

2008 - International Symposium on Online Journalism

Day 1, Panel 4: Multimedia and Interactivity: Faster internet connections and cheaper network and storage space have paved the way to more video and audio and more database journalism projects on the web. Are online journalists finally taking advantage of the multimedia and interactive capabilities of the internet?

Moderator/Chair:

Howard Finberg, Executive Director, Poynter Institute's NewsU.org

Panelists:

Alberto Cairo, Assistant Professor, University of North Carolina at Chapel Hill

Liz Nord, Supervising Producer, MTV News

Fernando Rodrigues, Reporter and Columnist, Folha de S. Paulo, Brazil

Aron Pilhofer, Editor, Interactive News, The New York Times

Paige West, Interactivity Editor, MSNBC.com

Howard Finberg: Good afternoon, everybody. I'm Howard Finberg. I'm the Director of Interactive Learning at the Poynter Institute for Media Studies in sunny St. Petersburg, Florida as opposed to rainy Austin, Texas.

Audience Member: Uh-huh. Not anymore.

Howard Finberg: Not anymore. I have the pleasure of one single task this afternoon, [it] is to be the timekeeper on a very interesting session with lots of people who have lots of interesting to say about multimedia. Actually, I do have one other task: to be somewhat of an agent provocateur. And I hope that you, the audience, will take on this task for me, and that is to think about the unintended consequences of this unending storage and this vast computing power and these broadband connections that allow us to do things faster, easier, glitzier, you know, and a lot more exciting with the media and video than we've ever done in the past. The question that I have to raise, not

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only because I am a journalist or have been a practicing journalist, is because of the important role that journalism plays in our democracy. And so I've asked the panel, I've warned the panel that what we want to do is not only see the flash and the glitz, but also hopefully explore some of the challenges around multimedia, and whether it's worth it, and what we hope to accomplish, and where's the journalism in all of this as we wrap up an online journalism symposium? So with that, and with the idea that we'll try to keep everybody on time and get you to 6th Street, I introduce our first presenter, Alberto Cairo, from the University of North Carolina.

Alberto Cairo: All right. [Setting up for presentation.] All right. Good afternoon, everybody. Thank you for being here. I have the honor to be the first to talk on this panel. I'm going to talk a little bit about infographics. I think that it's very nice that I'm the first to present today, because information graphics is something that is usually forgotten when we think about a multimedia in general. When the news media think about multimedia in general, they usually think about video, they think about audio, but sometimes they forget about information graphics as well. I mean, that's a very, very important [part]. infographics are a very important part of the multimedia equation. You cannot understand multimedia without information graphics. That's something that... That's something that I really try to convey to my students. I teach at the University of North Carolina at Chapel Hill. In case there is some absentminded people in the room, I have to remind you that information graphics are the use of photography, use of digital charts, diagrams, animation, 3D, etc., to convey information. That's what I teach at the University of North Carolina. Before going to North Carolina, by the way, I used to do information graphics in Spain. I was one of the main Mario's. Where are you Mario? Mario Tascón is in the room. Hey, Mario. I was one of the main Mario's competitors in Spain. We are good friends anyway. [audience laughter]

So anyway, there are three trends now that we can identify in how information graphics are evolving in the web. Not all organizations are using infographics in the web. That's too bad. Everybody should use them. But there are three trends that are -- that we can identify in how media are using information graphics at the moment. The first thing, the first trend is how interaction is being improved in information graphics. By interaction, of course, we understand an interchange of information between a user and a system. Okay? That's what interaction is. Many news media -- some news media, particularly the ones that are doing the best job using information graphics, such as The New York Times, for example, are exploring three kinds of interaction. Okay? Three levels of interaction. We can talk about three levels of interaction.

So far, what we usually see in information graphics -- what we have seen so far in information graphics is just the first level: the instruction level of interactivity. If we think about how infographics were made a few years ago,

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well, of course, instructing is issuing instructions to a system using a button or typing instructions to a system. If we remember how information graphics were -- online information graphics were before 2008, 2008, 2007, they usually looked like this. This is one of the information graphics that I did for El Mundo. (Let me allow. There we go.) One information graphic that I made for ElMundo.es in Spain in 2004. It's a very straightforward presentation that explains the Cassini-Huygens mission to Saturn. Okay? So, as you can see, while it's a linear presentation and the only level -- the only interaction that we really have here is these couple of buttons that you can press to continue. Oh, then you have some rollovers here, but those are not really relevant. Then you can continue, continue, continue, continue, continue. This is instructing. This is the first level of interaction in information graphics. Well, the action goes on and on and on and explains almost everything you want to know about this mission and probably more things that you would never want to know about it. So that's the first level of interaction, and this is what most newspapers in the world are doing. They are just restraining themselves to this level of interaction. If we think about how infographics are made, almost everybody is doing this level of interaction. But there are two more levels of interaction that we can explore. Some people are already doing it -- doing that.

