

Multimedia Standards

<http://www.multimediastandards.org>

Greg Linch: Alright, could you start by introducing yourself?

Alberto Cairo: Yes, I am Alberto Cairo. I am the James H. Schumacher professor at the University of North Carolina at Chapel Hill. I teach information visualization, information graphics, multimedia and three-dimensional design at the school of journalism at that university. Before joining the faculty here, I was the online graphics director at El Mundo, which is the second-largest newspaper in Spain. I also do consulting, I teach all over the world, which is a lot of fun. I do some freelancing stuff sometimes, but not very often. What I really do the most is teaching at the moment.

GL: How do you get your information on multimedia and what do you usually look at in terms of journalistic multimedia storytelling?

AC: Well, I am a very old-fashioned person, meaning that I'm still someone who enjoys reading the print newspaper every day. So, the first thing I do every morning is read the New York Times. Sometimes I also read the News & Observer from Raleigh and I take a look at their stories. Then, what I usually do when I get to the office is take a look at their Web sites. The first thing I do is open NYTimes.com and see what they have done throughout the previous day. So, I read the New York Times because information visualization is what I enjoy the most. I really enjoy their charts and their maps, their interactive maps. The News & Observer used to do some interesting stuff for the few past years, but they are not doing a lot of stuff anymore. I usually also visit MSNBC. I also visit some minor newspaper in the U.S. and some newspapers in Spain, such as El Mundo, El Pais, and then I take a look at all the blogosphere. I visit Information Aesthetics. I visit also Infographics News, which is a very good Web site. I visit my friend Xaquín Gonzalez's Web site, xocas.com with an "x" at the beginning. All those sites give you a good idea of what's going on in the online information visualization area, which is the area I'm more focused on at the moment.

GL: What would you say are the essentials of a good multimedia project? Obviously your background is in infographics, but just on a larger scale.

AC: Well, I try to approach these kinds of questions in the simplest manner that I can. Meaning that I try to set some basic rules for myself. For example, when I do infographics I use the rule "form follows function," meaning that what you have to represent basically drives your decision-making on what are the best tools to deliver the information. If you translate that into multimedia, you can use the same rule. Basically, for every kind of information, for every kind of data set you have, for every kind of story, there is a best way of codifying the information. Some stories are better told using videos. Some stories require the use of audio. Some stories are

better told using an infographic, particularly if they have a very heavy quantitative or geographical component. And some stories are better told just using text. Depending on what your story is, you'll choose a tool for telling that story.

GL: Taking a step back, how would you define journalistic multimedia storytelling?

AC: Well, that's a question that is really difficult to answer. Basically, I define it by saying that the rise of the Internet has put a lot of tools in our hands that allow us to pick the best one for telling the best story. So, we could define journalistic multimedia storytelling as the profession that takes advantage of all the possible, available storytelling tools out there. I don't have any better way to define it. It's just the total freedom of choosing the better tools to tell a story.

GL: What is your workflow when you work on a multimedia project? For instance, I know that you were involved with South of Here. For that kind of project, on an overall scale and on an infographic scale.

AC: Regardless of the projects I have been working on, I've been doing some freelance for several organizations – the Discovery Channel, New York Times and other media and for other newspapers and magazines in South America – but basically I always approach the projects in the same way. First of all, I try to gather as much information as I can about the topic that I have to talk about with my infographic, my visual explanation because, if you don't have enough information, you will not be able to do anything, basically. So I do a lot of reporting and I really enjoy that part – that's usually the part I enjoy the most. After I have gathered all the information that I feel that I need, what I do is a lot of planning, meaning that I do a lot of sketching, storyboarding. I try to basically filter all the data and all the information that I gathered before to give some sort of order, to give it some sense of hierarchy and to create a good flow for the information. I do all that in the planning step with all my storyboarding and stuff. When I have finished doing the planning, I start working on the computer. I start 3-D models, Flash animations, 2-D animations, some programming, whatever the project requires basically. So it's pretty simple, it's pretty straightforward. Three steps: information gathering, planning and final art.

