or video books)	89.09	76.93
10	Media literacy (consumer awareness regarding media creation, content, language, business, etc.)	75.03	76.41
29	Media/Arts for Cultural Diplomacy and Change	77.17	75.52
24	User Generated Content Technologies providing Democratization of Content Creation (i.e. print on demand, do-it-yourself/DIY)	82.58	74.88
27	Serious Games (Cyber games to educate and solve world problems)	72.5	74.39
26	Social/Global advocacy through storytelling (influencing writers/producers to utilize mainstream media stories to advocate information awareness and actions; ie. Behavioral/philosophical/ethical "product placement").	78.65	73.77
11	Telepresence (virtual teleportation using immersive cameras and displays)	81.49	73.59
31	Geographical Information Systems (GIS) - Advanced geographic mapping, visualization and	87.8	72.45

	Seed	Likelihood	Importance
	augmentation.		
32	Augmented Reality: Environmental Overlays and Geotagging (Use of mobile device camera to recognize geographic locations and overlay with informational text, photos, videos, messages, contextual advertising, etc.)	87.82	68.85
14	Multi-touch Displays (touch screen displays with multiple-touch control features)	91.18	63.54
9	Media/Arts/Cyber Healing	63.85	62.45
23	Convergence of Computer/Mobi Content on Television	86.39	60.45
25	Ubiquitous Computing (computers and tracking tags embedded into everyday products/objects/appliances)	85.7	60.06
22	Sc Art (art inspired by science)	64.81	58.52
15	Interactive Displays (gesture-based user interfaces)	78.35	56.7
6	Virtual and 3D Art Exhibits/Collections/Museums	75.78	56.28
30	Photogrammetry and Gigapixel Panoramic Imaging; Extracting 3D models or ultra-high-resolution images of spaces, terrain or objects based on multiple 2D photographs	75.08	56.08
3	Performance in Public Spaces/ Flash Mob Art	60.42	52.52
16	Augmented Reality: Third-Person Augmented Reality (video camera captures user and augments scene with 3D elements that track scene - user views augmented reality on flat panel, projector, laptop or computer screen)	68.95	51.47
18	User-Based Content Creation (i.e. cinematography) within Virtual Worlds (called *Machinima*)	64.29	50.36
19	Augmented Reality: Architectural Projection Mapping	60.82	49.74
17	Multiplayer Online Virtual Worlds	73.03	48.67
5	Domes, Planetariums and 360 Immersive Cinema	61.79	48.38

	Seed	Likelihood	Importance
1	Cyber-Techno Classical (Blending Classical Arts and Futuristic Technologies)	64.49	47.97
4	Location-based group interactive video games	63.64	47.42
20	Technoetic arts	52.93	47.02
12	Autostereo (glasses-free) 3D Displays	72.79	44.3
8	ARG: Alternative Reality Games and Experiences (participatory games played in real life places and situations)	57.3	44.05
2	"Holographic" Performances (live performance of virtual characters - digital puppetry)	58.34	42.45
13	Eyeware and Head-Mounted Displays (HMD)	57.82	37.94
21	Kinetic Art	54.93	37.64

And graphically, in Figure 6, a strong relationship between likelihood and importance is demonstrated: the important, the more likely:

Figure 6: Relationship between Likelihood and Importance
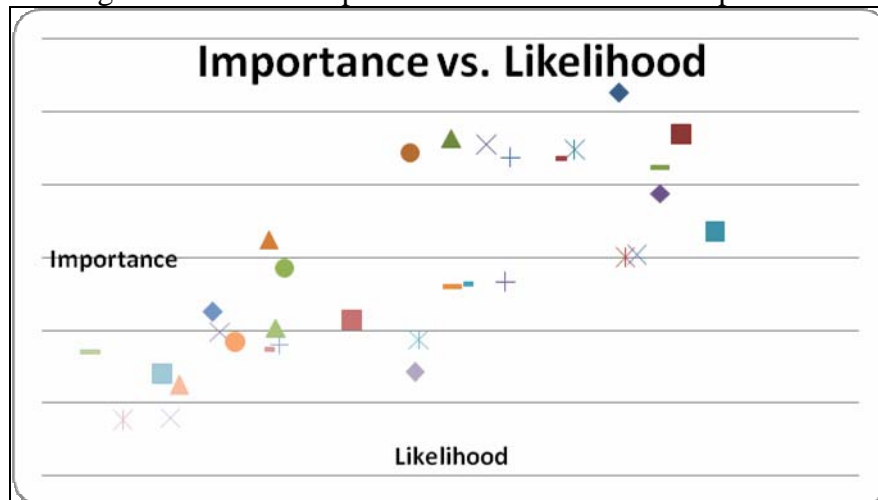
The distribution of quantitative answers appear in Appendix C. The responses were grouped into quintiles in this Appendix. As can be seen, there was very good agreement on some items and large spreads on others.

Figure 7: Illustration of High Agreement
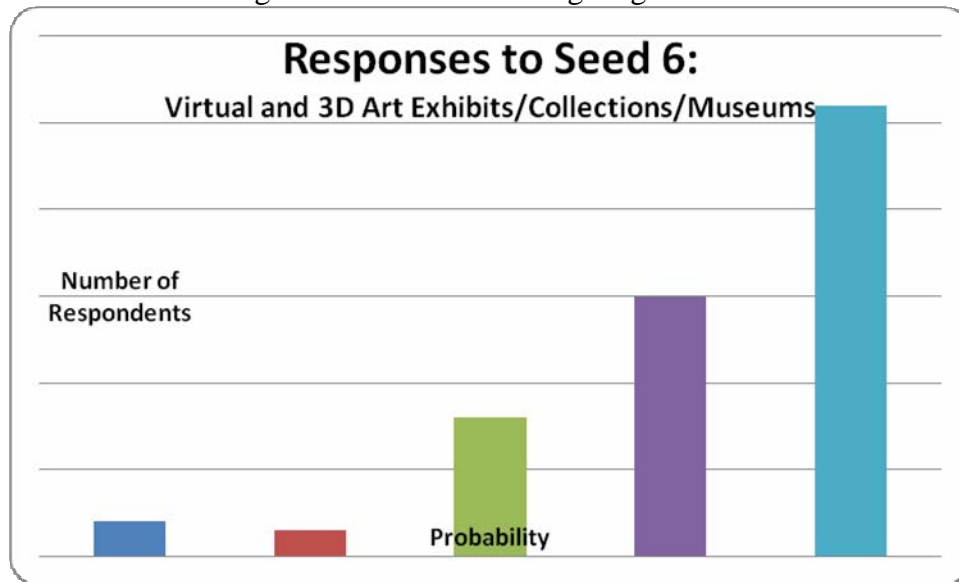
Figure 8: Illustration of Lower Level of Agreement
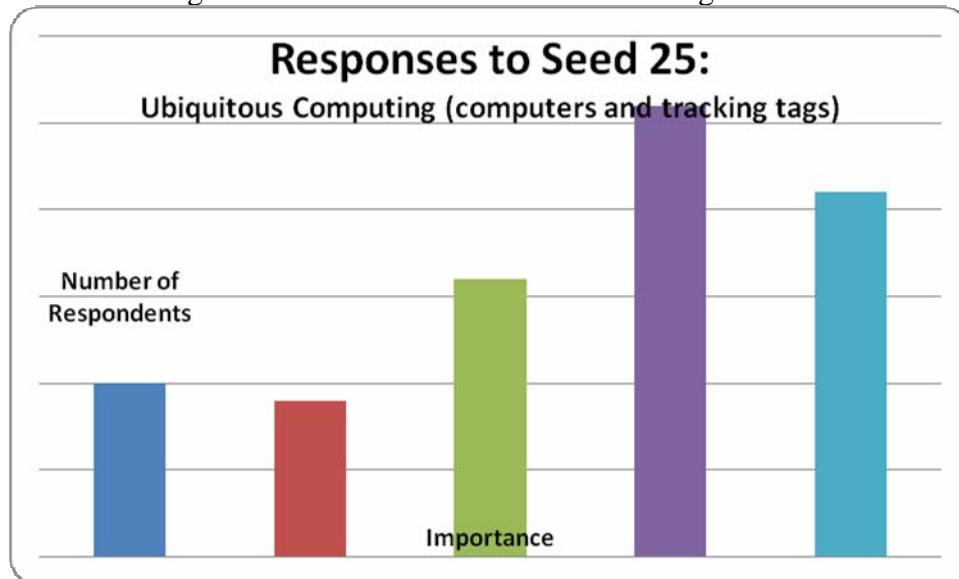
4.2 Narrative Inputs
Respondents were asked to provide reasons for their quantitative responses and to be involved in the various items presented in the questionnaire. Throughout this summary report the responses are verbatim. All of the responses appear in Appendix A in three sub tables: responses to questions dealing with likelihood and importance, responses to question on personal involvement, and responses to the two open ended questions.
Some typical responses to the likelihood and importance questions are:

> *(Seed 1) This is a natural progression in the Social Networking model that has taken over the world. As a musician and composer this is so exciting. I already compose with*

collaborators via the internet. I want to be part of a virtual choir like Aurumque! It makes room for the spiritual/energy connection between participators, since there is no physical contact to colour the relationships. Of course singing in a choir or making music in person with others is the ultimate oxytocin rush and very satisfying as an artist, but virtual performances and concerts are definitely exciting and I can't wait to be involved in one.

(Seed 7) Achieving the best for civilization when it comes to electronic publishing I feel is a two edged sword. As long as the current copyright regulations are in place, the west is well served with all sorts of knowledge. But how about access to knowledge in other countries? This is already a problem now, because e.g. libraries in third world countries have a hard time paying the licenses. If this is not improved the electronic publishing will go ahead but it will not be achieving the best for civilization world wide! It is something that very few people are aware of. In addition one can wonder what will happen if the public library system in the western world is demantled. They are a quiet and rather silent but so so great source of electronic information.

The final column asked the question "Are you, or would you like to be involved in developing this seed with other futuristic seeds?" The results appear in the second table of Appendix A; some typical responses were:

(Seed 1) I am interested in particular in the educational value of such projects with young people and in broadening their horizons to engage with the arts.

(Seed 3) I am quite convinced that we should develop this furter for "achieving the best for civilization" because these flashmobs bring people together and create a sense of well being, a sense of happiness. One could argue that it is a shallow sense, however in these hard times where disasters and inhumanity are frequent and will probably become more frequent, I am convinced that these quick, small gatherings where everyone is connected by movement, across language borders and across cultural borders even for 10 seconds are of essential meaning for our future.

(Seed 8) No, I don't. I play my roles, all my real roles, in my real life, and I like it.

The last two questions asked were open ended:
33....Are there any additional Media/Arts technologies, genres, or modalities that you feel are important future trends that we should be tracking?

34....How would you like to participate in future productions that integrate some of these seeds into new global arts/performances? Please list any ideas and suggestions about how such global arts/performances might engage the public in addressing the 15 Global Challenges and create more socially beneficial arts and media?
Some illustrative responses were:
Question 33:
The technologies you are tracking all seem to be very much geared to the western world. I do miss the folk dances, the local painters, the traditional folk tale tellers etc in less

wealthy countries who are and will be a very important part of cultural development in the near and distant future. Additionally, you could put more emphasis on tracking ideas re mobile phones. Many people in not 1st world countries (let's put it like that:-)) do have mobile phones, even on e.g. Mongolian grasslands. Through those mobile phones people can connect to the internet, without having a pc. So mobile phones I think will be a great carrier of arts & culture across the globe.

And for question 34:

(T)here will be an impact especially in DEMOCRATIZATION, GLOBAL CONVERGENCE OF IT, HEALTH ISSUES, CAPACITY TO DECIDE, GLOBAL ETHICS, LONG TERM PERSPECTIVES. I would like to participate in th(ese) areas. What we need are Exchange Programs, Mentoring and Coaching for Artists, Creative Producers of Contents, Students and Children. We need Labs, Beta Areas, Digital and virtual Test-Playgrounds to apply new ideas and concepts, to exploit the digital power to bring people closer together. Thanks for this great Real Time Delphi which really makes a difference!

APPENDICES

A. Narrative Responses

Likelihood and Importance

The table below presents the narrative answers to the questions posed in the first and second columns on likelihood ad importance.

col 1	seed	reason
prob	1	The rate to technological advancement and lowering prices is such that it will be a drama itself as advance tech and art continue to be intertwined
prob	1	Pretty predictable - the arts have always adopted new methods to tell stories, new technologies are new additions. The real question is what new forms will arise out of this marriage? See next question (hologram replacements, etc.) Perhaps also some virtual productions with no actors live or on the same stage but remotely acting.
prob	1	That the arts and technology will continue to merge, blend, and cross fertilize is the future and the concept of a virtual choir has rich potential. It may be that the concept of what is classical art will change to include indigenous art, for example.
prob	1	As we evolve into the Integral/Convergence Age in both the cultural and techno-systemic dimensions it will be a natural progression for the convergence of old and new art/media platforms.
prob	1	Looks good to me
prob	1	Merging of technology and art appears a given. The quality will be in proportion to the genius applied.
prob	1	This is a natural progression in the Social Networking model that has taken over the world. As a musician and composer this is so exciting. I already compose with collaborators via the internet. I want to be part of a virtual choir like Aurumque! It makes room for the spiritual/energy connection between participators, since there is no physical contact to colour the relationships. Of course singing in a choir or making music in person with others is the ultimate oxytocin rush and very satisfying as an artist, but virtual performances and concerts are definitely exciting and I can't wait to be involved in one.
prob	1	the chances that popular culture will abandon film and TV for the theater is pretty low, and the theater is where this kind of hybrid will live, if I understand the question. DOminant? No. Present? Absolutely, it already is. Vital? I hope that grows.
prob	1	Actualmente las nuevas generaciones y los ya no tan jóvenes están deseosos y abiertos a una propuesta estética diferente y original. Los medios saben que para competir en el ámbito actual y del futuro en la difusión artística y cultural tienen que ofrecerle al público expresiones novedosas, con gran aporte y sustento tecnológico que esté a la par de las emociones, sentimientos y sensaciones que se pueden experimentar con la "magia" que suministra la tecnología. A su vez estas innovaciones habrán de enriquecer el proceso de cambio que ya no puede detenerse.
prob	1	i think that this area of art is so specific and if you research about percentage of people who interested this area I think that the answer will so low.
prob	1	everything change so rapidly. nothing will remain the same in the future. the only thing will continue to emerge will be sharing and collaborating.
prob	1	As these new approaches to using emerging technologies become adopted across cultures the cyber-techno approach will extend classical arts into the future in ways that engage new audiences in the ways they prefer to be reached and involved. While it is certain to be adopted, it will continue to evolve as tools and opportunities for using them evolve, so it remains to be seen whether it will become dominant or continue to be considered avant garde or remain in a niche category.