The second one is manipulating. All right? Manipulating is a special kind of instruction where users can modify the setting of information graphics and how to adapt the information of the information graphic to their needs, all right, or to their goals. All right? The position, the color, physical characteristics, in general, of the objects in this scene. One of the best examples of manipulating information graphics that I have found so far is this information graphic from The New York Times. In my opinion, and probably most of you have seen this infographic already, in my opinion, this is the best information graphic that was published last year in the world, period. It's great! It's a fantastic piece of information. And it tells us a lot about how information graphics are evolved. Well, this information graphic basically explains if it's better to rent or to buy, but the great thing about this graphic is that every user can change the information that is being displayed to adapt to his or her needs. So here, you can change the home price, the price of the home that you want to buy. You can now change the down payment, the mortgage rates that you are going to get from your bank, and then you can change also the annual home price appreciation or the annual rent increase or decrease. So you can play with all those variables, all right? You can play around with them a little bit. And this chart will show you at what point, when it's going to be more convenient to buy or to rent. Okay, then you can get more detailed information just clicking on these buttons on the chart. All right?

So what this infographic tells us about how information visualization is changing in the web is that information graphics are not or should not be, in some cases, static presentations anymore. In some cases, information

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graphics are being changed into software tools. They are tools to explore the information. In some cases, we are not the ones to explore the information for the reader. We are the ones to provide the reader with tools that will allow that reader to explore the information by themselves. This is what that infographic tells us about how information graphics can change.

The third level of interaction in information graphics is—(sorry)—exploring, all right? And this is something that not many people are doing at this point, because the technology is not advanced enough; particularly, the one that is being from information graphics. As far as the special kind of manipulation where users are more or less free to explore a world, a virtual world, what I usually use as an example of information graphics is the world of war-craft game. Okay. This game allows you to explore a huge environment. If we apply the ideas that this game conveys, we can apply them and create pieces like this one from Second Story, which is a great organization. And they created this fantastic information graphic about Thomas Jefferson's estate, the Monticello. It's here. Explore the house. So you can basically explore the house. You can get into the house. You can move around the house. Take a look at the walls. Take a look at the different paintings that you can see now. It's a fantastic piece of exploration. Now we can apply these ideas now, because there are some tools, there are some new plug-ins that are being developed for Flash that allow you to create this kind of presentation quite easily. The latest one is called PaperVision. If you Google PaperVision3D, you will find it. And it's an open-source tool that you can apply and that you can use to create these kind of presentations. So this is the third level of interaction in information graphics.

So the first trend is that, the use of interaction, exploring new ways of adding interactivity to your graphics. The second trend is that there are some people who are already thinking about how to share their graphics with other people, all right? For example, using widgets. All right? There's a very new news organization in Spain called Soitu, Soitu.es, which is an online only news organization. They had a great idea. You know that we had a general election in Spain this year? What they did, instead of just showing the information graphic of how -- of the outcome of the elections, they allow you to create your own graphic here. You can set the width and the height of the information graphic here, 600 by whatever, and then you can click for a preview. And then you can basically—(let me get the graphic here)—you can basically copy and paste this HTML code, place it in your website, and there you go. You have the graphic on your website. But they didn't stop there, all right? Because there are many people doing this already, providing other users with the tools to place information graphics in their website. They didn't stop there. After delivering this tool, they also gave you the opportunity to download the Flash files and also the source code. So they allowed you to basically create your own chart about whatever topic you want to create, just by changing the Flash file very quickly. All right? So that's another trend in information graphics: sharing the graphics.

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The third trend... These two, these two trends that I have talked so far about -- I have talked about so far are beneficial, all right, for the -- for the -- for this world, but the third one is not. And that one is that we are giving up a certain, a very, very particular kind of information graphic, which is the linear, the old, traditional linear, step-by-step presentation. All right? The people who are exploring, the news organizations that are exploring more data-driven information graphics, more interactive information graphics, etc., are forgetting that there is another kind, a very old kind of telling a story, a very old kind of way of telling a story, which is the linear graphic, all right, using audio, using video, etc., etc., etc. This is a graphic that I produced in 2004, so it's quite old, which combined... I'm not going to show it, because I want to move on, and I know that everybody is eager to get out from here, but it's a linear graphic that uses audio and 3D animation. It's pretty simple. It's pretty humble. It's a small piece of information, but it works. So we should never forget to create these kind of things.