GL: And is most of the work you do or did previously daily coverage or special coverage?

AC: Well, when I was working at El Mundo we were very well-known for our breaking news coverage. So we did a lot of graphics, for example the one on the 11 of March 2004 terrorist attacks in Madrid, so that was a breaking news project. It was a huge online information graphic, animation that was done in just a single day, in a few hours, and it was very successful. But that was in the past, until 2005. After 2005, when I joined the faculty here at UNC Chapel Hill, most of the work that I do as a freelancer is big-scale projects. I do a lot of graphics that take one month or two months to complete.

GL: Is there anything you would change about your process as a professor or a freelancer. What would your ideal process be?

AC: Well, the ideal process is that – information gathering, planning and final art. Sometimes I feel that I would like to spend more time with the information gathering. For example, I am currently doing a series of infographics for a pharmaceutical company in Spain called Pharmamar and I am doing a lot of graphics on how cancer works and how drugs against cancer work, and I would really like to have more time to learn more about that topic because I am a journalist, I am not a specialist, I am not a physician. And I feel that, as journalists, we should try to learn as much as we can about the topics we are covering before we even start writing or drawing about them. So sometimes I feel that – I feel like I would to spend more time with that part of the process, with information gathering and organization of that same information. That might be because I love reading, so I really enjoy that part of the process.

GL: We sort of touched on the good multimedia part, but at what point – if possible – can multimedia storytelling be too much, too overwhelming? How do you balance wanting to tell the story well in different forms without overwhelming the reader or making sure they're able to digest it.

AC: That question is a little bit difficult to answer on an abstract level. We should talk about specific projects, but I'm going to give it a try and answer it anyway. I would say that whenever a new tool or a new set of tools shows up in the industry, people start using them like crazy. They try to use them for every single project. I remember, for example, when back in 2000 or 2001 we started using 3-D modeling tools and modeling tools at El Mundo's newsroom. We started using those tools for every single project that fell on our hands, and that's not right. The form follows function rule should be applied on every single project. So there are some infographics that require the use of basic line art animation and others that require 3-D. The same thing can be said about multimedia in general. Now that some newspaper and magazine newsrooms have discovered video suddenly, they have started using video for every single project and sometimes that's not the right decision. Sometimes they need different tools, they just need a piece of audio with a couple of photographs or a good graphic, but not video because video is not good for explaining processes or explaining quantitative information. At the same time, I feel that multimedia is being overused, meaning that many newspapers seem to be trying to overwhelm the readers by not editing the amount of videos they provide, that they put online. They just seem to be placing every single video that they can on their Web sites, so there is some sort of lack of editing or restraint on the side of journalists and editors in newspapers, I feel.

GL: Right, right. I think that answers the question very well.

AC: As I am an information visualization guy, I see that same trend in infographics currently and I'm going to criticize my friends at the New York Times. Sometimes I feel that, even if I love what the New York Times is doing with information visualization, sometimes I feel that they go too far. They create very complex, complicated data-rich information visualizations, graphics, maps, etc. and sometimes I feel that those graphics are too much for the general reader. Sometimes they are too complicated, too difficult to use, too data-dense and I think we should restrain ourselves sometimes. We should think about the reader more when we work in multimedia and infographics.

GL: If you were to compile a general multimedia team for a journalistic organization, what kind of people, what kind of roles, skill sets, would that entail?

AC: You need videographers, audio gatherers and editors. You need reporters of course, people who can write and write very well, who can write very tight and short. You need infographics artists, I mean people who know about cartography, statistics, people who know how to process data in data sets and how to work with data sets. You need artists in the sense of people who can draw as well. You need animators and, above all those, you need programmers who can take all those data sets, all the information you have gathered, all the pictures, etc. – you need photographers, of course – and put them all together into integrated storytelling pieces. That's the reason you need programmers. Programmers today are crucial for the workflow.