col 1	seed	reason
prob	1	The blending of traditional and classical forms with high tech staging is already underway in Korea, but is narrowly confined to those who patronize the classical arts.
prob	1	I believe this blending will bring new converts into the classical arts; the blend will be of particular interest to a generation that has grown-up in virtual worlds (gaming and otherwise) as it represents a merger of the "real world" and the virtual... a "ground" or "space" that will become ever more important as cyber savvy individuals the feel the need to reconnect with the natural world.
prob	1	For the classical arts to survive, they will have to adopt to new delivery mechanisms in order to captivate audiences. Utilizing current technologies helps to render the classics relevant in new context. Already over years opera performances have changed and have continued to introduce latest staging techniques allowing for ever new experiences of the same core materials.
prob	1	It's alread happening - organically. People are already usnig tehcnology with trad arts a the tech is easy to use and within reach.
prob	1	This seems certainly happen if thinking only in terms of the technical development. The doubt is whether it will come to dominate popular media as the prompt suggests. Even in markets where the classical arts are very popular (e.g. China), I'm a bit skeptical about the idea that the blend of advanced media technology and the classical arts will come to dominate popular media and culture.
prob	1	I am sure that technology is already well developed.
prob	1	Ithink about these new collective performances at a distance as niche performances. Nothis as music entails dense - hence personal, face-to-face - intercation. The sense of music is not the sound as such; it is the sound-together-here-and-now.
prob	1	Computer puts distant things together
prob	1	The combination of skills and talent in a trans-disciplinary way opens the visual arts to a wider population group for presentation as well as work opportunities. I also think that a wider age group will be able to enjoy specific productions.
prob	1	The classic arts have resisted change, but in many ways modern technologies have creeped into the classics anyway. Modern concert halls are designed with the latest computer modeling. Video projection has taken the place of static backdrops. And architectural mapping is increasingly finding it's way onto the stage. In another decade, young innovators will pervade the space and we will see a much greater acceptance of modern technologies in the classic arts.
prob	1	Transmedia - the combining of multiple creative practices on a diiverse range of platforms for an interactive experience - is increasing. Digital tools are creative tools and as such they will be utilised in creative practise, and merged with existing practices. Whether people, particularly younger generations, continue to visit venues, or whether they will access live performance via a screen, is the interesting question!
prob	2	this is certainly an exciting form now, but will evolve into far more complex holographic experiences that by 2020 will make this (now futuristic form) look primitive.
prob	2	dominant is not likely. A multidimensional element is more likely.
prob	2	if the form allows for a replica of reality with a way to engage the audience, similar to live interactive theater, then I can see a real fascination.
prob	2	La expresión artística a través del performans holográfico se puede percibir como una forma extraordinaria de vincularse e identificarse con personajes de nuestra propia imaginación. Este tipo de espectáculos abre la posibilidad de hacernos llegar de manera más íntima y personal a los protagonistas virtuales que actúan en el escenario, quienes a través de su actuación habrán de recrear y alimentar nuestras propias fantasías. Esta propuesta seguramente tendrá muy buena acogida en los medios populares.
prob	2	It may come to pass but occupy an impact similar to digitally animated cinema now. A popular form, but resonating to a certain market segment. As Rifkin pointed out in "The End of Work", there will also arise an economy of authenticity. Possibly a rise in amateur practitioners (ie.

col 1	seed	reason
		community theater)
prob	2	This form will become more popular, but I do not expect it to become dominate by 2020, but rather gaining popularity in the following decade, especially as holographic technology becomes more affordable
prob	2	Soon to be cheaper and less troublesome than real life teeny pop stars.
prob	2	It seems very unlikely that this will grow to a dominant popular form, given the marginal status of puppetry and live performance of fictional characters today.
prob	2	They seem to me niche-media, instead of pop-media.
prob	2	art is the pure expression of freedom: I think that in the future, thanks to technology, there will be an increase of the number of art expressions. So, I don't think there will be a dominant one
prob	2	If this form of art can be utilised for education purposes I think it has a potential for growth.
prob	2	Dominant not likely. The technology to do this is unlikely to be widespread in this time frame. Also, one could easily argue puppetry and live performances are not dominant forms of entertainment compared to TV, film, video games, ettc.
prob	2	Unlikely it will emerge as a dominant form. It may be a technology that's integrated into the performing arts, though I'm unsure of how widespread this technology is likely to become - avatars are the dominant version of the hologram.
prob	3	Though incredibly impactful, the cost and logistical difficulty of mounting this type of effort is likely to keep it small.
prob	3	It will certainly grow but don't see it dominating the art world.
prob	3	Another beautiful element of delightful surprise when you are least expecting it. The groups can pay theior own expenses and keep costs low. With 20 and 20 million page views, these appeal to many people and if they happen to be there when it happens, so much the better.
prob	3	If the material to perform is chosen wisely, Flashmobs are one of the best ways to give the observers an instant rush of happiness, good vibes and sparkle to their lives. They generate waves of feel good happy vibes virally, since the observers will go on to work or home etc and share their experiences and share the feel good vibes.
prob	3	A great example of how social media can create events on the spur of the moment, especially with pre-existing groups and is a way that high tech becomes high touch with live, surprise performances. It's a art treat, but not the main course.
prob	3	Will be an outcome of versatile communications technologies. Probably confined to twenty-somethings experimenting with communitarian activities. Kind of like large concert festival goers.
prob	3	Flashmobs will continue to be used as artistic expression, but most likely also begin to be used for more targeted activities such as political protest, issues awareness etc.
prob	3	Seems quite probable given the ubiquity and sophistication of networked mobile devices that already exist
prob	3	Flash art is a collective partaking, which gives also to non-performers a performing status. It is a new cultural space settlement. It gives the feasibility of a new relation people-city.
prob	3	Flashmobs, like streaking, are most probably a thing of the past. There hasn't been use of one in quite sometime that I can remember. Bill Wasik, who created Flashmobs, disbanded his at the eigth iteration. It relies on cultural popularity. What ever happened to Dance Maratons? These cultural manuevers are at the right place at the right time but have a short life span. I agree that politically, a call to arms using digital media will continue. That, however, is not necessarily art.

col 1	seed	reason
prob	3	I expect that social networking capabilities will increasingly empower flashmobs, however I doubt that it will become a dominant form of entertainment.
prob	3	Flash mobs is a fad, one that has faded already.
prob	3	I think that whilst people are spending increasing amounts of time in virtual spaces, the physical space will continue to be utilised for some time to come: via flashmobs and other formats often utilised during festivals eg. street theatre, large scale installations.
prob	4	Los grupos interactivos de videojuegos crean la sensación multitudinaria de satisfacción compartida. Se aleja por completo el fantasma de la soledad que tanto agobia a las sociedades modernas. Enriquece la posibilidad de sentirse parte fundamental de un todo envolvente. Este tipo de reuniones será una gran propuesta muy solicitada en los todos los medios populares.
prob	4	Big events but confined to kids and young adults and in certain areas where gaming is well-established.
prob	4	People do enjoy experiencing in community. As we are also more and more used to constant activity, current passive media environments such as movie cinemas will be replaced by more interactive and immersive environments.
prob	4	Low probability, higher where mass behaviors are more diffused, lower where individualization processes take place.
prob	4	Interactive games will continue to be popular. However, digital gaming does not require location, just a computer or smartphone. The behavior of twenty somethings still take their computers and gather together at a friend's house to play World of Warcraft. They do not need to travel. However, large interactive games may become more popular at theme parks which can absorb the high expense by packaging it with other entertainments at the venue.This is a corporate venuture. And this form of entertainment/art is specific to high consumption countries.
prob	4	There are more powerful group interactive modalities than this that will be more dominant.
prob	4	belonging a very , very deep human need
prob	5	dominant..not sure but definitely a piece of the puzzle
prob	5	For many this would be an entertaining and stimulating form of recreation, however it could also be detrimental in that it could be too stimulating and possibly cause dizziness and seizures in some.
prob	5	Definitely an immersive experience especially for the young who continue to appreciate high tech stimulus.
prob	5	Maybe more like holographic environments with interactive capabilities. This is an extension of 2-D and 4-D technology trends. The hook is in the ability to participate in scripting the scenarios.
prob	5	Due to existing infrastructures that can be fairly easily converted - and will need to be to stay relevant, the growth of this medium seems likely.
prob	5	Leaving aside domes and planetariums, immersive cinema seems to be fairly likely as a major popular art form of the future (although 2D cinema will continue to be a major form too). Although the 2020 horizon is much too soon, I think, given the amount of infrastructural and technological investment required
prob	5	Vivir la experiencia de los medios digitales inmersivos es interiorizarse con el contexto irreal llevado al plano subjetivo de la realidad. El pensamiento procesa las imágenes y los sonidos envolventes y los percibe como sensaciones auténticas y vívidas. Esta gran experiencia de los sentidos y las innovadoras sensaciones que se pueden experimentar a través de los medios digitales inmersivos los hace candidatos a una gran probabilidad de existir con gran demanda en los medios populares de un futuro inmediato.
prob	5	Next future will be open to a huge social request of striking and marvelous exhibits, interactive and immersive. There is an increasing demand for the Nature Spectacle.

col 1	seed	reason
prob	5	Cinema has no where else to go but around people's heads!
prob	5	This is and will continue to be a niche form of entertainment over the next decade.
prob	5	Unlikely this will become dominant, especially as 2D becomes available in the home. However, the link of these forms with museums may mean the continue to be accessed by education audiences.
prob	6	In an attempt to generate additional revenue streams, some museums are beginning to virtualize their collections. this might also occur with private collections and even non-existent virtual collections. Once the framework has been built, more and more people will move in this direction.
prob	6	Given current trends in museum media, seems very likely
prob	6	It is easy for me to reply, living as I live in a city (Rome) gathering the 48% of the entire Italian incoming tourists; and Rome is year by year more and more considered (10% per year of increase in the last 5 years, with no decrease); it is the Italian fullest city of exhibits, collections, museums, etc.
prob	6	Doesn't a 2D art exhibit require 2D artists to create 2D art? The medium attracts a few, but not many.
prob	6	Virtual museums will ultimately dominate physical museums.
prob	6	Virtual art, and virtual access to exhibits may continue to increase as a means to provide access to audiences who can not make physical visits, also as the technology of virtual environments improves.
prob	7	This is fabulous and definitely here as the new way to read and interact in different mediums. I love the way you can link to others while reading and watching videos of scenes etc. This was all science fiction not long ago, and we've finally brought it into being. The only problem with electronics is that there is more unrecyclable waste, even though it cuts down on tree usage.
prob	7	e-publishing not only provides opportunities for writers but for readers who can become part of the "book" in conversation and commentary. That eBooks can link to other media is an exciting dimension.
prob	7	The devices and user interfaces are continually being upgraded and the advantages will far outweigh disadvantages in the very near future. Here's a problem, though, why does it still, today, cost less to buy the latest biography on Cleopatra as a hard copy, traditional print version at Costco than it does to buy a digital version? Why do people have to pay $15 for a digital copy of something when it should not cost this much? Why must authors be willing to give Amazon or Apple up to 80% or more of their profits in order to be successful? Why haven't we come up with a successfully marketed "commons" in which authors derive the profits from their works. Evidently global, national and local economies "prefer" the old-fashioned method of product distribution because it creates bottlenecks at which taxes can be levied, but isn't this just what the Internet was supposed to help us overcome? Information should be free, said many Internet pioneers. Not so much today, really.
prob	7	We will continue to see meshups not just of content, but also of content encapsulation. Again speaks to the current generation trained in digesting multiple media format simultaneously.
prob	7	This has already happened. Publishing houses are cutting down or eliminating hard back and paper. Magazine, which is expanding in accordance with niche markets. However, publishing has not realized the problems with piracy. Self publishing will continue, but with a flattening of the market, the art form will be a winner-take-all industry, along the lines of Lady GaGa in music.
prob	7	No doubt that books will become increasingly digital and interactive...
prob	8	we will see a general trend toward gamification - of consumer experiences, as well as political and social participation. Games can further be integrated with solving real life situations.

col 1	seed	reason
prob	8	This should be coupled with location based gaming. However, the games may have lifespans similar to that of Flashmobs.
prob	9	The question 'grow into a dominant form of media' I am ignoring. This approach to use arts-based methods--aesthetic methods - for self-expression is very powerful, with more and more people becoming involved but I do not think that it represents a 'medium' in the sense we think about media. The question also mixes 'cyber-healing'. Too many ideas mashed together here. Separate arts-based healing from cyber-healing for a start.
prob	9	Advances in neuroscience will allow a growing understanding about triggering specific mind states. This is already being used for Neurofeedback devices to teach people how to entrain specific brain frequencies and has recently broken into the consumer market with the Jedi mind games for kids.
prob	9	separate arts-media healing from cyber-healing they are different
prob	9	Given the popularity of the self-help and alternative health industries today, this seems quite likely
prob	9	By the year 2020 is the catch. I don't see it happening in eight years. More research is being done, but unless you are part of a University research project, you won't have access to it's proper use.
prob	9	separate arts-media healing from cyber-healing they are different.
prob	10	Everyone has a voice. New platforms such as ipad and android tablets have integrated video recording and editing capabilities allowing even technologically challenges individuals to create and share media with the world. The platforms will only become easier to use and more accessible. This will also make people more aware of the media they are being exposed to, with ever new means to create useful media diets.
prob	10	this already is dominant, and seems very likely to continue as such
prob	10	Thinking about Italian situation, that's not good for unknown artists and writers, web is a cheaper (and democratic) way to express him/herselves
prob	10	With communication between social networks not strengthened because of digital communication, branding has to remain honest. The real questions will be about group dynamics and media. I do believe artists will continue to call attention to the world around them. People will have quicker access to respond to the art.
prob	11	It is already happening successfully and will grow rapidly as more get used to it - just as email was resisted in the 1970s and 1980s but then took off and now 20% of the world is connected to the Internet - airports are already crowded and costs are going up. It will be come easier and more fun - geography will become less relevant.
prob	11	As oil supplies deplete and travel becomes more cost prohibitive, alternative choices for participation will start to dominate. But how will artists use it? We are now able to watch some dance companies create during their process, but is that commentary, interactive visual journaling or art?
prob	11	Skype can already allow a certain amount of "telepresence" at little or no cost. By 2020, driven by the costs of travel and the rapid deployment of new tools and capabilities in networking and display systems this will be highly developed. Some offices and homes in 2020 will have rooms in which large-screen projectors line the walls and create a "holodeck" feel ala "Star Trek" (not that complete immersion, but a representation of it) and you can "transport" yourself to Hawaii or talk to grandma 1,000 miles away, visiting as if she's in the same room with you. We have the technology now to do this, but it's too expensive for consumer adoption.
prob	11	Video conferencing has been common for years. Virtual meetings are becoming more realistic and with growing cost of travel due to increase in oil prices, this will most likely be an expanding field.
prob	11	As broadband rolls out and travel becomes more expensive there will be increased uptake.