That's something that I try to convey to my students every semester, and in fact, I didn't want to show these today, but I'm going to do it anyway, because this -- this morning I got an email from one of my students from Chapel Hill, who is working on our latest multimedia documentary project. Our students are currently doing a multimedia project on Patagonia in the south of Chile. And as a part of that project, some of my students are working on information graphics. I'm going to show a linear information graphic that one of my students is producing, because I am so proud of her. So, but it's a good example of how linear are so effective, are very effective at... Allow. Yes, I want to allow it. There we go. So it's not finished. It should have audio. It doesn't have audio yet. You will see that there are some animations that still look clunky. But this information graphic explains why it is so dangerous to navigate through that area. So here you have audio narration. It explains something about Magellan and how Magellan got there and how his ships were, etc., etc. That's a 3D model that she created. It's a linear piece, okay? It's a linear piece. The interface is not working very well right now, but it's totally linear. No interaction here. Just the little buttons that you have down here. But still, it's a great piece. It's going to be a great piece of infographic storytelling. Then you have other things here, and then more here [inaudible]. Then you have information about the ships that they used back there.

So you are here because you are interested in the future of the online media. If you are interested in that, you are interested also on how the media is going to survive in the future. The only way we are going to survive is if we can differentiate ourselves from our competitors. The only way we can do that is to use it and nobody else can use [it]. And information graphics is one of those, okay? No citizen journalist, in general, is going to be -- ever going to be able to produce a piece like this, okay? Only professional journalists.

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It's a good thing to invest in information graphics and to hire my student, of course. [audience laughter] I'm not supposed to say that. Sorry.

Okay. Anyway, thank you so much.

[Audience applause.]

Howard Finberg: Thank you, Alberto. Next up is Liz Nord, who is with MTV. And we're going to... Oh, sorry. And thank you, Alberto, again. And next up is Liz Nord, and from MTV, and we are going to take questions for all the panelists at the end, so save your questions.

Liz Nord: Can you hear me? Oh, there we go. Hi, everyone. Thanks for sticking around at this late hour. I'm coming from a bit of a different place than a lot of you and my co-panelists, so hopefully I can provide somewhat of a different perspective in that I work for a broadcaster, MTV, and we're not necessarily known for our news coverage, but believe it or not, it is a big part of what we do. And the broadcast model is changing so much due to the web as well. So I think you'll find some of this relevant. But just in case, I'd like to start with the slide "What is MTV doing here?" because I sometimes get asked at these things. So just by way of background just for a second, we have a news department. It's a whole, distinct department outside of our other programming. And there's also a pro-social department or I guess the official term is Strategic Partnership & Public Affairs. So we have since the history -- since the beginning of MTV in 1981 been trying to engage people in the issues they care about, in part for selfish reasons. That is, to give them a sense of ownership over the network if we're covering what they care about. And that's something I think a lot of you are now kind of looking at in your business models. What do our readers really...? Oh, oh, excuse me. What do our readers really, really care about, and what can, you know, how can we cover it for them? So we've done all these pro-social initiatives over the years, including--(is that better?)--AIDS awareness campaigns and discrimination, you know, issue-based specials, world hunger, the Live Aid Concert, some of you might remember.

And about ten years into the network, we started hearing from our audience that although they were interested in social issues, they had felt a big disconnect with national politics. So in 19--, oh, I mean, so, [chuckles], in 1992, our Choose or Lose Campaign was launched, and that is our youth focused election coverage. Do you keep hearing a little...?

Man: I think it might -- I think it's your necklace.

Liz Nord: Oh, my goodness. I'm so sorry. Okay. Yes, clearly, I'm from the highly technical broadcast world. [audience laughter] It's a little embarrassing. So, anyhow, Choose or Lose having launched was an innovation in of itself. You know, this kind of youth-centered election

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coverage. And every four years, we've tried to do something new to engage our audience in election coverage and in national politics and social issues.

And so this year we thought, well, how will we innovate in '08? And there are a couple of main forces behind our thinking. One being, I'm sure you've all read and probably reported on the record youth turnouts in the 2004 presidential elections, the 2006 congressional elections, and the other piece is kind of what we're all here talking about today, this explosion of new media tools that allow young people to kind of not only organize in ways they never have before, but to become these citizen journalists, to get their voices heard in unprecedented ways. So MTV capitalized on these two things in a few ways that I think are pretty relevant to you all.