GL: How do you determine whether a project is successful? After that, could you specify any examples from your work or what you've seen.

AC: In general, what I look for on an abstract level, when I'm looking at a multimedia project, is that those projects are able to tell the story with the right amount of words, let's put it that way. With the right amount of sound, right amount of graphics. You should not go further than that. So, first thing I recommend people producing multimedia is to edit down as much as they can. The information should be tightly edited regardless of whether it's an audio piece or a video or even an infographic. That said, you can also push the boundaries a little bit. You should not be conservative in the sense that you can and you should challenge your reader or your viewers by presenting the information in innovative ways so they get used to those also and you can use those tools that you have used in future projects.

Now, talking about specific projects, as I mentioned before, I really like what the New York Times is doing with their maps. For example, the maps and graphics that were published during the American presidential election are great examples of online infographics and multimedia storytelling. I really like, also, the calculators and simulators that they published sometimes. For example, there was a graphic a couple of years ago that allowed you to compare whether it's better for you to rent or to buy an apartment or a house. I really liked that. I really like what MSNBC is doing also. I think they are doing a great job at integrating infographics with other

multimedia storytelling tools. They do a great job with audio and video. I really like what the Washington Post is doing. I think that they use video quite well. I really like that. And I also like what our students at UNC Chapel Hill are doing. Our multimedia documentary storytelling projects, even if they are experimental projects. Sometimes they are really well edited, sometimes they are not. We also made a lot of mistakes, but that's what our projects are for. The students can do some research and experimentation and make mistakes as well. So projects like SouthofHere.org or RCrusoe.org or TheAncientWay.org. In all of those you can find pieces that are very well edited and that are great examples and inspiration for multimedia producers in newsrooms.

GL: Moving into the realm of storytelling, you talked already about using the appropriate medium for different stories. How is storytelling different in multimedia than traditional media?

AC: Well, in the sense that now you have more tools available to do your storytelling. You can allow the reader to actually interact with your content, which is great. And to produce content as well. So there is some kind of interaction at different levels in this new world. That existed already in all media – if you want to put that in quotes – because you could actually communicate with the producers of the information you were consuming.

But in the new world that capacity has been extended, expanded. So right now the users are also producers and I usually say that, in the infographics world, for example, which is a world that I know best because that's what I teach, infographics people are not presenters anymore – they are also facilitators in the sense that you have to present the information, you have to tell the reader or the viewer what the main facts are and what the relevant information of the day is or what the reader's attention should be focused on in the graphic or map or diagram that you're producing. But then after that you can become also a facilitator for the reader in the sense that you can allow, after you have presented the information, to actually play with the information and create different scenarios with the data provided.

A perfect example is the graphic I talked about before – the graphic that compared whether it's better for you to buy or to rent an apartment. That's a calculator. It presents the information but allows you also to play with the data. Another great example is the Bridge Tracker from MSNBC, which is a great [Live Earth]-based piece that allows you to see bridges you cross every day on your way to work. It allows you to see what the state of that bridge is. If it's in good condition or bad condition, what the schedule for work on that bridge, if it needs some work, if it needs to be repaired, etc. Customization is a great thing in infographics today. It's an important thing to consider in infographics today and interaction related to that customization are closely related. And that extends also to other multimedia storytelling.

GL: Looking into ethics. This is not too related to infographics, but on a general scale, how do you feel about the use of music in pieces.

AC: In what sense? In the sense of copyright issues or in the sense of trying to create a mood for the story?

GL: Right, right. In the sense of, if you have the legal rights to music, what do you think about integrating that in those terms.

AC: I don't know if I am the right person to answer that question. When I work on a project, I try to tone everything down in the sense that I don't try to create a mood artificially. And I don't like people trying to make me feel sad or make me feel happy. I think that, in most cases, it is better not use music in journalistic multimedia storytelling pieces that drives the reader to feel in a certain way or change his or her mood. That said, in some cases it might be acceptable. It depends on the story. I don't really know how to answer that question. I don't have a good answer.