col 1	seed	reason

Health concerns with the eye are coming to light. It is becoming commonplace in movie story telling, at the moment, but I believe the amount of films going into production this year is minimal. "While three of last year's domestic top-five highest grossing films were made with 2-D technology, one always has to remember that a ticket for these films costs as much as $4 more than one for a normal film. On top of that, "Toy Story 2" and "Shrek Forever After" are sequels to wildly popular family films and thus would have ended in the top 10 regardless.

prob 11

The battle over 2-D has seen the new technology take a beating in ticket sales recently, but this year may be the deciding factor for its future. This summer features family films ("Cars 2" and "Kung Fu Panda 2"), superheroes ("Thor," "Green Lantern" and "Captain America") and sequels to popular franchises ("Final Destination 5" and "Transformers: Dark of the Moon") all shot in 2-D. "http://utdailybeacon.com/entertainment/2011/apr/18/2011-can-make-or-break-2-d-films/

prob 13 The primary breakthrough here will be contact lenses with nanobots creating overlay. Current HMD are still clunky and only appropriate for specialty use. Such contact lenses have already been developed in first gen experiments.

prob 14 A wonderful medium for individual creativity, but global interactivity via these? yes, I guess so, bringing very complex groups of information in new synergies with new people, yes, I guess this could be quite exciting

prob 14 This is a situation in which "dumbing down" the user interface actually makes it less useful to power users who are most likely to be able to innovate and invent new things if they continue to have the most latitude possible. While there's no doubt that touch displays have an advantage because they are intuitive they can never possibly gain the nuances of control we already experience through current methods of accessing computing power in our large and small devices. Apple and other companies are using software and hardware design to move consumers into a realm in which they will be app-dependent, and while some applications will be "free" most will cost people something every time they choose to use them. The world is moving from freely available information on computers hooked up to information networks to a world of controlled appliances for which they must pay and pay and pay and pay. Apple's latest OS update, nicknamed Lion, is the company's move to get consumers into that controlled world and build up the company's profit-margin. This does create new jobs for applications developers, and monetizing the Internet in more direct ways creates more revenue flows, but the act of monetization politicizes the act of creation and drives people to impose more rules and build more bottlenecks and can cut the poor and uneducated out of the invention and innovation equation.

prob 14 This technology is already widespread in the US

prob 14 iPad, anyone? Is it part of art creation or art delivery?

prob 15 depends on getting the aesthetics and user-friendliness right for mass market use

prob 16 Right now it is being used in video gaming. Toys with cameras create virtual worlds using the existing enviorent and adding overlays to it.

prob 17 It will take time for people to really get used to it, but certainly within 20 years it will be a dominate media for everything imaginable.

prob 17 Second Life is interesting and World of Warcraft has had some limited success, but the user interface has to improve for this type of communication to be widely adopted, and even it it does it is likely that while there will be many people who are highly engaged in alternate realities offered by online virtual worlds most people will still prefer and live in the real world in 2020. The continued development of "video games" and the maturation of the sophisticated imagery computation is now capable of rendering will continue to move us toward a time in which the "holodeck" on Star Trek may become more possible.

prob 17 This medium is already well-established

prob 17 As this area is already established the technology is likely to be invested in and improved meaning that new generations will be increasingly engaged in this space.

col 1	seed	reason
prob	18	This is already well-established
prob	18	So much of game-play is based on eliminating "the other." to solve world problems, we will need to change that view into "each other as ourself."
prob	20	I don't see this so much as a 'medium' of creative expression, more a tool of the human body as the body and machines combine, and as we increase our understanding of brain function.
prob	21	It's a OLD kind of art! It's part of the achieved past of mankind, I think.
prob	21	A more cost intensive art form. However, taking it into the digital world, where the art expresses via a unique digital relationship with the viewer, thus making the viewer part of the kinesis, shows much promise.
prob	21	Since we are moving into a digital world, and since distribution of art is more and more being done more and more by digital means, since maintenance of all art forms is relying on digital work, and since science is behind digital world, science will be at the forefront. Remember, the creation and mixing of paints in the renaissance was a chemical science, as well as an art form. Science has always been there.
prob	23	While the convergence of Internet/mobile/television is now under way and it is likely to have moved along quite a ways by 2020, that is not necessarily a good thing. If people begin to confine their exposure to computing to uses of their home televisions and their small mobile devices they will be cutting out a lot of potential and they will be "dumbing down" their experiential opportunities. If consumer spending is no longer channeled to PCs and desktop computing and businesses and individuals channel their money to heavily entertainment-oriented TVs and mobile phones on which they only run apps we're going to see the cost of personal computers rise and we will see a lot of potential for innovation possibly drying up, especially in less-developed nations, where people might settle for mobiles or TVs with their controlling regimes driving all content toward producing revenues and thus primarily satisfying the basest needs of entertainment and relaxation. The fullest realization of human potential will be denied in a system dominated by TV-based and smartphone-based "computing."
prob	23	Seems pretty likely given current trends
prob	23	Already there for two main reasons. 1. The consumer already needs to buy in, which they will do in eight years. TVs are always a big item. However, consumers may wait for the latest and greatest and the whole technological TV revolution even out and drop down in cost. 2. content creation costs are plummeting and we are seeing a new generation of story tellers not hampered by studio distribution. The studios are already concerned with the drop in revenue YouTube and Vimeo, etc. Are creating. Distribution networks will be created. People are smart, and corporations will follow the masses. Herve Fischer, in his excellent French book, "The Decline of the Hollywood Empire" predicted just this. And we are seeing the collapse of the distribution system, allowing artists to enter the field as they will. Copyright issues withstanding, we are seeing a democratization of art. A third note. All of this relies on clean silicone production for chipsets, which, because of the demand, is getting scarcer.
prob	24	The question is: Will people continue to be able to leverage their current abilities to "cut out the middleman" or will Google, Apple, Amazon, Netflix and other corporations continue to take their 10 to 80 percent of the profits of creators because the lazy majority decides they want to take shortcuts and show that they are willing to pay more to streamline their acquisitions, thus rendering all other opportunities unsuccessful and defunct?
prob	24	This trend is already well under way
prob	25	Sure the potential abuse is clear, but in this study we are looking at it's a ability to be a major forces in the future of art, media, and entertainment. Ubiquitous computing can be used by all three - instead of sitting in a theater or home, you could walk down the street and experience continuous, interactive media.

col 1	seed	reason
prob	25	There's no doubt that this will continue to develop. The question is how much organized pushback there will be from consumers who do not want their behaviors and uses tracked and from people in countries in which the controlling forces are trying to leverage such systems in Big Brother formats.
prob	26	I happen to believe that storytelling is to be an important part of our future if for no other reason than it has always been a part of our past. New ways of storytelling, e.g. games, structured conversations, and others will keep storytelling alive.
prob	26	Storytelling is the most powerful way to elevate human consciousness. If the story is engaging, people remember it forever and are changed as a result. We have scientific measures in published literature of the profound impact of TV health storylines on viewers' knowledge, attitudes and behavior. These stories reach up to 20 million viewers in a single hour and up to 80 million viewers in the first week. The episodes later reach up to 400 million viewers in over 100 countries worldwide. When the content has social value, it is a service to humanity.

The way to partner with scriptwriters and producers is NOT through advocacy or "product placement." That is an old paradigm and Hollywood's writers are allergic to it. I would change the wording of this question to "Social/Global enlightenment through storytelling (partnering with writers/producers to inspire and inform them to address topics of social concern accurately) and to link traditional media and new media in innovative and interactive ways." |
prob	27	I consider serious games a form of storytelling through sensemaking.
prob	27	Serious games are already getting a lot of attention and there's a lot of experimentation and hope centering on the fact that they might be highly effective ways for us to educate some people more efficiently and even work together to solve global problems. However, it is difficult to break through the status quo in education and government, so while I think some progress will be made by 2020 and serious games will have been implemented in many useful ways by then they will not be a dominant form - they will still be seen as an "alternative" method or an "add-on" to more traditional approaches.
prob	27	Coupled with Alternative Reality Games, Cyber games will continue to push the envelope in education.
prob	28	It is already 100 percent assured of bringing political change. It remains to be seen, however, if the Internet will survive the efforts of corporations and governments (through controlled software and hardware and control in the architecture of the Internet exercised in the name of "security" and to protect global copyright regimes) to cut back on the free and open sharing of information we now experience in 2011. Digital Social Networking for Cultural Diplomacy and Change might already have reached its peak and within 20 years might be nearly non-existent in many regions of the world. See 2011 Global assessment by Freedom House, which finds mounting threats to Internet: http://bit.ly/emozdX Among the at-risk: Jordan, Russia, Thailand
prob	28	this trend is already well-established and unlikely to decline
prob	32	This is already here. As the Internet of Things - connected intelligent sensors and "intelligence" embedded in smart objects that are linked to information networks - continues to be built, we will see much more common adoption of augmented reality applications than we have today, in the early years.
import	1	if it can touch the soul and help audience embody oneness, it will serve an evolutionary function.
import	1	Obviously this brings people together who could not normally partake, for example, my 85 year old mother who has an amazing singing voice, but cannot join a choir since they mostly meet at night time when she doesn't feel safe and physically cannot do. But she could sing with a choir from her computer, (which she's a wizard at).
import	1	This is interesting and perhaps even culturally important but will not improve society very much

col 1	seed	reason
import	1	Content is everything and whom one is connecting. I can see reaching to the hidden parts of our world, to the women who are illiterate and repressed, and tapping their voices. Gang members in prisons, elderly in homes, these are the voices in song or poetry, to hear to have a social impact.
import	1	La fusión entre el arte clásico y las nuevas manifestaciones artísticas con tecnologías del futuro crean un puente muy adecuado para que las generaciones que se resisten aún a un cambio radical, puedan asimilarlo paulatinamente y se adapten de forma espontánea y natural a la nueva propuesta estética. Este cambio es importante porque el intelecto y la creatividad humana tienen la obligación de evolucionar y perfeccionarse para llegar al conocimiento de sus auténticas posibilidades en la conquista del universo entero.
import	1	While creativity in music, theater and other arts is critical to innovation that crosses over into other realms, it probably can't be seen as having significant influence over critical global issues.
import	1	The impact will be greater than its patron base much as the fine arts is now. One can expect significant growth in all existing and emerging arts as societies will generally shift towards a more aesthetics-based economy.
import	1	Important as it maintains cultural heritage and makes it accessible to younger generations allowing for bridging human experiences.
import	1	Not sure how much it will bring civilisation forward but music is spiritually very important
import	1	It heavily depends on your condition, if as performer, or as customer. Maybe speaking of "civilization" is too much.
import	1	Important stuff, to be sure, but not nearly as important as other forms of arts and media that influence us on a daily basis.
import	1	Integration of new mediums with the canon is a great way for art to speak about humanity. But more than that, with good artists the blending will create good art, and it will be accessible over multiple formats.
import	2	Potentially this could be very important since it will be able to integrate more information in exciting forms that the public would like to experience.
import	2	Again, if the characters can resonate with audiences at a heart level, they may have transformative potential.
import	2	If the form creates a dynamic that is real and surreal, pushing outside of the familiar, then it could have real potential for powerful social experiences.
import	2	La percepción de nuevos estímulos y sensaciones que enriquezcan los sentidos habrán de cumplir una función importante en el desarrollo evolutivo del cerebro. Esta nueva información de sonidos, formas y figuras estéticas fortalecerán la imaginación y la capacidad para percibir y recrear un mundo interno que nos ayude a conectarnos con otras realidades y dimensiones de las que aún no tenemos acceso.
import	2	Will have a limited impact but not universal. Other competing forms will draw followers. It will have a dedicated community to be sure, along the lines of anime fans.
import	2	Will likely be pervasive and will have solid impact on society as artists are able to "teleport" themselves to remote locations.
import	2	to know the impact in the audiencies and compare them with the "real" event
import	3	I am quite convinced that we should develop this furter for "achieving the best for civilization" because these flashmobs bring people together and create a sense of well being, a sense of happiness. One could argue that it is a shallow sense, however in these hard times where disasters and inhumanity are frequent and will probably become more frequent, I am convinced that these quick, small gatherings where everyone is connected by movement, across language borders and across cultural borders even for 10 seconds are of essential meaning for our future.
import	3	The impact is likely to be great where this occurs, but the number of occurrences is likely to remain small.
import	3	Public performances are one of the most direct way to affect the general public - and the general public's education and engagement in building a

col 1	seed	reason
		better future is critical to the future of civilization.
import	3	We need more surprise and delight in our world to offset the 24/7 negative media spin.
import	3	I scored this 100% simply because positive flashmob performances can potentially cause a rippling effect of upliftment and joy.
import	3	Romper la estructura formal del espacio privativo que hasta ahora ha existido entre el artista y el espectador puede resultar sumamente enriquecedor para ambos. Una comunicación más íntima y estrecha entre el espectáculo y el espectador debe conducir a sensaciones y estímulos realmente profundos, más vívidos y personalmente entrañables.
import	3	Creating community is the result of flashmobs, along with the childlike innocence of surprise--all worthy achievements in our fragmented, artless, jaded world.
import	3	The impacts will be significant for those few events that go viral. Again akin to music festivals. "Burning Man" captures the imaginations of many more than the actual attendees.
import	3	I find the potential of "flash mobs" to be so significant that I have been working on re-languaging it; my preferred term for "flash mob" is "flash flock" -- thus "flash mob art" becomes "flash flock art" -- a term which I believe captures the spontaneous nature of the phenomenon, while simultaneously reflecting the peaceful nature of the events. Through stressing the ability of humans to co-create harmoniously we further a vision of ourselves as capable of co-creating a sustainable and peaceful world. "Flash flock art" has an essential role to play in the further evolution of humanity.
import	3	Puts power into people's hands. Anyone capable of building and engaging community can create one with respective ripple effects/ viral propagation and additional exposure online. E.g. the Target flashmobs a while back that invited people not to shop at target due to their political activities.
import	3	Probably will have significant widespread (good and bad) effects for public practice of democracy
import	3	Inasmuch this kind of "direct art" is performed downtown with ordinary people taking part into it -- that is: inasmuch it happens into the "agora" -- it is straight part of Western civilization.
import	3	It's not a good thing, I think. It always seemed to me a sort of "technical test" for organizing people to do something all together in a moment all over the world. It may be art, it's right. But when somebody will decide to organize people for making "other things", what do you think about? Flash mob is amusing, but I have a dubt..
import	3	Flashmobs can be transformative, providing an uplifting, mood-shifting and inspiring effect in public spaces. I'm not sure how important it will be in the overall scheme of things, however.
import	3	I think it is important for people to feel a sense of 'ownership' of their public space, especially as spaces are increasingly privatised (eg. shopping malls). Emergence of forms like parkour are testament to the empowering nature of this type of work for people from all socio-economic backgrounds.
import	4	This is again a great way of having people interact to reach one goal across language and cultural borders. However, the gaming should develop more content, should go beyond play only. What can we do with this sort of activity for other targets groups e.g. elderly with Alzheimers? Handicapped? To a large extent our population (at least in The Netherlands) will consist of elderly people in the not so distant future. Can we gear this sort of activity more towards them in order to enable full participation of all people in society?
import	4	positive group activity has the potential to empower people which could help further civilization...playing games that make the world a better pace woud be a great direction...
import	4	El videojuego compartido permite a los usuarios ser parte activa de un todo. Se deja de ser mero espectador (como por ejemplo cuando se observa un