One is that we wanted to provide this real-time access to candidates, and not just -- I think we took it kind of a step further than the YouTube debates, where with YouTube, folks could send in their videos, and then those became questions, which was very, very cool. But what we did was we actually had these interactive candidate dialogues, where there was a single candidate. Our audience had an hour with them. And we had a live audience, but we also had these Flektor graphics online. There's an example of one up here, where there was real-time polling. So as soon as a candidate would answer a question, a graphic like this with choices would pop up, and they'd say, "What did you think of McCain's answer on healthcare?" And there would be four choices. And our audience would be plugging their answer in. And then the moderator would say, you know, "John McCain, our audience just said that answer stinks." You know, and he would kind of have to respond to that. So it's been a new way of approaching presidential dialogues using multimedia, graphics, and again, real-time interaction with our audience. People could also instant message questions into the candidates, so that was pretty cool. You know, when a candidate gets a question from IAmACutie or whatever, you know, it's pretty unusual.

Second way is our multimedia activist community. Now this is a social networking site that's called Think.MTV.com, but it's all around youth activism. So you can't just put up videos of your cat dancing. It's really a way for young people to publish, well, to organize around issues they care about and also to publish videos or blogs about these issues that they are so passionate about. And actually, I was talking to someone here from the Friendship News Network, and they just joined on, and so high school students are publishing their news stories to Think.MTV.com, kind of socially relevant stories.

Oh, and the other thing that's kind of unique about this site, which I think, you know, again may be of interest to some of your citizen journalist efforts are that -- is that we are rewarding good behavior on the site with badges, which eventually will lead to real life prizes or things. So we are trying to reward young people for participating in the site, but also for participating in

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activities in their community. That socially, kind of socially responsible behavior.

So the third main way we are capitalizing on these two factors I mentioned earlier is through the project that I am mainly responsible for. And this is our Street Team '08. The folks you see on screen here are 51 citizen journalists, one from every state and one from Washington, D.C., who we recruited to cover youth-related election issues in their state for the year leading up to the election. So this is a partnership with the Knight Foundation, whose name you've heard again and again today. They are funding so many exciting digital experiments and news. And so this venture was kind of part of their Knight News Challenge. As I mentioned we have these 51 citizen journalists, and it's kind of the Pro-Am model, so they are not just -- we didn't just kind of throw them out there. We brought all 51 of these folks, after, by the way, a long, intensive recruitment process, we brought them all to New York for a kind of journalism boot camp and they began reporting in January. And they are really being trained in a way for this new world that we keep talking about, because their reports are in the form of blogs, vlogs, and traditional, what we call traditional video packages. But in a way, even the video packages are non-traditional in that we are trying to, you know, get them to insert their personality in a way that you probably wouldn't have seen pre-vlog.

So their stories are distributed in a wide range of ways. And one of the things the Knight Foundation has been most interested in, and therefore, what we've really tried to pursue is our young people consuming and sharing news by mobile technologies. And I haven't heard a lot of talk about mobile in that we are at the online journalism symposium, but, you know, this is where it's all headed, really. And I'm sure there is going to be less and less of a distinction between what is online and what is mobile as we move forward.

So we have the whole online model. All 51 of the reporters stories always appear online. So we have the ChooseOrLose.com and StreetTeam08.com that are both on that Think platform that I mentioned earlier. Then the stories also have an opportunity to bubble up to the larger MTV online presences. And we have a great partnership with the AP Online Video Network. I don't know if any of your newspapers utilize their videos, but the best of our Street Team videos end up being disseminated through the AP Online Video Network, so that's been -- that's been very exciting.

But then mobile, again, is a big component. We have a website. Some of the videos are available to Verizon Mobile subscribers. We're working on a linear mobile TV channel that is just -- it's really like TV on your phone. I don't know if you are familiar with these yet, but instead of content where you go to a website and you access the specific pieces you want, it's just like TV on your phone. So you turn it onto the channel you're interested in, and whatever happens to be playing at the time is what you see. So that's very

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much on the horizon or already here basically. And of course, MTV has the luxury of a broadcast platform, so, you know, our best user-generated stories and our best Street Team stories have the opportunity to air, so that's exciting for them.

And we've heard a lot today about experimenting, how important it is to experiment. And one thing that's nice for me with this project is that it's not a -- it's not a profit-based project. None of the MTV pro-social projects are done for profit, so I don't have to worry about viewership in the same way as some of our other shows do. And that frees us up to experiment in a lot of ways with projects like this. So in one way, it's an experiment in that Pro-Am journalism model, because again these are just citizen journalists who are randomly uploading stories. They are folks who we selected, we trained to a certain extent, and we do kind of moderate their work that comes in. We have an editorial board made up of MTV news producers who kind of flag the stories just to make sure that they fit into our standards and there's no legal issues and that kind of stuff.