GL: I think that's a good answer. Different opinions...

AC: I never thought about that. The answer could be, in most cases, I would try to avoid music just because it's something that...it's opinionated, in some sense. In the sense that you are not analyzing the data or information, you're just giving your own opinion on the piece that you're presenting by choosing the music on that piece. We are journalists, so we are not here to give our opinions – just the facts, if we can.

GL: Right, it's adding something outside of the story that you didn't capture.

AC: Something outside of the story. That's definitely correct.

GL: I agree. What about for access to stories? Sometimes subjects might not have access to these projects. What do you think are remedies to that? Also, in terms of people who may have disabilities. Do you think there's an ethical obligation to address that?

AC: As much as we can, of course, we should take all those things into consideration. But there are limits, of course. There are budget limit that don't allow many media organization to address those problems. To the extent that you can, try to do it. Try to adapt your content to as many readers as you can. Accessibility is always an issue. Not only for people with disabilities but for people with slow connections. There are many people out there with slow connections and sometimes they are forced to see very heavy content that takes awhile to download. And sometimes that content is very important for their lives or very relevant, so we should take that into consideration, of course.

GL: And now, moving into the functionality and design theme, specifically what makes good design: what interactive elements have you found to be particularly

successful in the past. You touched on that previously, but just in this framework – in terms of design.

AC: Again we are moving ourselves into a very abstract level. In general, the simpler the better. Meaning that an interface should not be flashy, should not be loaded with special effects, lots of color, funky type faces. It should be as simple as it can. Because, if your navigation and your interface are too complicated, it will take away from the data. You want the readers attention to be focused on the information, not the navigation. That's the rule that I apply. Of course, I'm talking on a very abstract level, but I think it's a rule that can be applied to every single project: avoid special effects, avoid animation that doesn't have any meaning, avoid a strange color palette and color schemes and avoid funky typefaces. Tone everything down. Keep it simple.

GL: And in terms of navigation, whether it be a global navigation or section navigation for a project, what kind of advice or what kind of things do you try to do or prefer when working on a project?

AC: Well, it depends on the project. Some projects need section navigations, some projects need search engines, some projects need a zoom in and zoom out tool. Again, form follows function. Depending on the data that you want to present, that will drive your decision on not only what tools you should use to codify the content, but also what metaphors or analogies you should use on your navigation. Form follows function.

GL: And, in terms of different technologies, in what instances do you think different technologies are applicable, be it JavaScript versus Flash or straight HTML or other Web technologies?

AC: Well, the simpler the better. So, if you don't need to use Flash, don't use it. I mean, I use Flash all the time just because I do animated interactive infographics, so I need to use Flash because I need a tool that allows me to integrate 3-D renderings with 2-D illustrations, with text, with some video, with some interactive elements, etc. So I do need Flash. Now, if I have to produce just a still picture – a map, for example, that doesn't have any kind of interactive elements – I don't need to use Flash. I will use just Adobe Illustrator, export it as a JPEG or a GIF and put it on an HTML page. And that would be it. Again, the simpler the better and the lighter the better. Think first about what you want your presentation to do or what you need your presentation to do and that's going to drive your decisions on what techniques and what tools you should use for that. It's as simple as that.

GL: I asked the accessibility question out of order before, sorry. Specially in terms of foreign language coverage – and I know you can speak to that in terms of projects you've done at UNC – as well as closed-captioning, transcripts, screen readers.

AC: On the project side at UNC Chapel Hill, we try to make them bilingual or even trilingual. We made a project – The Ancient Way – it was done in three different

languages: Spanish, English and Galician, which is pretty similar to Portuguese; it's from Galicia in the northern part of Spain. Not all media organizations can apply the same approach, that depends on who your audience is. That said, organizations that want to become really global, such as the New York Times, Washington Post in some projects, MSNBC, the Sun Sentinel (which has done a great infographics work in the past and also in the present) should think about presenting their work in different languages just because they're having more people accessing from different countries. Sometimes the people who are trying to access your site from other countries are also the people who you are covering on the stories that you publish. So you should facilitate their access. That's what we try to do with our multimedia documentary projects at UNC. We are covering a specific community and we want that community to be able see what portrait we have created about them, so we should facilitate that. That would not be possible if we publish our projects just in English.