col 1	seed		reason
			partido de futbol o cualquier otro deporte) Los individuos dejan de ser personas pasivas y se convierten en piezas claves para el óptimo desarrollo y el buen funcionamiento de la estructura, los objetivos y la meta del juego. Este tipo de acciones motiva la creatividad, espontaneidad y la colaboración inconsciente en el trabajo de grupo, razones importantes para motivar este tipo de esparcimientos indispensables en las sociedades actuales y del futuro.
import	4		Will have a community building benefit much as described by Jane McGonigal. Games will evolve into a variety of program solving forms beyond the shooting forms currently popular.
import	4		Interactive gaming has vast potential to empower collective action; I believe it can be used to inspire action on behalf of the environment and other important issues facing humanity.
import	4		In particular in combination with the trends in gamification, this medium could easily be turned into a group performance center, in which apparent gamers are solving real world problems collaboratively abstracted into a gaming layer.
import	4		I think it's good to make "the opposite of" civilization! Or of what I think to be civilization, of course.
import	4		There will be more powerful group interactive modalities than this, however it will sustain and play a minor role in future entertainment.
import	5		These things I feel can potentially create a better sense of what surround us, our planet which can have a positive impact on our common humanity. However, I think that these experiences will be much more created at the individual homes in the not so distant future, rather than in domes etc.
import	5		as always depends on content that inspires and helps us understand ourselves as co-evolutionary participants rather than spectators.
import	5		The only positive thing here is that it brings people together physically to watch giant screens, rather than them being locked onto their own personal screens at home.
import	5		Could provide a profound and dramatic experience
import	5		Will bring about some tension between the virtual and the authentic. There is some assumption that these will be collective activities. Might be overembraced by social isolates.
import	5		Es muy importante estimular y entrenar la percepción de nuevas formas de percibir la realidad. O mejor dicho, es el momento de descubrir diferentes realidades que permitan ampliar la capacidad de nuestros sentidos renovando, perfeccionando y especializando la experiencia de nuestros procesos mentales.
import	5		The most important asset is the social character of collective and interactive fruition.
import	5		It's a kind of cinema made of excitation, not of art, in the most of cases. Only art can make grow up civilization; excitation is too easy to make it
import	5		As these formats are often used by museums they tend to be linked with educational experiences.
import	6		This is great stuff, stuff the future is build off. It will take different policies and different ways of looking at accountability of arts & institutions by government. But what a wonderful way of looking at art this provides!
import	6		How wonderful to visit an art museum in your own home. You can relax and take as much time viewing each painting or object.
import	6		waw
import	6		It's very important, because it permits to people all over the world to visit collections and museums even if they can't reach the real site of it. It's a very democratic medium: poors can enters the museums all over the world, for example.
import	6		This can be develop into a great opportunity for third world countries to have access and to display collections from other parts of the world. Can this be an app for mobile phones?

col 1	seed	reason
import	6	Access to the crowning achievements of humankind - past, present and future visions - is vital for our growth.
import	7	Achieving the best for civilization when it comes to electronic publishing I feel is a two edged sword. As long as the current copyright regulations are in place, the west is well served with all sorts of knowledge. But how about access to knowledge in other countries? This is already a problem now, because e.g. libraries in third world countries have a hard time paying the licenses. If this is not improved the electronic publishing will go ahead but it will not be achieving the best for civilization world wide! It is something that very few people are aware of. In addition one can wonder what will happen if the public library system in the western world is demantled. They are a quiet and rather silent but so so great source of electronic information.
import	7	e-publishing can become a worldwide benefit with smart phones and internet access, including translation tools as the third world adopts greater smart phone use in particular. Libraries will survive and their wonderful quiet spaces will adapt to new community use.
import	7	Allows for new levels of integration as video format can sometimes overcome literacy issues.
import	7	Ready and quick access to human knowledge is/will have a major impact on civilization.
import	8	Quite likely in the not so distant future a game developer will win the Nobel prize for peace. This is a great way for people to experiment!
import	8	It's not kind of me, so I apologyze: but I have to say alternative reality games are the real proof that people is stupid. Real world,as real life, are so dramatically complicated that in a real life there are almost two or three different lives indeed. What can it mean a need of playing to an alternative reality game?
import	9	Arts-based healing - equals deeper-faster compared to traditional talk-based therapy (both are needed, however). The need for healing will never go away and will be needed to attend to the 'wounds of transition'. Cyber-healing - the use of technology for healing purposes (using aesthetic processes or not)will increase in importance for the same reason as above and will be more accessible. Combining the two healing streams will be slower to come due to finding and testing the varieties of methods that will arise
import	9	Use where possible, but espcially in medicine, healing the human factor cannot be overestimated. The caring process is essentially interhuman.
import	9	Our research shows the profound impact of entertainment media on health knowledge, attitudes and behavior. I see the media/arts healing format evolving beyond the current forms, with television in evolved interactive forms as a driver of human consciousness and its healing impact augmented by individual artistic expression in person and in virtual worlds.
import	10	Hang on...this is not a trend as such! Media literacy is an instrument that enables working with media, living in the information society, to frame it in good old 90s language :-) It is something that should get continuous attention and budget, but it's also something that is not the most exciting. But so necessary. however, there is a category confusion here so when processing these results please note this!
import	10	a required competency in the next four decades of 'Narrative Wars'
import	11	The world continues to get more complex, requiring this form for better management and this form will be critical plus helping more peaceful relations among peoples.
import	14	This type of technology could be of great use for everybody, including elderly and handicapped and thus it could help build an inclusive society.
import	14	Again, I would like to see negative territory represented in this column. While touchscreens are going to be an advantage to those who disabled or illiterate or those who are not tech-savvy, it will disadvantage the rest of us in significant ways.
import	15	This is a way for the body to be integrated with the technology eg. the use of motion sensor for animation. If this technology is refined, it could have broad roll-out and provide a new form of interactive creation/play.

col 1	seed	reason
import	16	This will raise the question about what is really true. Will we be able to identify true history from reconstruction? When there are competing histories who will be able to tell which is authentic?
import	17	World games could help resolve conflicts
import	17	The ethics of the external social world will permeate these worlds and vs vs.
import	19	This seems to be a purely analytical medium. The artist will and can infuse their purpose with this medium as support.
import	20	Understanding the effects of technology on consciousness is incredibly important, especially as technology and the body/brain increasingly combine.
import	21	Kinetic Art has made its job in civilization year ago; it's about fifty year at least.
import	21	It could be beautiful, anyway.
import	23	In the second "answer" column of this delphi, the wording is problematic. ALL technological development has positive and negative effects. On this question: How important will this be in achieving the best for civilization? your sliding scale should go up to 100 points in the negative direction as well. People should be able to answer whether they see the development as a net positive or a net negative in the end.
import	23	It's going to happen, so it's important!
import	24	Not sure if the complete downfall of experts would be good, but democratization of content creation does offer great perspectives on interconnection between people, peoples and countries away from the abstract big picture into real life.
import	26	I think story telling creates the hummus, the fertile earth for people, professionals, corporations and even nations to grow. However, the moment storytelling becomes an empty marketing tool where ethics is preached but not practiced it looses all value.
import	26	How important storytelling is remains a complex issue, one that is hard to quantify; my response is based more on intuitions that grow out of the statistics we see in epic storytelling, roleplaying, adventure games. I point to Jane McGonigal's latest book for evidence.
import	26	Storytelling and entertainment media have profound impact on health knowledge and behavior. Hollywood, Health & Society's research shows when we become engrossed in a TV storyline, we forget our surroundings, and come to see the characters as beloved family or friends. In this state (called "transportation" in the literature), we are more open to learning, have higher knowledge gains and are more likely to change our behavior. As technology advances we increase our modes of communication, self expression and storytelling. One leading actor who portrays a detective working to solve sexual crimes told me she receives thousands of letters a month from victims who say they've never told anyone their story before. This TV show gives viewers hope and courage to speak out and the actor refers victims to sources of help. The victims' stories had such an impact on the actor, she started a Foundation to help survivors of sexual assault to heal. So art imitates life and life imitates art in ways that inspire and heal actor and viewer alike. Taking this to a new level of technology with artistic expression of all involved can only increase the healing power of storytelling and entertainment media. The key is to inspire content developers of entertainment media to tell stories that elevate human consciousness, and to connect viewers to interactive forms of media where viewers can tell their own stories. I'm in the early phases of this work through "transmedia" projects where I link traditional and social media in innovative ways to help people surf across various media platforms to improve their health and well being. For example, we worked with the writers of a TV health storyline on traumatic brain injury (TBI) which resulted in a multi-episode story arc. We created content on TBI for the show's web page with web links to credible sources of information (CDC), helped the show develop a Facebook page for fans on traumatic brain injury featuring a "home video" of the character talking about brain injury, provided tweets on TBI for the show's twitter network and the lead actors twitter followers. We also helped the CDC develop content for their TBI Facebook page with a blog where visitors, many of them viewers of the TV show, could tell their own stories. And the CDC send tweets about the TV show's TBI storyline to their public health twitter followers which resulted in a complete set of cross linkages across multiple platforms.

col 1	seed	reason

 Storytelling can be a powerful form of self-expression and healing. Many viewers self-diagnosed for the first time after seeing the storyline and the CDC staff helped them find help. We had similar transmedia projects addressing diabetes and bi-polar disorder among youth. We confirmed 162 TV health storylines aired in the span of one year (2009-2010) after consulting with HH&S for accuracy of the health content. We have been serving as a free resource of health information and expertise for Hollywood's writers and producers for nearly a decade. Now we're launching a Global Climate Change Initiative to inspire writers of TV, film and digital media to accurately portray climate change in their storylines.

import 27 My response here follows my response in storytelling, particularly with reference to Jane McGonigal's latest book.

import 27 It should be of great importance: creating a virtual, other world where we can try to work things out. However the games are constructed by humans and based on models and the complexity of our world is hard to grasp. Modelling human behavior, consumer behavior etc is still at the very, very early stages. And models always fall short of reality. In addition the builders values, prejudices etc will be build into the game, consciously or subconsciously. A point of ethical concern en attention. Having said that, these games could assist in sensitizing people to alternative realities and ways of working towards those realities. And that could potentially be a great good.

import 27 More money and time goes into games than books;hence, those interested in engaging the public in positive global change should spend more time and money on games than writing or reading books.

import 28 As I mentioned above, in this second "answer" column of this delphi, the wording is problematic. ALL technological development has positive and negative effects. How important will this be in achieving the best for civilization? your sliding scale should go up to 100 points in the negative direction as well. People should be able to answer whether they see the development as a net positive or a net negative in the end. Mobs of people can take down a government or an organization and endanger others; groups of people can be uninformed or misinformed and make poor decisions, just carried along with the flow of the popular uprising. I hope, as do we all, that the change we see in the world today through social networks being used for positive change does not somehow get twisted or somehow result in unintended consequences that wind up being a net negative generated out of only positive intentions.

import 28 Arts allow us to share our common humanity across barriers of language. Does it do so across barriers of culture? Or are aesthetics culturally determined?

import 29 This medium can be used for good or evil.

import 31 Enabling the armchair traveller: can one truly understand the other, his/her country, world, life without having been there, I wonder. I notice more and more people say "yes" to this questions, thanks to technologies like these. I am not convinced: smelling the smell, feeling the wind blow you off a road in eastern Russia, having to live the hardships there...that makes you truly understand the other. So yes these will definitly be technologies for the future I think, but paradoxically I don't think that they will help us advance as humanity on the whole. Not in the least because again this is pretty much only available and useful for developed nations and people.

import 32 In the realm of this delphi, augmented reality will have quite a high impact compared with other choices. Just-in-time or real-time information can be life-saving in some situations, and it will certainly make a huge difference in informing people, providing them with needed economic, social and political information on which to base decisions as they move from moment to moment in their daily lives.

Involvement

The table below presents the narrative answers to the third column: "Are you, or would you like to be involved in developing this seed with other futuristic seeds?"

seed	reas
1	I would be happy to be part of a think tank that explores which new technologies should/could be included in classical arts.
1	Techno music is one of the fields of work for videogames, and the university has carrer for that and some research works.
1	I would be happy to provide my observation and ideas.
1	Yes, I would love to contribute.
1	I would be happy to be part of concept development into a broader application.
	As technologies develop , the tools become more and more available to interface traditional modes of Visual Art . Multi-Disciplined approaches weave a more complex experience.
1	A more profound result. incorportaing 2-D sculpture with videography and music. The media is the message. Although I wouldn't just incorporate "techno" , as that may be misleading, cold and automated. Putting people ,places and experiences to more profound levels of presentation. I bought a camera for this purpose,wish it was 2-D!
1	Me interesa desde hace tiempo el proceso de cambio de las transformaciones del pensamiento humano a través del arte, la ciencia y la tecnología. La percepción de nuevos estímulos y sensaciones que enriquezcan los sentidos habrán de cumplir una función importante en el desarrollo evolutivo del cerebro. Esta nueva información de sonidos, formas y figuras estéticas fortalecerán la imaginación y la capacidad para percibir y recrear un mundo interno que nos ayude a conectarnos con otras realidades y dimensiones de las que aún no tenemos acceso. Sería una gran satisfacción para mí poder contribuir en este ambicioso proyecto.
1	I would be happy to be part of a think tank that explores which new technologies should/could be included in any kind of arts.
1	sociological studies show that synchrony (music, dance, ..) helps to advance pro social behavior in groups; this kind of effort will be needed also on global level, modern ICTs can help a lot; at IAAI we have had an idea for "The world synchronized on 250 (ppm)" in 2009 http://www.glocha.info/glocha250/; this year we are planning "the world synchronized on 2012" and a Rio 2012 Youth Song World Cup; will try to link it up with MP Arts Node
1	Yes, I am extremely interested in facilitating this merger; I believe the blend of cyber-techno and classical arts serves as an essential "bridge" between the real world and the cyber world. A bridge necessary to our continual evolution.
1	Yes, I wolud like to explore the potential of contributing and/or involving my professional work if and when an opportunity arises.
1	I find this field very interesting but I don't have much knowledge. I would be happy to take part.
1	Yes, I'd like, 'cause it would be amazing for me learning something completely new
1	NO
1	This is not my field
1	I am interested in particular in the educational value of such projects with young people and in broadening their horizons to engage with the arts.
1	No, I'm not involved in developing this seed.