But we've also, and this is probably more along the lines of the panel, we've done a lot of tech experiments with them. Excuse me. Aside from having the kind of multi-platform approach to their work that I mentioned, we got to do something really cool on Super Duper Tuesday, where we had our reporters in all 23 states doing live mobile-to-web broadcasting. There is a new company out of Israel called Flixwagon. Their little logo is in the bottom corner of the page there. And Flixwagon using Nokia N95 phones allows you literally to do live mobile to web. So someone points their mobile phone at you, interviews you, "Did you vote today?" "Yes, I did." And at the same time, anyone on the web can see you saying, "Yes, I did vote today." So this was pretty significant. I don't think, as far as we know, no news organization, no broadcast news organization has covered an event in this way before. And we were able to then take the clips that they were submitting all day long and turn some of them into broadcast-ready pieces. So it was like a kind of full effort using all our media capabilities.

And as you can see, we created this kind of cool Flash map. This is just a still one, but basically the folks that have red around them, they were live now. So you could click on their little image and see what they were seeing at the same time. So it was an exciting project.

And to kind of sum up how the broadcast industry is also changing, not just the print news industry, I have a clip from one of our Street Team members from that day. By the way, I'll mention that the quality, you know, obviously, shooting on these mobile phones, it's okay, it kind of looks YouTube-esque. It's, you know, that's where it's sort of lacking still. For the regular video reports that our citizen journalists do, they have three chip cameras, and they are out there kind of doing sort of, like I said, more traditional news packages. But this one... Oh, whoops. I forgot I had this slide. Anyway, this

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was a neat clip. Our Alaska gal was live, live mobile broadcasting with Alaska's governor there, who was talking about how cute Ron Paul was. [chuckles] So anyhow, I did bring one clip that, like I said, kind of sums up what happened on that day. And here she is. This is our New York reporter, and she was at the Hillary party in New York right after or right before Hillary was about to go on. So it's quite dark, because she's up in the gallery, but you'll get the idea.

[Plays mobile broadcast. No audio.]

[Some audience laughter.]

Liz Nord: So, yeah, that about sums it up.

Howard Finberg: That's pretty cool.

[Audience applause.]

Howard Finberg: Thank you, Liz. Pretty cool. Well, I guess it's live to podium now. Fernando, you're up.

Fernando Rodrigues: All right. Well, good afternoon, everybody. Thank you very much for having me here, the Knight Center, Professor Rosental Alves. I'll just put some other stuff here before I start. And it's going to be just a second. Just put this in here. And there we go. All right. So I'm going to talk in 12 minutes about this project that we had in Brazil. It's been on since the year 2000. But before I actually start, I'll just digress a little bit. Because every time I'm asked to report on this project that we did in Brazil, outside Brazil, I always like to talk a little bit about, like, put some context, like contextualize the world we are in right now in terms of online penetration. Because we have been talking about online journalism since this morning, but in case of internet, the world is definitely flat yet. As you see, there is an immense symmetry between what you have here or what Europe has there and Australia, but Australia and Oceania is a very tiny population. But the thing is, the fact of the matter is that there is a little internet penetration in many, many countries of the world, and that includes Latin America, where Brazil is in. So that has to be taken into consideration when you analyze how far behind certain countries are as compared to the United States or certain Western European countries.

As a matter of fact, I was analyzing these figures to put this slide together, and I just came to this information, which was so nice. It's not related to what I'm going to say right after, but I think I have to share that with you. In the year... It was not only until the year 1953 that the United States population had, well, more than 50% of the United States population had access to TV. And it was seven years after in the general election of 1960 that TV played a big role in the presidential elections in the United States.

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And not surprisingly, it was in the year 2000 that more than 50% of the U.S. population had access to the internet, and it's actually now, seven, actually eight years after that [the] internet is playing a big role in politics in this country.

Let's just go forward. This is just another way to see the same type of statistics. As you can see, the percentage of users of internet in North America and Europe is much, much bigger than in South America or the Middle East or not to mention Africa.

Let's go one, and that's some Brazilian background, because I'm going to talk about a project that happened in Brazil. Brazil is 186-million inhabitants. It's a democracy. And 42.6-million people have access to the internet; although, it means only 22% of the Brazilian population. It means 46% of the population of South America. We have a tradition of liking digital stuff. We have digital elections in Brazil, much different than you have here in this country. But although we don't have the Freedom of Information Law in Brazil, which makes things more difficult for us in terms of getting information, digitizing them, and then putting them on the internet in a journalistic way. This is another figure there.

And now I'll go to the project I'm going to talk about, which is called Politicos do Brazil. The main objectives of Politicos were basically build up a database, match up with data about Brazilian politicians, [and] produce good investigative stories for the newspaper. And in that case, in particular, it was Folha de São Paulo, which is a newspaper based in São Paulo, Brazil. We wanted to offer the readers a tool which could be useful for them to use, rather than only reading the stories or going to the newspaper in print. And also, it was an attempt, to some extent, of the newspaper to increase its presence in the online world and to be more competitive in this new environment.