GL: In terms of integrating multimedia into a site, do you prefer it be all encapsulated, for instance if it's Flash, or as a standalone site or integrated within the main site?

AC: It depends on the project. In general, I feel that readers enjoy pieces that don't take long to view or to understand. So my feeling is that, in most stories, we should keep things short, very close to the reader, meaning that, if you're writing a story on the American president election and you're writing about Barack Obama and you want to create a timeline, you should not put that timeline on a pop-up – it should be integrated into the HTML page where the story is so the readers can take a look and at the same time they are reading the story. At the same time, you're going to use a video, don't put that on a different page – integrate it with the story. That said, if the main piece of a story is going to be an infographic, all the other ways of codifying the information could gravitate around it. For example, I'm thinking about a project the Times did on the new Metropolitan Museum, about the Roman and Greek galleries. It was just a walk-through the galleries based on a 3-D model of the galleries so the infographic was the main device for the storytelling and everything else depended on the infographic. It was built into the infographic, including text, including audio narration by the reporter, including video, including pictures. So it depends on the story.

GL: Back while you were still working [at El Mundo] and at UNC, what kind of content management systems did you use and do you use?

AC: For our multimedia documentary projects, so far we have used CMSs that were built by our students. Right now, for my own Web site, I have hired a company to create a small CMS just for that. But, in other cases, I might use just an open-source content management system, such as Joomla – that's a great content management system and we are using it for some of our future documentary projects.

GL: What kind of platforms, in terms of Web, mobile, are the projects usually geared towards?

AC: Most of our projects at UNC, also the infographics that I used to do for El Mundo back in Spain, the platform was computers – they were created just to be viewed on computers. I feel strongly about this, this is something media organizations should start thinking about, that people are not just using computers to access our content. Most big organizations are already adapting their workflows for that. They are creating content for mobile phones and other devices. But that's not happening in the case of infographics, for example. Or at least it's not happening everywhere. We should think more about that, what the platform will be – that every reader will access our content from a different device.

GL: Have you seen any? I know, for example, USA Today – they put some of their infographics on their iPhone site.

AC: There are media organizations that are already adapting to this new way of delivering information. The only thing I would say is that I see that in some specific cases – such as USA Today, New York Times, very big organizations – but other smaller organizations, if they want to survive in the near future, they will have to invest some money in that. They will have to think about how to adapt their content to those platforms. I really feel that people will keep accessing our content from computers, but also from other many devices that have a screen built in.

GL: I'd like to move into marketing and tracking. For your projects at UNC and then previously at El Mundo, how did you track readers, viewers with analytics, metrics, things like that?

AC: I cannot give you a technical answer to that because I was not part of that process. I know that we did track readers, but I cannot explain what the technology was. But when I was back at El Mundo we tried to keep an eye on what infographics people preferred, which infographics had a short lifespan and what infographics had a very long lifespan because that really helped us understand how readers accessed our content and how they read it. It was really, really useful. We discovered, for example, that breaking news infographics usually have a big impact. It was not surprising, but at least we had some quantitative data to confirm our guesses. So breaking news infographics had a very short lifespan. It was very successful on the first day, but then access to that graphic dropped. Whereas graphics that had to do with scientific topics – health, healthcare for example – were not so successful at first. They didn't have so many hits on the day they were published, but they had and still have a very, very long lifespan. So, if you invest resources in creating good health-related content for example, you will have a steady flow of hits for many, many years or for many, many months.

GL: In terms of promoting your content, probably more so at UNC now with the advent of lots of Web 2.0 technologies, are you posting to social media sites, like YouTube, Facebook, Twitter, Digg, other tools for school projects?