seed	reas
1	***Being a vocal artist who has always been interested in creating and evolution, I look forward to being involved with others who are as excited about this blending of technology and art as I am!
1	The likelihood "classical arts" will blend with future technnologies is 100%. It's one of the reasons we perform Bach on electric pianos today rather than pump-pedaled organs. Will it be important in achieving the best for civilization? 50/50 on that as it depends on what else is going on when a given blending is introduced. That's why 8-tracks are no longer in production but laser-disks cum CDs cum DVDs have and why Walkmans became iPods and mpg players. I'm interesting in exploring and observing this seed via experimentation. "Developing" it implies controlling it and "controlling" it implies a favored outcome. Favoring one outcome over another is big business' and governments' provost, not mine.
1	could be a good experiencde, nad i love lo know more about the methodology
2	Would love to.
2	We would like to participate, considering we are acttually working and researching in some related topics
2	Sure
2	Por supuesto me encantaría participar y aportar ideas que enriquecieran este tipo de manifestaciones artísticas.
2	Why not? It would be an interesting experience
2	NO
2	No, I'm not involved in this field
2	yes i want to study it in his constitutive eleemnts
2	I would definitely like to be involved, as a director, creating holographic experiences coupled with motion-based group interactivity with the projections.
2	I am quite convinced that we should develop this furter for "achieving the best for civilization" because these flashmobs bring people together and create a sense of well being, a sense of happiness. One could argue that it is a shallow sense, however in these hard times where disasters and inhumanity are frequent and will probably become more frequent, I am convinced that these quick, small gatherings where everyone is connected by movement, across language borders and across cultural borders even for 10 seconds are of essential meaning for our future.
2	By 2020 people will desire to connect face to face with their peers. We want to feel connected to others and only only true way to do that is to be physically able to be together. Anything we can do to foster bring people together is important for our future and bonding as people.
2	Would love to participate in developing, participating or tracking these delightful happenings
2	Being a composer, there are already a couple of songs I'd love to use in a Flashmob. When workshops begin for the new musical I'm writing, which is about tapping into the abundant, positive and powerful energy available to all humans, I'll be looking for volunteers. You'd have to live in or be able to get to Sydney, Australia though.
2	Realmente interesante en este tipo de espectáculos puede llegar a ser el factor "sorpresa". Algo inesperado que te saque por algunos minutos de tu introspección, tus problemas cotidianos, tu monotonía, el estrés de la vida cotidiana etc. Incluso experimentar el alivio de no sentirte solo en un lugar atestado de gente, cuando todos en un momento dado se integran compartiendo el mismo sentir, el entusiasmo, la alegría, el bullicio que invade a todos los que momentos antes eran unos auténticos desconocidos.
2	Would like to participate in an event, especially in at risk urban communities and in senior centers
2	

seed	reas
	I Would love to participate in developing, participating or tracking these kinds of seeds becouse I believe that anything we can do to foster bring people together is important for our future.
2	Nooo, not at all! I couldn't think to make anything in a crowd of people.
2	NO
2	In Bill Wasik's book - Bill Wasik created and started Flashmob's -"And Then There's This" he could only sustain Flashmobbing's popularity through 8 iterations before it died down. Like streaking and restaurants, it is a cultural phenomenon relying on culture to propogate it. But, culture at this point, has moved onto the next thing. Kind of like dancing in the aisles in a theatre production. Makes people uncomfortable through confrontation.
2	I think there's an obvious link to social media. It's not only about performing in public spaces but about initiating stories and publicity (which is documented in order to use it for further communication activites). Therefore I think there's quite a lot potential e.g. for activities that integrate CSR components as well.
2	I Would like to participate in some way in these kinds of seeds.
2	This is the classical ballet and opera of its day. Greatly appreciated, widely viewed when it was the principle theatric form, and when was the last time you went to a ballet or opera? It is new "now". Will it be new "then"?
2	i think is a way to get people involved in the show bussines as a profesinist is wonderfll to be involve in some ways to give people joy and an oportunity
4	This is again a great way of having people interact to reach one goal across language and cultural borders. However, the gaming should develop more content, should go beyond play only. What can we do with this sort of activity for other targets groups e.g. elderly with Alzheimers? Handicapped? To a large extent our population (at least in The Netherlands) will consist of elderly people in the not so distant future. Can we gear this sort of activity more towards them in order to enable full participation of all people in society?
4	I would like to see and participate in creating relevant content for this kind of games. They should become a fun way of communicating and educating people of all ages of the most pressing issues affecting mankind
4	Yo soy inventora de juegos y modelos matemáticos. Para mí sería un gran reto poder participar en la creación y desarrollo de juegos multitudinarios interactivos. Algunas ideas ya las he desarrollado al respecto y sería fantástico poderlas llevar a la realidad.
4	I love playing, speaking, living with real persons in real life. It's a limit of mine
4	I Would like to participate in some way in these kinds of seeds.
4	One needs to define "best" to truly answer this question.
4	yes i would love to be involve in a narrative interfase experiment
5	These things I feel can potentially create a better sense of what surround us, our planet which can have a positive impact on our common humanity. However, I think that these experiences will be much more created at the individual homes in the not so distant future, rather than in domes etc.
5	**great potential for awesome entertainment and spectacle. Not sure if it translates to better interpersonal understanding--It really depends on the content.
5	La tecnología del futuro inmersa en las nuevas propuestas del arte no debe olvidar el concepto del mensaje. El mensaje también es parte vital del desarrollo de los procesos mentales de los individuos para su crecimiento como seres humanos y como sociedad. Como escritora de ciencia ficción me gustaría ser parte de alguno de estos proyectos.

seed	reas
5	I'm not particulary interested in it. I can go and see, that's it
5	Yes, I plan to be more involved in dome theatres and planetarium content.
5	The key element that would allow these technologies to dominate is that they involve individuals from different social networks to unify into a new social network for a single purpose, much like the diversity of people who go to a sporting event to cheer for the home team.
6	I made it, using google arts. Beautiful thing.
6	I believe that virtual and 2D Art are very attractive, especially for young people.
7	It will play a big part in our education system.
7	As a librarian and educator, as well as an author, I am very interested in tracking the rapid development of e-publishing and its use for both readers and authors.
7	A high percentage of books is sold to people who give them to others as a present. This act is not only symbolic but plays an important part in sharing information, thus converges a precious object (the book) with precious information. To really reinvent the printed book also means to reinvent a new form of precious object. It would be interesting to see if the e-book can achieve this by mere screen-based technologies.
7	We will need ever-growing and faster ways of information in a mobile society. Tablets can add video and sound experiences which will enhance viewers' pleasure and interest.
7	I think it's a very powerful tool. I am interested to know if it will develop more and more and if it can bring more young people to arts and other form of culture.
7	1) This is a history of technology thing - putting the most power into the most people's hands economically. 2) Again, define "best".
8	No, I don't. I play my roles, all my real roles, in my real life, and I like it.
8	Group game development will better demonstrate the consciousness level of the group in developing and dessminating answers to real global problems.
9	The relevance of this being an expanded way of treating and healing those in many areas cannot be stressed enough for now and into the future. Only becoming more and more powerful as a tool when the world recognizes that all peoples can create. Building a fruitful existence of health and harmony to mankind.
9	'Emotions' tend to be treated differently and worked with differently under conditions of creativity as opposed to therapy.In the former they are used to generate ideas and energy as part of the creative process, in the latter they are often treated as ends in themselves.
9	It is essential that we balance and utilize our technologies not only for communication, information and entertainment, but for the positive evolution of the individual. I think this area of work is a very vital space and look forward to seeing how it evolves.
9	Storytelling and artistic expression are some of the most powerful healing tools we have, and they've been around for thousands of years. When we become engrossed in a story, whether on screen, online or in person, we lose track of time, forget our surroundings, and come to see the characters as beloved family or friends. In this state (called "transportation" in the literature), we are more open to learning, have higher knowledge gains and are more likely to change our behavior. As technology advances we increase our modes of communication, self expression and storytelling. One leading actor who portrays a detective working to solve sexual crimes told me she receives thousands of letters a month from victims who say they've never told anyone their story before. This TV show gives viewers hope and courage to speak out and the actor refers victims to sources of help. The victims' stories had such an impact on the actor, she started a Foundation to help survivors of sexual assault to heal. So art imitates life and life imitates art in ways that

seed   reas

inspire and heal actor and viewer alike. Taking this to a new level of technology with artistic expression of all involved can only increase the healing power of media and the arts. The key is to inspire content developers of entertainment media to tell stories that elevate human consciousness, and to connect viewers to interactive forms of media where viewers can tell their own stories. I'm in the early phases of this work through "transmedia" projects where I link traditional and social media in innovative ways to help people surf across various media platforms to improve their health and well being. For example, we worked with the writers of a TV health storyline on traumatic brain injury (TBI) which resulted in a multi-episode story arc. We created content on TBI for the show's web page with web links to credible sources of information (CDC), helped the show develop a Facebook page for fans on traumatic brain injury featuring a "home video" of the character talking about brain injury, provided tweets on TBI for the show's twitter network and the lead actors twitter followers. We also helped the CDC develop content for their TBI Facebook page with a blog where visitors, many of them viewers of the TV show, could tell their own stories. Storytelling is a powerful form of self-expression and healing. So many viewers self-diagnosed for the first time after seeing the storyline and the CDC staff helped them find help. We had similar projects addressing diabetes and bi-polar disorder among youth. I look forward to being involved in this work over the next 20 years!

9   E.g. Online consulting in psychotherapy is an important and efficient way of helping people to cope with challenges in life, overcome crises and open up new persepctives. It has to be done in personcentred way and there is a huge need for research of new forms of virtual interaction

9   Will it grow into a popular form? Of course it will. Have people forgotten how everyone had to be Christian when Jimmy Carter was in office or how everybody had to talk about their alcoholism, drug addiction or childhood trauma in the mid 1990s?
Will it pass? Of course it will. See above.

9   I am interested in the therapeutic applications of virtual environments that the military is investigating in an effort to treat the many soldiers returning with both physical and psychological injury.

I've recently been reading Letters of Marshall McLuhan and (with reference to his preface to The Mechanical Bride: Folklore of Industrial Man (1951), he writes of the current "condition of public helplessness" [c. 1951!] created by the onslaught of the emerging media (where "many thousands of the best-trained individual minds have made a full-time business to get inside the collective public mind"). McLuhan rhetorically asks "Why not assist the public to observe consciously the drama which is intended to operate on it consciously? . . . Poe's sailor [in "A Descent into the Maelstrom"] saved himself by studying the action of the whirlpool and by cooperating with it."

10   In this time of tumultuous change in the media environment and the concurrent swiftly shifting patterns of consumer consumption, audience viewing behavior, social networking, and political and civic participation, careful and well reasoned consideration must be given to the issues attendant to the development and subsequent introduction of any new technology that has the capacity to further transform our already rapidly evolving mediated cultural landscape.

An interdisciplinary approach to media research and education, I believe, is critical to our ability to forge a more comprehensive and deeper understanding of the possible (and to better anticipate the probable) impact of the introduction of any given technology or medium on individuals, culture, and society at large, and to thereby educate--and better equip--individuals about the nature and dynamics of the new media environment. Without a well considered program for understanding on a global scale--and the attendant ability to create the tools, techniques, and mechanisms to navigate this environment--I fear that, as an increasingly global civilization, we can expect to do nothing more than fall short of our potential to succeed as such.

Please let me know how I may actively participate.

10   For me this area is the most crucial one in the whole arts and media environment. The dynamic in developments of new forms of media needs new

seed   reas

concepts of responsability, competence, data protection and systemic understanding. We work in a social media lab on experimental development of media literacy and media competence and would like to contribute more to this development

10
I'm wondering how much history the author of these questions had studied. The advent of printing increased literacy, the advent of radio increased literacy, the advent of TV increased literacy and the advent of the web increased literacy, and each was media related. But each increase in literacy was relatively shortlived when compared with the longevity of the medium (print was the exception) because quickly on the heels of each media introduction came marketing and advertising (again, with the exception of print) and marketing and advertising can only work if appeals are made to the lowest common denominator, so...

10   This is one of the core developments and potential advances; I just hope "media ethics" are incorporated into media literacy curricula.

11   Aesthetic experience of global inter-dependency and harmony requires this - happy to help get the arts more involved in this medium for simultaneous performances on a global basis

11   I have done some work in this area. It presents terrific productivity and financial benefits for business, and for cultural exchange and diplomacy.

16   This has terrific implications for tele-medicine.

18   Could help with creating viable futures - narratives of what we collectively want the world to look like

18   I am involved with this medium; consider it a new generation animation form.

20   This stream and the arts-based healing stream could come together

20   Yes, this is an important stream, particularly if/when ethical/moral considerations are placed in the forefront.

22   Have a personal interest in this. Building some skills currently. More a 5-year optimal impact. Am currently working my way into being a practitioner.

22   this is very nearly a dominate form already.

24   a means of getting
one's story out' - affirmative action

24   this is very nearly a dominate form already.

25   Ubiquitous computing will be the tech support for the evolution of global consciousness. How well this evolution works will be dependent on how well mystics and technocrats cooperate to make it enlightening.

25   As we track more things and create more data, we both lose something and potentially gain something. I think at the momet our facsination with this technology will continue for some time without consideration of the social implications. By the time people wake up to it, it will be too late.

26   I am interested simply because I'm already engaged in that process by several means.

26   will be a necessity in the Narrative Wars

26   This is crucial to our survival as a species. Governments will not change unless there is a definite impulse from many individuals. A person is a majority of one and should lear, be aware and be mindful of how live on Earth is changing at a very rapid pace and start getting involved.

26   I am leading this work now and urge the UN and others to partner with us. It is critical to separate advocacy of a particular governmental agency in the media from accurate portrayal in entertainment media of some of the most important issues of our time: health, climate change/environment, human rights, humanitarian aid, global leadership, peace/conflict transformation, spirituality, freedom of creative expression, global monetary systems.

26   Storytelling is the oldest form of education known to humanity, we must use it to tell the crucial stories of our time... certainly climate change is one of

seed	reas
	those. My research in the area of "evolutionary guidance media" suggests the importance of including data across ten dimensions of human activity in our story & media creation if we are to more quickly promote planetary consciousness.
26	yes iam a pioner in this field with the social use el mass media or eduentertainement... but we have to inditify the core issues in this new digital area
26	Yes--this is one of my ultimate goals...to create and direct entertaining social/global advocacy and education media utilizing a number of the Delphi-listed media technologies in convergence.
27	"Fate of The World", by Red Redemption
27	As complexity grows and more and more of our world is interconnected I think this will continue to grow as a way to deal with the complexity and educate others.
27	It is a very important media to develop as a means of educating people. Many of these games should be published in order to increase the public's awareness on the complex issues we will have to face in the future.

row_id	reas
27	Yes, games should be a means whereby individuals can take action in the real world.
27	Yes in any group or effort to use all te arts and entertainment posibilities fro education
28	yes im interesting in making new kind of digital parlaments
29	Yes, I am dedicated to promoting this type of creative work in the world.
29	Yes, I am currently working in this area and consider it to be vital to the betterment of society.
29	Have there been any good cross cultural studies on the effectiveness of social marketing? Also of interest to me is the detection and prevention of social marketing for evil purposes, for propaganda, and for recruitment for crime.
29	yes i would love to participate in any kind of research on any group who know the metodology and Also of interest to me is the detection and prevention of social marketing for evil purposes, for propaganda, and for recruitment for crime.
21	What every person do everyday is linked to the territory. So the location of natural events and human movements are strictly related to the space. Electronic georeferencing is important for every aspect of human life and therefore also for the arts.
22	I would like to be involved in devloping this seed. Some existing technologies have made   it clear how important it is geotagging, for any type of human activity. From relief to tuism, from entertainment to art, link (georeferencing) uman activities to a geographical location (and even the emotions) in my opinion wil be more and more widespread

Responses to open ended questions

This table lists the responses to the question:

33....Are there any additional Media/Arts technologies, genres, or modalities that you feel are important future trends that we should be tracking?