Okay. The project, as I said, began in 2000. We started to collect the data from the 27 Brazilian states. And we had to do that basically manually, because the information was in print. So we would get -- we need to go to all the states and request for the information, and then have them either scan or digitized actually in turn -- in order to build up the database. We ended up nowadays with more than 25,000 records of 25 -- roughly 25,000 Brazilian politicians. And that covers pretty much 100% of all politicians in Brazil. And we have a free search website. People can go there and search the information they want. And just to give you a flavor of how it was perceived and received by the Brazilian public, in 2006, which was the last time it was updated, (because we have elections every two years, and that was the last year we updated, we are going to update it this year again), on the day it went -- on the day it was released, it had an audience of more than a million visitors in that single day. I'll just show you a little bit how it works. All right.

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The most interesting thing about this, so we have three elections in a row in terms of general elections, national elections. We don't have here the municipal elections in this site in particular. You can choose like the office you are kind of looking for. In this case, I chose president for the election 2000. And if you go onto the name of the politician--(that's the President of Brazil)--then you have this. This is what draw most of the audience. We have a list of the personal assets of all Brazilian politicians. Because they are required by law in Brazil to file a report when they run for office saying what they have, if they have a house, a car, boats, airplanes, whatever. And this is what people get when they kind of click in there. We had to kind of scan everything, because it was in print. That's his signature. That's what he said he had. It was an apartment. He had some savings accounts. So that was there, everything. And then if you want, you can easily switch from, say, we are in the year, 2000, you can go to the next year. Then choose the same guy again, which is the President. This year we managed to kind of have it in an online format. So if you click here, you see how much he has now four years after being in office. So you can compare whether that is compatible or not to his salaries and other sources of income during that period of time.

This database, because it contains roughly, as I said, 25,000 records, it was used by the newspaper to produce lots of stories, not only statistical stories, but pretty much investigative pieces telling how the Brazilian politicians are fairing in terms of their personal assets, but also because we released together with this. That was a very, a very debatable decision, but we decided to put that on. This is the equivalent of the Social Security number in Brazil. So there are 25,000 Social Security numbers there. And with this number, you can check 25,000. 25,000 records. And yes, this is one of them. So with this -- with this information, you can check whether this politician has -- whether he has or not any pendencies with the Brazilian IRS. And what we discovered was this. This year, let's see here. All right. Where is that? Okay. This is -- this is how we measured, like, how many farms, houses, airplanes, cars, boats, everything they had. But this is, I think, yeah, this is the one I wanted to find. We discovered that 2,168 Brazilian politicians in that year had some pendencies with the Brazilian IRS. They were eventually not paying their taxes the way they should. And that was, of course, a front page story.

But that's not the whole result of this database, because it was public. It was not only -- it was not only to be used by... These are some of the pages that I've just shown you. Because it was public, it evolved into some sort of participatory journalism, because the newspaper alone could not run story on all the 25,000 politicians. So because the information was available for anybody who wanted to be interested and go there and search about a particular politician, it would be possible for that person or for that journalist to produce a story or to have some different approach than what Folha de São Paulo had already done. So we started receiving lots of calls from all

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parts of Brazil saying, "Well, here in the state of Piauí or Amazonas, we have this politician who says he has like a Volkswagen Beetle, but he drives a Mercedes Benz or something like that." Of course, we could not keep up with all the -- with all those information. And several newspapers around the country started to produce stories themselves, which was something like this.

Let me give you this example. This is the governor of the state of Maranhão. That was the story which was produced and run by Folha, so that's why I like it, but they used the database put out by Folha. This politician said he had total assets in 1998 of 388,000 Brazilian Reais, which is roughly... To know what is in dollar -- what this is in dollar terms, you just divide it by two. And then you see the evolution of his personal assets? It's 41% after four years in office. But then when he was about to leave office, this is his records. It's all there. But then 41.2%, that's the difference between his assets after four years in office. But then they discovered that when he was about to leave office, he was buying this penthouse for three million Reais, which is much, much more than what he owns. And that was, of course, a big scandal. It was published by this newspaper in Brasilia called [unintelligible]. And the former governor, of course, was current -- was at the time actually, he spent some time in jail, and now he's still facing some charges for tax evasion in Brazil.

Here is another story which is of the same kind. They produced a similar database in Rio de Janeiro. And what they discovered going to the place where the politicians said they had houses, see this example. He had a regular house in Rio de Janeiro, but when they went to the site to see the actual house, they discovered it was not actually like pretty much a regular house, but a much more luxurious one. And so they had this million dollar club series run by Global, which was a very successful story. And it was actually something pretty much similar to what we did at Folha a couple of years before.