AC: I don't do that, personally, but the students do it usually. The students are usually the best way to promote their own work. They use social media broadly. I have Facebook, of course, and I post things there, but I'm not the one doing that kind of promotion at the moment.

GL: For the projects, is there any sort of citizen journalism aspect or community-generated content?

AC: Not at the moment, but we are thinking about it already.

GL: On the topic of contest at both UNC and El Mundo, what kinds of contests did you enter in terms of organization and categories?

AC: We have entered Society for News Design competition, that's called the SNDs. And our students have won many awards throughout the years. We enter also the Malofiej infographics competition. That's the most important international infographics award. It's run by the Spanish chapter of the Society for News Design. The Horizon awards, best picture of the year. We try to enter every single contest that we find.

GL: Any other organizations that you enter. Online News Association or any of the others?

AC: Yeah, Online News Association as well. All the organizations and all the contests that have to do with journalism and journalistic storytelling, we try to enter those.

GL: Are there any that you value the most? You mentioned the SNDs and the others.

AC: As my area is infographics, of course the ones that I value the most are the SNDs and Malofiej because one interesting thing about the Malofiej awards is that, when a student enters a competition, he or she is not competing against other students – that person is competing against professionals. So winning a Malofiej award for a student is really, really valuable. That person will have a professional award on his or her resume. That's really, really valuable. But that's because I teach infographics and information visualization. There are equivalents in other areas.

GL: And what do you think of the categories that are currently available? Do you think they are too broad or too narrow?

AC: It depends on the awards' organization. In the case of the Malofiej awards, it would be possible to create categories that have to do with the use of interaction, usability, even reader-generated content. What I mean is that the categories you can

find in the online awards resemble too much the ones you can find for print infographics. They try to match the same kind of categories and that doesn't work, necessarily. The categories for online infographics should be reshaped to adapt to the nature of these new ways of storytelling. For example, the use of animation, the best use of 3-D, the best use of video, the best of integrated multimedia storytelling, the best use of interaction. Those are the kind of categories I would like to see in the future. But we are working that. The Malofiej awards are changing every year. Something they are very good at taking advice from professionals, so if you're a professional and you are willing to participate, you just send them an e-mail giving them some advice and they will take that advice and change the awards the next year.

GL: And what do you think about judging?

AC: What do you mean by judging?

GL: How they're judged? Do you think the right people are judging the contests?

AC: Yes, in the case of the awards I'm more familiar with, yes. I don't know about other areas. I don't know about photojournalism contests, I'm not really familiar with those. But, in our case, it is the right people.

GL: If you were a judge, what would you say are the most important criteria for evaluating journalistic multimedia storytelling projects?

AC: Do the tools and techniques used in each project match the kind of content that you want to deliver? Meaning that, are you using video not just for the sake of using video? Or are you using graphics for the sake of creating something beautiful or because it has a role in your storytelling piece? Do the infographics deliver the information clearly? They are really basic.

GL: When you were at El Mundo and now at UNC, are there different tools you use besides metrics to evaluate [projects], such as focus groups, EyeTracking or different kinds of testing?

AC: Professor Laura Ruel here at UNC Chapel Hill has done extensive research on EyeTracking and has written some reports for the Poynter Institute on EyeTracking and how people use the online media. Those reports are really useful because they really tell you where people look at when they enter a site, for example, or what kind of buttons they press when they are interacting with an online presentation. So, yeah, we do some research.

I wish I had more time to do research myself, but unfortunately I don't, so I have to rely on what other people are doing here. I'm more focused on teaching and writing articles and doing presentations and consulting.

GL: At UNC and El Mundo, who would you say your competition is and was?