34....How would you like to participate in future productions that integrate some of these seeds into new global arts/performances? Please list any ideas and suggestions about how such global arts/performances might engage the public in addressing the 15 Global Challenges and create more socially beneficial arts and media?

question	response
33	no
	The technologies you are tracking all seem to be very much geared to the western world. I do miss the folk dances, the local painters, the traditional folk tale tellers etc in less wealthy countries who are and will be a very important part of cultural development in the near and distant future.
33	Additionally you could put more emphasis on tracking ideas re mobile phones. Many people in not 1st world countries (let's put it like that:-)) do have mobile phones, even on e.g. Mongolian grasslands. Through those mobile phones people can connect to the internet, without having a pc. So mobile phones I think will be a great carrier of arts & culture across the globe.
33	This study is exploring future - not past - elements of the arts;hence, why you see no folk dances, etc.
33	Flash Mob Art
	People lost their own identity and hide in to group or anonymity. Flash Mob Art has the power to awake the recognition of Humanism.
33	Interpreting the world through the development of real-time human communication era will come to the disappearance of the barrier. This means a new beginning for all mankind. Babel Fish smartphones to become the first in the history of mankind is not the language barrier will greet the era. I am now writing this letter as using Google Translator. Perhaps the biggest transformation of the future will be started from the demise of the language barrier.
33	These media technologies have two important attributes: they make possible the construction of realistic alternate histories and others enhance the ability to persuade. Both are potentially dangerous. They lead to confusion about what is or was really true.

When artificial constructs are very good and indistinguishable from reality there will be two possible disasters. First, the constructs may be seen as good or better than the true world and people, including poor people, may choose to live there and avoid reality. This happens now with Second Life. Could this become even more addictive when jobs are scarce and free time weighs heavily? Second, perhaps even more disturbing is the possibility of using these media technologies to construct artificial histories that are indistinguishable from real truths. Imagine the holocaust deniers building a Nazi history which omits the holocaust, or Apollo deniers building a site that shows how the lunar landing was faked in Utah: a fake of a fake.

In this era, who could say what was or is really true? Maybe there could be an incorruptible NGO that acts as a global authenticator.

In addition, these media technologies could enhance the ability of "big brother" governments to persuade. Now government sponsored "social marketing" programs are effectively used in the public interest, for example in persuading the pubic to avoid smoking or to use condoms. But in the future what about convincing the public that the present government is the best that could be or building realistic but false histories of the opponents of those in power. Propaganda in the new world could become even more insidious and effective.

question	response
	Therefore, track the downside
33	I have no idea for this, so sorry~
33	Integral/Evolutionary Media: Media in the service of awakening, stimulating and catalyzing shifts in human development.
33	The use of "Transmedia" to encourage innovative ways of linking traditional and ever-evolving new media.
33	Technology and Media are only part of the whole understanding of arts. Content is vitally important and as a means of addressing present and future challenges, 'ecological arts' and activist forms of art are of the highest value.
33	Voice modeling and animation. While visual character modeling and animation has incredibly grown and nowadays animated characters are frequently more complex and interesting than characters interpreted by actors, nothing similar has happened to voice, and actors still lend their voice. There is no reason why voice modeling and animation should not evolve and visual character animation.
33	citizen empowerment through digital storytelling futures workshops for youngsters, students, unemployed, senior citizens, utilisizing digital storytelling
33	Congratulations, this is really a comprehensive collection of trends and genres, congratulations! I miss the possibilties of arts/media in music, this video shows what I mean, I find it very impressive: http://www.youtube.com/watch?v=gaJ4A7mXJH8&feature=player_embedded I miss the dimension of gobal collaboration in arts and media, with the new tools descriped, the team approach on all this arts/media production, which is connecting people, nuturing unterstanding and peacefull cooperation. And in this context I see a great need for training, programs, coaching, mentoring to develop this virtual, informal and colourfull dimension of a new diversity in the world!
33	movil media entertainment
33	Each of these technologies is fascinating in its own right, and each has the potential for beneficial impact. I believe what will be most interesting are the "mash-ups"--the convergence of a number of these technologies into singular media events/environments. Herein lies my primary focus--both as a forecaster and, mostly, as a creator.
34	yes please.
34	I would love to participate in groups via cyber space to feed or review or suggest content from the 15 Global Challenges to arts/media groups. ...Flash Mob Art against poverty using Twitter and Facebook sounds great but how would you do it?
34	Love to participate in groups via cyber space to suggest content en directions. Want to have the Flash Mob Art against poverty using Twitter and Facebook
34	Performance in Public Spaces/ Flash Mob Art Digital/Social Networking for Cultural Diplomacy and Change
34	specialize in live broadcast applications

question	response
34	I'll have interest in this parts, but I know now that there is not much. ^^;;;;
34	Would love to participate, help, support or contribute to this work in any way I can.
34	Yes, I would love to participate as fully as possible in this important work!
34	Art as a form of ecological engagement is crucial to understanding the reality of complexity and to contribute to the potential emergence of transdisciplinary ways of living.
34	I'd be interested in any experiment of "digital performance" that is to say (re-)creating the performing scene in the cyberspace. My take is that we're still very far from having anything like a "digital stage", which should be much more than a simple live-stream.
34	there will be an impact especially in DEMOCRATIZATION, GLOBAL CONVERGENCE OF IT, HEALTH ISSUES, CAPACITY TO DECIDE, GLOBAL ETHICS, LONG TERM PERSPECTIVES. I would like to participate in this areas. What we need are Exchange Programs, Mentoring and Coaching for Artists, Creative Producers of Contents, Students and Children. We need Labs, Beta Areas, Digital and virtual Test-Playgrounds to apply new ideas and concepts, to exploit the digital power to bring people closer together. Thanks for this great Real Time Delphi which really makes a difference!
34	I will love to participate in any kind of experiment where I am a kind of interface and in any aducational effort to make a more equitative world and maybe we have not talk anything about the violence and the future of the kids as an effect of the reality we are living in the narco and terrorist world
34	I have a great many thoughts on this and ideas for initiatives I would like to pursue. I wish I had come to the Delphi sooner and had the time to write it all out.

A breakthrough in 3d web capability overcomes many of the limitations of things like SecondLife and other "walled-garden" multi-user worlds. Essentially, 3d interactive and immersive environments can be delivered in the browser...you can embed them onto any website and don't need to download an application. They "play" like an embedded YouTube video would play on any blog.

The ability to take a photo and have it automatically rendered into a 3d model for use in a 3d immersive environment is now possible via a fairly new open source project. An example I have been toying with that would bring all of this together is: going to Tahir Square, Egypt and taking a series of photos of the square with my cell phone; those photos will then be converted into a 3D model of the square, which I can place in a virtual world; I would then use my cell phone to video the demonstrations and have that footage streamed into the model of the square. That whole thing can be put on my website. People can come to the site and enter into that real-time 3d world, see the demonstrations via video, and speak and interact with any other users who are also on the website at that time. One should be able to create that entire set-up in a few hours--about as long as it takes to set up a wordpress site.

APPENDIX B: The Participants

An * means that the person provided at least one answer.

No	First Name	Last Name	City	Gen	Country	Field
*	Olivier	Adam	London	male	United Kingdom	Internet/Web Professional
*	Josef	Akebrand	Frankfurt	male	Germany	Fine Arts Professional
	Maria	Alejandra		female	Argentina	Arts/Media Educator
*	Janna	Anderson	Elon, NC	female	United States	Communications/Media Prof
*	White	Anthony		male	United States	Entertainment Industry Pr
	Karen	Atkinson	Los Angeles, CA	female	United States	Fine Arts Professional
	Guillermina	Baena	México D. F.		Mexico	Academic
	Mohsen	Bahrami	Tehran	male	Iran	Academic
*	Jaime	Baldovinos	Mexico, DF.	male	Mexico	Communications/Media Prof
*	Olivia	Barham	LA	female	United States	Entertainment Industry Pr
	Bain	Barnet			United States	Other

No	First Name	Last Name	City	Gen	Country	Field
*	Fernando	Barrios gomez	mexico d.f.	male	Mexico	Entertainment Industry Pr
	Heiner	Benking	Berlin		Germany	Arts/Media Educator
*	Davide	Bennato		male	Italy	Other
	Iain	Bennett	Liverpool, England	male	United Kingdom	Other
*	Sara	Bentivegna	Rome Italy	female	Italy	Communications/Media Prof
	Kaz	Brecher		female	United States	Communications/Media Prof
		Broda	Basel, BS	male	Switzerland	Internet/Web Professional
*	Gregory	Brown		male	United States	Other
	Andrea	Buchholz	Stuttgart	female	Germany	Communications/Media Prof
*	Sandra de castro	Buffington	Beverly Hills, CA	female		Health
	Gia	Campari		female	United Kingdom	Communications/Media Prof
	Stuart	Candy	San Francisco, California	male	United States	Communications/Media Prof

No	First Name	Last Name	City	Gen	Country	Field
*	Leonardo	Cannavo'	Rome, Italy	male	Italy	Communications/Media Prof
	Donatella	Cannizzo	roma, italy	female	Italy	Communications/Media Prof
*	José miguel	Caro	santiago	male	Chile	Internet/Web Professional
*	Joseph	Carrabis	Nashua	male	United States	Other
	Lynda	Carre		female	United States	Communications/Media Prof
	Frank	Catanzaro	Cranston, RI	male	United States	Other
*	Michele	Centorrino	Rome	male	Italy	Communications/Media Prof
*	Josele	Cesarman	Mexico	female	Mexico	Fine Arts Professional
*	Elsa	Chabaud	Mexico City	female	Mexico	Fine Arts Professional
	Maura	Conlon-mcivor			United States	Communications/Media Prof
*	José	Cordeiro	Caracas	male	Venezuela	Academic
*	Theresa	Crowley	London	female	United Kingdom	Other

No	First Name	Last Name	City	Gen	Country	Field
	Karl	Cunion	London	male	United Kingdom	Other
*	Cornelia	Daheim		female	Germany	
*	Margo	De groot coenen	The Hague	female	Netherlands	Other
*	Gerardo	Del pozzo	Mexico	male	Mexico	Entertainment Industry Pr
	Jason	Della rocca	Montreal, QC	male	Canada	Gaming Professional
*	Piero	Di pasquale	Italy	male	Italy	Communications/Media Prof
*	Simone	Di zio	Pescara, Italy	male		Other
	Joelle	Dobrow	Los Angeles, CA	female	United States	Entertainment Industry Pr
*	Timothy	Dolan	Bucheon-si	male	South Korea	Other
*	Carlo	Donzella	Valletta, Malta	male	Malta	Internet/Web Professional
*	Ilan	Durán	Valencia, Carabobo	male	Venezuela	Academic
	Don	Dwyer	LA. CA.	male	United States	Other

No	First Name	Last Name	City	Gen	Country	Field
*	Brian	Dyer	Los Angeles, CA	male	United States	Other
*	Megan	Elliott	Beijing	female	China	Communications/Media Prof
	Roshanna,	Evans	Los angeles	female	United States	Fine Arts Professional
*	Cristian	Ezcurdia	Mexico	male	Mexico	Other
	Jessica	Fan	Beijing	female	China	Communications/Media Prof
*	Kate	Farrell	Sebastopol	female	United States	Publishing
	Felicia	Filer	Los Angeles, Ca.	female	United States	Other
*	Josh	Fisher	Encino	male	United States	Entertainment Industry Pr
*	Octavian	Florescu	Arad	male	Romania	Fine Arts Professional
*	Elizabeth	Florescu	Calgary, AB	female	Canada	NGO
*	Marla	Frees	Studio City, Ca	female	United States	Other

No	First Name	Last Name	City	Gen	Country	Field
	David	Friedman	Kailua	male	United States	Fine Arts Professional
	Adrienne	Fritze	Portland	female	United States	Other
*	Nadezhda	Gaponenko	Moscow	female	Russian Federation	Academic
*	Eva	Gaydon	Blue Earth, MN	female	United States	Communications/Media Prof
	Joseph	Gaylard	Johannesburg, Gauteng	male	South Africa	Fine Arts Professional
*	Florian	Gerlach	Stuttgart		Germany	Communications/Media Prof
	Leonardo	Germano	Rio de Janeiro	male	Brazil	Performing Artist
	Julia	Gibson	Los Angeles	female	United States	Publishing
	Matthew	Gilbert			United States	Publishing
*	Theodore	Gordon	Old Lyme, CT	male	United States	Other
*	Miguel Angel	Gutierrez	Buenos Aires	male	Austria	Academic
*	Dolores	Gutierrez	Mexico	female	Mexico	Entertainment Industry Pr

No	First Name	Last Name	City	Gen	Country	Field
*	Klaus	Haasis	Stuttgart	male	Germany	Communications/Media Prof
	William	Halal	Washington, DC	male	United States	Academic
*	David	Haley	Manchester	male	United Kingdom	Other
*	Aharon	Hauptman	Tel-Aviv	male	Israel	Academic
	Robert	Hawkins		male	United States	Other
*	Sirkka	Heinonen	Helsinki	female		Environment
*	Katarina	Heretikova	Bratislava	female	Slovakia	Academic
	Gina	Hernandez		female	United States	Communications/Media Prof
*	Mayra	Herrera	MEXICO	female	Mexico	Private Sector
*	Philip	Horvath	Los angeles	male	United States	Arts/Media Educator
*	Päivi	Hovi-wasastjerna	Helsinki	female	Finland	Arts/Media Educator

No	First Name	Last Name	City	Gen	Country	Field
*	Maryna	Hrushetska	Los Angeles	female	United States	Other
*	Paul	Hugel	Kihei	male	United States	Communications/Media Prof
*	Jeff	Hutner	Ojai	male	United States	Communications/Media Prof
*	Jihye	Hwang		female	Korea (South Korea)	Communications/Media Prof
	Ron	James	sedona, az	male	United States	Entertainment Industry Pr
	Susanne	Jehle		female	Germany	Communications/Media Prof
*	Gene	Jimenez	Orange, CA	male	United States	Arts/Media Educator
	Kenaid	Kaltham	Dubai	female	United Arab Emirates	Government
*	Mark	Kaplan	Pacific Grove, CA	male	United States	Entertainment Industry Pr
	Hanna	Kasper	Schiltigheim	female	France	Communications/Media Prof
*	Anita	Kelleher	Inglewood, WA	female	Australia	Other
*	Joongtae	Kim	Seoul	male	South Korea	Internet/Web Professional
	Namgyu	Kim	seoul	female	South Korea	Fine Arts Professional
*	Steve	King	Lafayette, CA	male	United States	Entertainment Industry Pr