And here are some other stories that were generated by that type of database. We chose the progress of their personal assets over the years they remain in office. This is another story which has just appeared. It's still generating stories. This one was run by another newspaper in Rio. It used *Políticos do Brasil* to produce that story. It was produced in January this year.

This is basically it. I think I've been confined into 12 minutes. Yeah. Thank you very much.

[Audience applause.]

Howard Finberg: Thank you. On the day that the Clintons announced their taxes for the last seven years, it's very appropriate we hear what...

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Fernando Rodrigues: Yeah.

Howard Finberg: I think they are buying million dollar apartments too. Aron, we'll let you get set up first. And remember, we have lots of time for questions at the end.

Aron Pilhofer: Thanks for having me. And I want to actually send a particularly warm thanks to Paige whose name as it happens falls farther in the alphabet than mine, which means I'm not the absolute last person up here keep y'all from the bars or wherever you're headed.

I'm here today to talk about sort of the data side of the information graphics: database journalism on the web. We've heard a lot about the multimedia side, but I want to talk more about the data side. And so I was looking for a particularly titillating subject for this and I came across... I'm a big Ruby on Rails guy. They call [it] Ruby on Rails in the community. The people who wrote it refer to it as opinionated software. And it occurred to me that that's actually a pretty good analogy to the sorts of -- or the approach that we at The Times are taking, which is slightly different than what some other media organizations are taking. So that's what I titled it.

First, let me tell you a little bit about me and my group. I come from a database journalism background. I was part of the Computer Assisting Reporting Team at The Times before I started this group, the Interactive News Team. We are seven journalists/developers with, at this point anyway, sort of a heavy emphasis on the developer, and we're sort of learning the journalism part. We do news-driven, news-focused, data-driven projects. That is our mission. And our motto is we do web development at newsroom speed, which we haven't quite achieved yet, but we're getting pretty darn close. This is where we are a little different than what some other media orgs are doing. We are based entirely in the newsroom. We operate, we are run by some relatively nerdy journalists. That would be myself and Matt Ericson, who is the Deputy Graphics Editor. We operate like a news desk, not a software shop, which I could talk to you offline about what the distinction is there. But we operate like journalists in a journalism setting. We're focused on journalism and not news products per se, so that's our first and foremost mission is journalism.

And let me just throw you a couple of quick examples. Actually, I'll just show you this one really fast. Here's a project we did. This is probably our most ambitious solo project. This was for the NFL playoffs. It was an ongoing [project]. We updated it week by week to give you a breakdown on your favorite teams and sort of contrast their strengths and weaknesses and so forth. And I'll come back to this one a little bit later in this. How do I get back in it? Is it this? Yes, okay. Okay.

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So this brings us back to the subject is opinionated data. Well, almost back to. Let's start by talking about un-opinionated data? Opinion-less data? There are two kind of trends that I see anyway on the data side when it comes to interactive journalism and particularly database journalism on the web. One is, I sometimes call it the data dump, the data stream, or when I'm feeling less charitable, the data vomit approach to... And this is a screen shot. And I'm apologizing up front to all the Knight Foundation folks and any relatives or friends of Adrian Holovaty, but this is from EveryBlock, which is his latest project. Adrian is an incredibly talented, brilliant programmer who's done some amazing things. This is his latest project. I encourage you to go see it. But this is sort of, I think, the [inaudible] and most current and best example of sort of the data vomit approach. Not that there is anything wrong with this, but I think it's sort of only halfway there, particularly for a newsroom.

And here is another example. This, again, I'm not bashing. I worked at Gannett for eight years. I actually worked at The News Journal. This is from The News Journal. This is sort of the Gannet approach. There's Data Universe, their version of Data Universe, which is to just sort of take all the data they collect and put it up in a searchable format so you can browse it and do it. And this is sort of what you get. You put in a search, and you get back results, and you can page through those results. Okay? So what's the problem with that? A lot of times nothing. Sometimes it works really, really well. Those of you who saw Chicago Crime, which is Adrian's first project, or at least the one that put him on the map, literally, was ChicagoCrime.org, where he mapped. It was the first really like newsy kind of mashup. And I think it's highly influential in the news world. But most of the time, it really doesn't because it begs questions. It begs questions like, what am I to understand from this data? What is the context of all this? And more importantly, the thing that my editors always ask me, why should anyone care?

So throwing out data online without context or analysis is what machines do, not journalists. So I am arguing for opinionated data. And that doesn't mean it's biased data or slanted data or misleading data. What I mean by opinionated data is, we should make editorial decisions about what we present and what we do. We should think about telling a story and how the appropriate use of this data helps tell that story. We should also provide context and analysis. And in other words, it's journalism. That's what we should be doing.