AC: Back at El Mundo, the main competition was El Pais, which is the other big media organization in Spain. They had and still have a very big and very talented infographics desk, so they were our main competition. I would say that, throughout the years, I would say the competition for El Mundo is not just El Pais anymore but also media organizations in other countries – New York Times, MSNBC, etc. – because Spanish readers, if they are able to read English, tend to access those sites to get their information. It happened, for example, it was a very interesting case when the March 2004 terrorist attacks happened in Madrid. There was this feeling among many that the government was lying to Spanish citizens, so many people turned to international media to get their information. They didn't rely on Spanish newspapers and magazines. Even if they were trying to do a great job, many readers went to the New York Times or BBC to get more information or to get better information, more complete information.

GL: If you were to start a multimedia contest, what would be your ideal set of categories?

AC: I think that I'm going to focus on just my area because I really don't know if I can answer for photojournalism and video.

If we talk about just graphics and information visualization, I think that, first of all, I would split it up into the different kinds of infographics that you can find, meaning: statistical charts, use of cartography, use of illustrated and animated 3-D or 2-D diagrams.

Those would be the main broad categories. Then you have other categories that could be more specific. As I mentioned before, I would really like to see categories that have to do with the use of interaction, how well interaction is used in graphics. Are we allowing the readers to participate, transform the data or adapt the data and the story to their needs or to their tastes?

I would create a category that has to do with the integration of different media. Using a video within an infographic, for example – a category that evaluates if that video really has a place in an infographic. I'm sorry I can't be more specific, I should think more about it. But, basically, I would try to create categories that try to evaluate if we are using the best tools and techniques to deliver the content.

GL: Looking forward, what do you see as the future of journalistic multimedia?

AC: More interaction on every single level. Let me put it this way: more people think the way to go is to allow the reader to do whatever they want with the content, meaning that they can transform the content, play around with the data, create a lot of tools and calculators and simulators. That's the way to go. As I mentioned before, we should be the facilitators. We should be the ones who create software tools that

the readers can use to explore the data, the information. I'm focusing a lot on graphics, statistics and maps. So we should create more tools like that – tools that allow you to explore the data better. But, at the same time, we are also presenters. We should not forget that our other role is still the old-fashioned way of presenting information, meaning that we should still present information linearly, in a linear fashion using videos, using audio, using traditional narratives. So I think that the future of multimedia has to do basically with finding the right balance of the old ways of journalistic storytelling and the new ways for interaction, for letting the reader play with or to create their own scenarios or stories. That balance is going to be the crucial thing to consider for the future.

GL: Are there any specific digital innovations in that area or in any other areas that you're excited about?

AC: I'm very excited right now, and it's something I have started thinking about writing about: I'm really excited about tools like Many Eyes – tools that allow readers to create their own organizations.

The New York Times has, for example, embraced these open-source tools and now, for example, has a tool called the Information Visualization Lab, or something like that, that allows the reader to go online, go to the New York Times, get the data set that the Times uses for their graphics and their maps and change the graphic form, to change the shape of the graphics basically. For example, you can get information on the unemployment rate in the United States. It allows you to change the shape of the graphic instead of presenting with a map, you can present that data using a graph, a comparison, a bar chart. It allows you to do basically whatever you want with that data.

There are other media organizations that are doing a good job with these. There is a site in Spain called Soi Tu. They are doing a great job of using graphics. They are basically creating APIs and widgets. They allow you to basically input data into a tool and then get some code, copy and paste that code into your Web site to actually present that graphic. It's really interesting.

They did that with the past presidential elections in Spain. They presented the information – they created a graphic with the results of the elections. But then, after that, they allow you to use that same graphic on your own Web site, if you have a personal Web site, and they allow you to change the size of the graphic, change the color of the graphic, change even the way the data was presented in that graphic. So it was interaction on a different level – on the production level, not only on the information level.

GL: You touched on it a little before, but what sites do you follow that cover multimedia?

AC: I usually follow Information Aesthetics. I usually follow Infographics News. I usually follow Xocas.com, Xaquin Gonzalez's Web site. I usually follow VisualJournalism.com, the SND Web site, the Poynter Web site, Interactive Narratives. There are many out there that are covering multimedia.

I also visit the Newseum and places like that to remember where we came from.