No	First Name	Last Name	City	Gen	Country	Field
*	Dana	Klisanin	New York	female	United States	Other
*	Hayato	Kobayashi	Washington, DC	male	United States	NGO
*	Sofi	Kurki		female	Finland	Other
*	Edward	Lantz	Los Angeles, CA	male	United States	Entertainment Industry Pr
*	Vicki	Larnach	NSW	female	Australia	Entertainment Industry Pr
*	Eubinne	Lee	Seoul		Korea (South Korea)	Fine Arts Professional
	Alexandra	Leh	Los Angeles, CA	female	United States	Entertainment Industry Pr
	Adam	Levenson	SANTA MONICA	male	United States	Entertainment Industry Pr
*	Daniel	Levy	New York	male	United States	Fine Arts Professional
	Martine	Levy	mexico city	female	Mexico	Performing Artist
*	Zhan	Li	Los Angeles, CA	male	United States	Communications/Media Prof
*	Zheng ri	Li			China	Arts/Media/Entertainment
*	Xin-wu	Lin	Taipei	male	Taiwan	Other

No	First Name	Last Name	City	Gen	Country	Field
	Stefanie	Lohaus	Berlin	female	Germany	Arts/Media Educator
	Ronnie	Lowenstein	McLean, VA	female	United States	Arts/Media Educator
	Jeremy	Mancuso	Houston, TX		United States	Other
*	M	Mari			Argentina	Other
*	Gaston	Martin	Santa Fe	male	Argentina	Gaming Professional
	Jonathan	Martinez		male	Venezuela	Internet/Web Professional
*	Kate	Mccallum	Los Angels	female	United States	Advanced degree, less tha
*	Jen	Mcclure	Newark	female	United States	Communications/Media Prof
*	Robert	Mcglynn	Western Australia	male	Australia	Communications/Media Prof
*	Bernard	Metais		male	United States	Other
*	Vincent	Morales	Richmond, California	male	United States	Other
*	Lilia	Morales y mori	Toluca	female	Mexico	Arts/Media Educator

No	First Name	Last Name	City	Gen	Country	Field
*	Be	More	Hamilton	female	New Zealand	Other
	Tony	Moss			United States	Entertainment Industry Pr
	Jyoti	Mukhia		male	India	Communications/Media Prof
*	Kawthar	Nakayima	Silver Spring	female	United States	NGO
	Phillip	Nelson	Reston, VA	male	United States	Other
*	Michael	North	Haleiwa, HI	male	United States	Communications/Media Prof
*	Santiago	Ochoa			Venezuela	Publishing
	Lora	O'connor	Venice, CA	female	United States	Communications/Media Prof
*	Louise	O'donnell	Darlinghurst	female	Australia	Internet/Web Professional
	Cathy	Ohara	Real de Las Lomas	female	Mexico	Arts/Media Educator
*	Concepcion	Olavarrieta	Mexico City, D.F.	female	Mexico	NGO
*	Eunji	Park	Seoul	female	Korea (South Korea)	Other

No	First Name	Last Name	City	Gen	Country	Field
*	Jungsun	Park		female	Korea (South Korea)	Other
*	Youngsook	Park	seoul	female	Korea (South Korea)	Communications/Media Prof
*	Jack	Park	Menlo Park, CA	male	United States	Academic
	Jeannine	Parker	Culver City, California		United States	Other
*	Daniel	Peragine	Del Mar	male	United States	Arts/Media Educator
*	Jahna	Perricone	Pacific Palisades ca	female	United States	Arts/Media Educator
*	Charles	Perrottet	Glastonbury, CT	male	United States	Other
*	Margaret	Perrottet	Glastonbury, CT	female	United States	Other
*	Cynthia	Phillips	Woodside	female	United States	Communications/Media Prof
*	Miroslav	Polzer	Globasnitz	male	Austria	Other
	Adam	Powers	Santa Clara, CA	male	United States	Entertainment Industry Pr
*	Luis	Ragno	Mendoza	male	Argentina	Other

No	First Name	Last Name	City	Gen	Country	Field
	Karen	Rappaport	Santa Monica	female	United States	Entertainment Industry Pr
*	Martin	Rhisiart			Germany	Other
*	Patricia	Rodríguez		female	Mexico	Other
	Stan	Rosen	Westchester CA	male	United States	Government
	Louise	Rubacky			United States	Entertainment Industry Pr
	Ana maría	Ruiz	Lujan	female	Argentina	Other
*	Juho	Ruotsalainen	Helsinki, Uusimaa	male	Finland	Other
*	Christoph	Salzig	Muenster	male	Germany	Communications/Media Prof
*	Enrico	Santini	roma,Italia	male	Italy	Performing Artist
*	Arif	Satar		male	Australia	Fine Arts Professional
*	Michele	Scarabelli	Studio city	female	United States	Entertainment Industry Pr
*	Stefan	Scheer	Düsseldorf	male	Germany	Publishing
*	Gerhard	Schmitz	Düsseldorf	male	Germany	Internet/Web Professional
*	Patricia	Segues	Mexico, D.F.	female	Mexico	Fine Arts Professional

No	First Name	Last Name	City	Gen	Country	Field
*	Joan	Shea	Oakland	female	United States	Arts/Media Educator
*	Gerard	Smith	Darien, CT	male	United States	Communications/Media Prof
	Pamela jaye	Smith	Hollywood	female	United States	Entertainment Industry Pr
	Sebastian	Sooth	Berlin	male	Germany	Internet/Web Professional
	Hjalmarsson	Staffan	Nacka	male	Sweden	Fine Arts Professional
	Juan f	Suarez		male	United States	Communications/Media Prof
*	John	Sweeney	Honolulu, HI	male	United States	Other
	Suzanne	Taylor	Los Angeles	female	United States	Entertainment Industry Pr
*	Robert	Tercek	Los Angeles California		United States	Entertainment Industry Pr
*	Björm	Theis		male	Germany	Other
	Esther	Tirado	México, D.F.	female	Mexico	Other
	Christopher	Toussaint		male	United States	Entertainment Industry Pr
*	Vladimir	Vasin	Moscow	male	Russian Federation	Academic

No	First Name	Last Name	City	Gen	Country	Field
*	Hoto	Velez		male	Venezuela	Publishing
*	Bernardo	Villacecias	mexico d.f.	male	Mexico	Entertainment Industry Pr
*	Max	Vogler	brooklyn, ny	male	United States	Entertainment Industry Pr
*	Joanne	Warfield joanne	Venice	female	United States	Fine Arts Professional
	Vanessa	Watkins	Köln	female	Germany	Private Sector
*	Eleanor	Whitworth		female	Australia	Arts/Media Educator
*	Brian	Woodward	Calgary	male	Canada	Arts/Media Educator
*	Brian	Woodward	Calgary	male	Canada	Arts/Media Educator
*	Sterling	Wright		female	United States	Communications/Media Prof
	Erdil	Yasaroglu	Istanbul	male	Turkey	Fine Arts Professional
*	Kim	Yeonji	Seoul	female	South Korea	Other
*	Jisun	Yeum		female	Republic of Korea	Performing Artist
	John	Young	Union Bridge MD	male	United States	NGO

No	First Name	Last Name	City	Gen	Country	Field
	Raquel	Zabala	Buenos Aires Argentina	female		Politics
	Only email provided				United States	Other
	Only email provided				United States	Communications/Media Prof
	Only email provided				Finland	Fine Arts Professional
	Only email provided				United States	Fine Arts Professional
*	Only email provided			female	Switzerland	Design and Fashion
*	Only email provided				South Korea	Other
	Only email provided				United States	Fine Arts Professional
	Only email provided				Germany	Other
	Only email provided				United States	Entertainment Industry Pr
*	Only email provided			female	United Kingdom	Other
*	Only email provided				United States	Internet/Web Professional
*	Only email provided				Germany	Publishing
	Only email provided				United Kingdom	Internet/Web Professional
*	Only email provided			female	China	Design and Fashion
*	Only email provided				Italy	Communications/Media Prof
	Only email provided				United States	Arts/Media Educator
	Only email provided			male	United States	Other

No	First Name	Last Name	City	Gen	Country	Field
*	Only email provided				Korea (South Korea)	Entertainment Industry Pr
*	Only email provided				Australia	Internet/Web Professional
*	Only email provided		Rome, Italy	male	Italy	Other
*	Only email provided				Italy	Other
*	Only email provided				United States	Communications/Media Prof
*	Only email provided			male	Italy	Performing Artist
	Only email provided				United Kingdom	Fine Arts Professional
	Only email provided				United States	Degree, over 10 years exp
	Only email provided				Bhutan	Fine Arts Professional
	Only email provided				South Korea	Entertainment Industry Pr
*	Only email provided				Germany	Arts/Media Educator
	Only email provided				South Korea	Performing Artist
*	Only email provided			female	Korea (South Korea)	Other
	Only email provided				United States	Other
	Only email provided				Iran	Other
	Only email provided				Australia	Other

No	First Name	Last Name	City	Gen	Country	Field
*	Only email provided			female	United States	Fine Arts Professional
*	Only email provided					
	Only email provided				United States	Other
	Only email provided				United States	Performing Artist
*	Only email provided				Korea (South Korea)	Design and Fashion
	Only email provided			male	United States	Publishing
*	Only email provided				United States	Entertainment Industry Pr
*	Only email provided			male	Venezuela	Internet/Web Professional
*	Only email provided				United States	Entertainment Industry Pr
	Only email provided				United States	Other
*	Only email provided				Korea (South Korea)	Publishing
*	Only email provided				Iran	Other
	Only email provided				United Kingdom	Other
*	Only email provided			male	Iran	Entertainment Industry Pr
*	Only email provided				Australia	Communications/Media Prof
*	Only email provided				United States	Communications/Media Prof
	Only email provided				Iran	Other

No	First Name	Last Name	City	Gen	Country	Field
	Only email provided				China	Design and Fashion
	Only email provided			male	Canada	Other
	Only email provided				United States	Gaming Professional
	Only email provided				United Kingdom	Other
*	Only email provided				United States	Publishing
	Only email provided				United States	Other
*	Only email provided			male	Germany	Internet/Web Professional
	Only email provided				South Korea	Design and Fashion
*	Only email provided				Israel	Other

APPENDIX C: Distribution of Opinions:

In this Appendix the distributions of quantitative responses is presented.

Item: 1.
Cyber-Techno Classical (Blending Classical Arts and Futuristic Technologies)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	70.00	-0.0	64.49	6 -0.0 to 20.0	16 20.0 to 40.0	30 40.0 to 60.0	48 60.0 to 80.0	36 80.0 to 100.0	136	22	84
4	Importance	100.0	49.00	-0.0	47.97	17 -0.0 to 20.0	33 20.0 to 40.0	37 40.0 to 60.0	22 60.0 to 80.0	17 80.0 to 100.0	126	50	39

Item: 2.
"Holographic" Performances (live performance of virtual characters - digital puppetry)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	60.0	-0.0	58.34	9 -0.0 to 20.0	22 20.0 to 40.0	27 40.0 to 60.0	30 60.0 to 80.0	27 80.0 to 100.0	115	31	57
4	Importance	100.0	43.00	-0.0	42.45	19 -0.0 to 20.0	27 20.0 to 40.0	38 40.0 to 60.0	15 60.0 to 80.0	9 80.0 to 100.0	108	46	24

Item: 3.
Performance in Public Spaces/ Flash Mob Art

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	65.00	-0.0	60.42	7 -0.0 to 20.0	16 20.0 to 40.0	27 40.0 to 60.0	41 60.0 to 80.0	23 80.0 to 100.0	114	23	64
4	Importance	100.0	56.0	-0.0	52.52	16 -0.0 to 20.0	19 20.0 to 40.0	28 40.0 to 60.0	34 60.0 to 80.0	12 80.0 to 100.0	109	35	46

Item: 4.

Location-based group interactive video games

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	66.0	-0.0	63.64	7 -0.0 to 20.0	9 20.0 to 40.0	31 40.0 to 60.0	34 60.0 to 80.0	28 80.0 to 100.0	109	16	62
4	Importance	100.0	50.0	-0.0	47.42	18 -0.0 to 20.0	20 20.0 to 40.0	34 40.0 to 60.0	24 60.0 to 80.0	7 80.0 to 100.0	103	38	31

Item: 5.
Domes, Planetariums and 360 Immersive Cinema

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	65.0	-0.0	61.79	11 -0.0 to 20.0	10 20.0 to 40.0	24 40.0 to 60.0	32 60.0 to 80.0	28 80.0 to 100.0	105	21	60
4	Importance	100.0	50.00	-0.0	48.39	14 -0.0 to 20.0	20 20.0 to 40.0	42 40.0 to 60.0	17 60.0 to 80.0	9 80.0 to 100.0	102	34	26

Item: 6.
Virtual and 3D Art Exhibits/Collections/Museums

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	80.0	-0.0	75.78	4 -0.0 to 20.0	3 20.0 to 40.0	16 40.0 to 60.0	30 60.0 to 80.0	52 80.0 to 100.0	105	7	82
4	Importance	100.0	58.0	-0.0	56.28	9 -0.0 to 20.0	12 20.0 to 40.0	39 40.0 to 60.0	30 60.0 to 80.0	13 80.0 to 100.0	103	21	43

Item: 7.
Electronic Publishing (Vooks or video books)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	95.00	-0.0	89.09	1 -0.0 to 20.0	2 20.0 to 40.0	5 40.0 to 60.0	14 60.0 to 80.0	90 80.0 to 100.0	112	3	104
4	Importance	100.0	80.0	-0.0	76.92	3 -0.0 to 20.0	8 20.0 to 40.0	6 40.0 to 60.0	35 60.0 to 80.0	51 80.0 to 100.0	103	11	86

Item: 8.
ARG: Alternative Reality Games and Experiences (participatory games played in real life places and situations)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	60.0	-0.0	57.39	5 -0.0 to 20.0	22 20.0 to 40.0	24 40.0 to 60.0	31 60.0 to 80.0	17 80.0 to 100.0	99	27	48
4	Importance	100.0	44.00	-0.0	44.05	12 -0.0 to 20.0	29 20.0 to 40.0	32 40.0 to 60.0	13 60.0 to 80.0	8 80.0 to 100.0	94	41	21

Item: 9.
Media/Arts/Cyber Healing

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	68.0	-0.0	63.85	4 -0.0 to 20.0	14 20.0 to 40.0	19 40.0 to 60.0	33 60.0 to 80.0	25 80.0 to 100.0	95	18	58
4	Importance	100.0	67.0	-0.0	62.45	6 -0.0 to 20.0	13 20.0 to 40.0	19 40.0 to 60.0	36 60.0 to 80.0	19 80.0 to 100.0	93	19	55

Item: 10.
Media literacy (consumer awareness regarding media creation, content, language, business, etc.)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	80.00	-0.0	75.03	6 -0.0 to 20.0	4 20.0 to 40.0	10 40.0 to 60.0	32 60.0 to 80.0	44 80.0 to 100.0	96	10	76
4	Importance	100.0	80.00	-0.0	76.41	6 -0.0 to 20.0	5 20.0 to 40.0	5 40.0 to 60.0	33 60.0 to 80.0	47 80.0 to 100.0	96	11	80

Item: 11.
Telepresence (virtual teleportation using immersive cameras and displays)

col	Col Title	Max	Med	Min	Avg	1st Group	2nd Group	3rd Group	4th Group	5th Group	Total Responses	Low End Responses	Top End Responses

						of Answers	of Answers	of Answers	of Answers	of Answers			
3	Likelihood	100.0	88.0	-0.0	81.49	3 -0.0 to 20.0	6 20.0 to 40.0	4 40.0 to 60.0	18 60.0 to 80.0	72 80.0 to 100.0	103	9	90
4	Importance	100.0	80.00	-0.0	73.59	4 -0.0 to 20.0	7 20.0 to 40.0	12 40.0 to 60.0	32 60.0 to 80.0	41 80.0 to 100.0	96	11	73

Item: 12.
Autostereo (glasses-free) 3D Displays

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	79.0	-0.0	72.79	3 -0.0 to 20.0	4 20.0 to 40.0	23 40.0 to 60.0	26 60.0 to 80.0	41 80.0 to 100.0	97	7	67
4	Importance	100.0	44.0	-0.0	44.30	11 -0.0 to 20.0	28 20.0 to 40.0	30 40.0 to 60.0	13 60.0 to 80.0	7 80.0 to 100.0	89	39	20

Item: 13.
Eyeware and Head-Mounted Displays (HMD)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	53.0	-0.0	52.82	11 -0.0 to 20.0	13 20.0 to 40.0	35 40.0 to 60.0	17 60.0 to 80.0	13 80.0 to 100.0	89	24	30
4	Importance	100.0	35.00	-0.0	37.94	20 -0.0 to 20.0	24 20.0 to 40.0	27 40.0 to 60.0	6 60.0 to 80.0	7 80.0 to 100.0	84	44	13

Item: 14.
Multi-touch Displays (touch screen displays with multiple-touch control features)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	95.0	-0.0	91.18	0 -0.0 to 20.0	1 20.0 to 40.0	4 40.0 to 60.0	10 60.0 to 80.0	80 80.0 to 100.0	95	1	90
4	Importance	100.0	67.50	-0.0	63.54	4 -0.0 to 20.0	12 20.0 to 40.0	18 40.0 to 60.0	39 60.0 to 80.0	19 80.0 to 100.0	92	16	58

Item: 15.
Interactive Displays (gesture-based user interfaces)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	81.00	-0.0	78.35	1 -0.0 to 20.0	3 20.0 to 40.0	13 40.0 to 60.0	29 60.0 to 80.0	48 80.0 to 100.0	94	4	77
4	Importance	100.0	59.0	-0.0	56.70	8 -0.0 to 20.0	13 20.0 to 40.0	30 40.0 to 60.0	25 60.0 to 80.0	15 80.0 to 100.0	91	21	40

Item: 16.
Augmented Reality: Third-Person Augmented Reality (video camera captures user and augments scene with 3D elements that track scene - user views augmented reality on flat panel, projector, laptop or computer screen)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	73.0	-0.0	68.95	5 -0.0 to 20.0	4 20.0 to 40.0	17 40.0 to 60.0	35 60.0 to 80.0	30 80.0 to 100.0	91	9	65
4	Importance	100.0	51.0	-0.0	51.47	11 -0.0 to 20.0	12 20.0 to 40.0	33 40.0 to 60.0	22 60.0 to 80.0	9 80.0 to 100.0	87	23	31

Item: 17.
Multiplayer Online Virtual Worlds

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	77.00	-0.0	73.03	2 -0.0 to 20.0	3 20.0 to 40.0	19 40.0 to 60.0	26 60.0 to 80.0	40 80.0 to 100.0	90	5	66
4	Importance	100.0	49.00	-0.0	48.67	17 -0.0 to 20.0	13 20.0 to 40.0	27 40.0 to 60.0	18 60.0 to 80.0	11 80.0 to 100.0	86	30	29

Item: 18.
User-Based Content Creation (i.e. cinematography) within Virtual Worlds (called *Machinima*)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	65.00	-0.0	64.29	4 -0.0 to 20.0	7 20.0 to 40.0	25 40.0 to 60.0	30 60.0 to 80.0	20 80.0 to 100.0	86	11	50
4	Importance	100.0	52.00	-0.0	50.36	10 -0.0 to 20.0	11 20.0 to 40.0	32 40.0 to 60.0	21 60.0 to 80.0	6 80.0 to 100.0	80	21	27

Item: 19.
Augmented Reality: Architectural Projection Mapping

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	63.00	-0.0	60.82	5 -0.0 to 20.0	7 20.0 to 40.0	25 40.0 to 60.0	30 60.0 to 80.0	15 80.0 to 100.0	82	12	45
4	Importance	100.0	50.00	-0.0	49.74	9 -0.0 to 20.0	16 20.0 to 40.0	31 40.0 to 60.0	17 60.0 to 80.0	5 80.0 to 100.0	78	25	22

Item: 20.
Technoetic arts

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	54.50	-0.0	52.93	10 -0.0 to 20.0	11 20.0 to 40.0	29 40.0 to 60.0	20 60.0 to 80.0	12 80.0 to 100.0	82	21	32
4	Importance	100.0	49.0	-0.0	47.02	13 -0.0 to 20.0	17 20.0 to 40.0	29 40.0 to 60.0	12 60.0 to 80.0	10 80.0 to 100.0	81	30	22
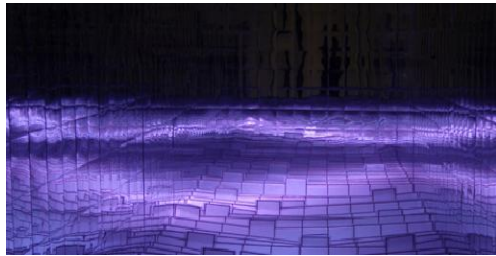
Item: 21.
Kinetic Art

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	57.00	-0.0	54.93	6 -0.0 to 20.0	12 20.0 to 40.0	32 40.0 to 60.0	18 60.0 to 80.0	12 80.0 to 100.0	80	18	30
4	Importance	100.0	37.0	-0.0	37.64	17 -0.0 to 20.0	25 20.0 to 40.0	24 40.0 to 60.0	5 60.0 to 80.0	6 80.0 to 100.0	77	42	11

Item: 22.
Sc Art (art inspired by science)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	67.0	-0.0	64.81	3 -0.0 to 20.0	7 20.0 to 40.0	25 40.0 to 60.0	34 60.0 to 80.0	22 80.0 to 100.0	91	10	56
4	Importance	100.0	60.0	-0.0	58.52	8 -0.0 to 20.0	9 20.0 to 40.0	29 40.0 to 60.0	22 60.0 to 80.0	19 80.0 to 100.0	87	17	41

Item: 23.
Convergence of Computer/Mobi Content on Television

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	93.00	-0.0	86.39	0 -0.0 to 20.0	4 20.0 to 40.0	7 40.0 to 60.0	10 60.0 to 80.0	69 80.0 to 100.0	90	4	79
4	Importance	100.0	61.50	-0.0	60.54	6 -0.0 to 20.0	9 20.0 to 40.0	26 40.0 to 60.0	23 60.0 to 80.0	20 80.0 to 100.0	84	15	43

Item: 24.
User Generated Content Technologies providing Democratization of Content Creation (i.e. print on demand, do-it-yourself/DIY)
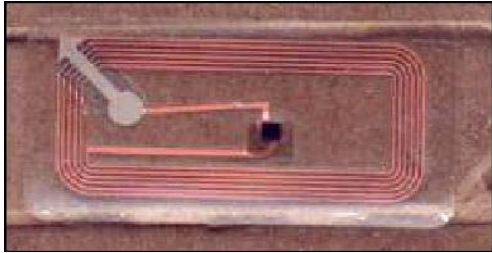
col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	90.00	-0.0	82.58	0 -0.0 to 20.0	3 20.0 to 40.0	9 40.0 to 60.0	22 60.0 to 80.0	56 80.0 to 100.0	90	3	78
4	Importance	100.0	79.50	-0.0	74.88	1 -0.0 to 20.0	5 20.0 to 40.0	14 40.0 to 60.0	28 60.0 to 80.0	38 80.0 to 100.0	86	6	66

Item: 25.
Ubiquitous Computing (computers and tracking tags embedded into everyday products/objects/appliances)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	90.00	-0.0	85.70	1 -0.0 to 20.0	1 20.0 to 40.0	5 40.0 to 60.0	13 60.0 to 80.0	66 80.0 to 100.0	86	2	79
4	Importance	100.0	65.00	-0.0	60.06	10 -0.0 to 20.0	9 20.0 to 40.0	16 40.0 to 60.0	26 60.0 to 80.0	21 80.0 to 100.0	82	19	47

Item: 26.
Social/Global advocacy through storytelling (influencing writers/producers to utilize mainstream media stories to advocate information awareness and actions; ie. Behavioral/philosophical/ethical "product placement").
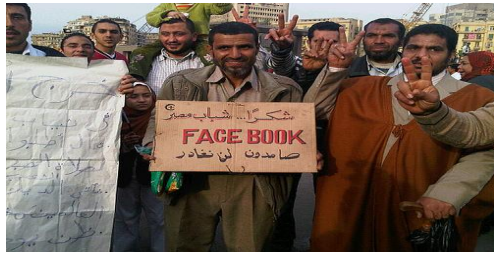
col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	83.00	-0.0	78.65	2 -0.0 to 20.0	3 20.0 to 40.0	12 40.0 to 60.0	20 60.0 to 80.0	51 80.0 to 100.0	88	5	71
4	Importance	100.0	77.00	-0.0	73.77	3 -0.0 to 20.0	8 20.0 to 40.0	8 40.0 to 60.0	27 60.0 to 80.0	40 80.0 to 100.0	86	11	67

Item: 27.
Serious Games (Cyber games to educate and solve world problems)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	75.00	-0.0	72.50	3 -0.0 to 20.0	6 20.0 to 40.0	13 40.0 to 60.0	30 60.0 to 80.0	36 80.0 to 100.0	88	9	66
4	Importance	100.0	79.50	-0.0	74.39	5 -0.0 to 20.0	4 20.0 to 40.0	10 40.0 to 60.0	28 60.0 to 80.0	37 80.0 to 100.0	84	9	65

Item: 28.
Digital/Social Networking for Cultural Diplomacy and Change

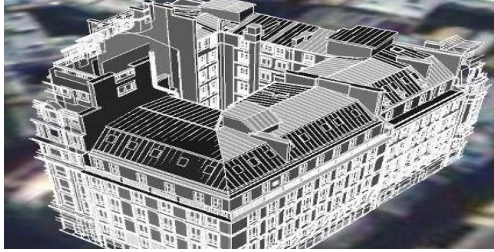| col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	90.00	-0.0	85.31	1 -0.0 to 20.0	3 20.0 to 40.0	4 40.0 to 60.0	15 60.0 to 80.0	65 80.0 to 100.0	88	4	80
4	Importance	100.0	86.50	-0.0	82.68	1 -0.0 to 20.0	2 20.0 to 40.0	7 40.0 to 60.0	19 60.0 to 80.0	55 80.0 to 100.0	84	3	74

Item: 29.
Media/Arts for Cultural Diplomacy and Change

col	Col Title	Max	Med	Min	Avg	1st Group	2nd Group	3rd Group	4th Group	5th Group of	Total Responses	Low End Responses	Top End Responses

						of Answers	of Answers	of Answers	of Answers	Answers			
3	Likelihood	100.0	81.0	-0.0	77.17	2 -0.0 to 20.0	3 20.0 to 40.0	10 40.0 to 60.0	29 60.0 to 80.0	45 80.0 to 100.0	89	5	74
4	Importance	100.0	77.0	-0.0	75.52	3 -0.0 to 20.0	4 20.0 to 40.0	10 40.0 to 60.0	31 60.0 to 80.0	39 80.0 to 100.0	87	7	70

Item: 30.
Photogrammetry and Gigapixel Panoramic Imaging; Extracting 3D models or ultra-high-resolution images of spaces, terrain or objects based on multiple 2D photographs

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	79.00	-0.0	75.08	2 -0.0 to 20.0	3 20.0 to 40.0	10 40.0 to 60.0	25 60.0 to 80.0	34 80.0 to 100.0	74	5	59
4	Importance	100.0	58.00	-0.0	56.08	7 -0.0 to 20.0	10 20.0 to 40.0	26 40.0 to 60.0	21 60.0 to 80.0	12 80.0 to 100.0	76	17	33

Item: 31.
Geographical Information Systems (GIS) - Advanced geographic mapping, visualization and augmentation.

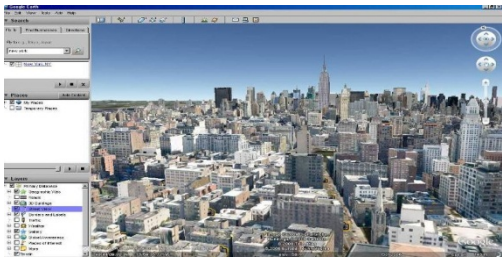| col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	92.00	-0.0	87.80	0 -0.0 to 20.0	2 20.0 to 40.0	3 40.0 to 60.0	15 60.0 to 80.0	62 80.0 to 100.0	82	2	77
4	Importance	100.0	76.0	-0.0	72.45	3 -0.0 to 20.0	5 20.0 to 40.0	11 40.0 to 60.0	31 60.0 to 80.0	33 80.0 to 100.0	83	8	64

Item: 32.
Augmented Reality: Environmental Overlays and Geotagging (Use of mobile device camera to recognize geographic locations and overlay with informational text, photos, videos, messages, contextual advertising, etc.)

col	Col Title	Max	Med	Min	Avg	1st Group of Answers	2nd Group of Answers	3rd Group of Answers	4th Group of Answers	5th Group of Answers	Total Responses	Low End Responses	Top End Responses
3	Likelihood	100.0	93.0	-0.0	87.82	0 -0.0 to 20.0	2 20.0 to 40.0	3 40.0 to 60.0	15 60.0 to 80.0	63 80.0 to 100.0	83	2	78
4	Importance	100.0	75.00	-0.0	68.85	3 -0.0 to 20.0	9 20.0 to 40.0	12 40.0 to 60.0	35 60.0 to 80.0	27 80.0 to 100.0	86	12	62