So here's sort of like my five-point plan, whatever you want to call it, for what makes a good interactive database or data-driven interactive. One, it's steeped in context and analysis. It's obvious to readers. Either it's presented with news articles, when it's something that's along with those news articles, or the context itself is just self-evident.

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They invite exploration, and more importantly, discovery. And that's the part that we're not quite there yet. I don't think really anybody is. The discovery part is where readers can explore the data and explore it through the interactive, through tools you provide, and come to their own conclusions, and then, ideally, share those conclusions with others and maybe push the story past where you as a journalist had taken it. And that's what I mean by providing a venue for sharing. Somehow that needs to be built in. I don't know exactly how that should look. The traditional model for that has been, you know, comments or forums, and I don't know if that quite works.

As an aside, we have a project. We're partnering with an organization outside of IBM called Many Eyes. They do data visualization. They do an interesting... I don't think they are quite there either, but they do some really, really interesting work in trying to have people sort of build community around data, believe it or not.

And be portable. Your data. Putting it up there in that sort of searchable format is one step, but you should have APIs around everything. You should allow the other nerds in the world, whether they are professionals or amateurs, to take this data and make of it what they want and use it in their own form, not just a search box with a 'go' button.

And data itself should be useful, but not ubiquitous. What do I mean by that? I mean, I am a kind of guy who -- I'm a data guy, okay? When I see columns and rows of data, I get goose pimples. It makes me... [audience laughter] It gets me going. I suspect I am somewhat in the minority in this regard. So what I mean is that you should present the data, but it shouldn't just be overwhelming. That's what I think kind of the problem is with these data vomit -- this data vomit sort of approach.

So let me show you some examples that I think work at The New York Times and then I'll show you something that I don't think quite worked as well as it could have. And I don't, again, I don't think we're quite there yet. I don't think anybody really is. But I think we're getting closer.

This is a project that we worked on with the Graphics Desk for the elections. This is one of the earliest ones we did with them. And so here, you can see where candidates raised their money, right? And then at the bottom, you can scroll and see, you know, over time, how things change and so forth. But what's really interesting here, and this is where you sort of get into the discovery point is, you know, look at all these candidates. I'll look at some of the ones who raised less money. They all have these sort of regional alliances. And the one guy that really pops out is Ron Paul. I mean, look at the differences there. He has no regional home whatsoever. And I actually pitched this as a story. I showed the people upstairs at the Politics Desk this. I said, "You know, you really ought to -- you really ought to look at this." One of my colleagues, Derrick Willis, used to work at The Post, pointed this

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out to me. And I was like, "Wow, this is really a story." So, but at that point, the appetite for Ron Paul stories had sort of waned unfortunately, so it never got done.

Clinton versus Obama. This is candidate travel. So we are building a database. We've been updating it on a rolling basis of where candidates are campaigning. And here again, you can see how it breaks down. Some of [inaudible] debated inside the paper whether we should take off candidates who are out or not. Ooh, and this is -- ooh, this is not a good... Actually, this is really bad, because I need that little slider. There it is. Oh. This is IE-7 and Vista. Maybe this is a problem that I need to look at. There it is. Okay. So you can see here, there's a little slider, and you can sort of go month by month and see where the candidates have been campaigning. And you can grab this and see how things change over time. But I thought the really interesting thing here, and again, when you start getting down to the point of discovery, is you just look at the last few weeks, and you look at the difference between Clinton and where she's focusing and Obama and where he is focusing. That... There you go. So all of a sudden, Mr. Obama is heading down to North Carolina, West Virginia, Pennsylvania, and Oregon. And Mrs. Clinton is not. So you get the idea there.

Buy or rent. This was covered earlier. This was a wonderful piece that Tom Jackson... Was Tom one of your students? Yes. Okay. Tom is a freaky, freaky genius with this stuff, as are all of Andrew DeVigal's multimedia guys. Most of the really amazing things you see are either the Graphics Desk or one of those guys. I am losing my place here. Try this again. Oh, you know, I had... Stop. All right. You say Buy or Rent. It's really cool. Let's move on.

Faces of the... Oh, good lord. This is why I own a Macintosh, people. [audience laughter] Keynote. Keynote. It's so much better! [audience responds with suggestions, inaudible] Ah! All right. Just seriously, Keynote. People, Keynote is so much better. Oh, look at that. That's nice. [audience laughter]

Buy or Rent, really good. Faces of the Dead. I'll find it. We did... This is one of the earlier pieces that I did with multimedia folks. It was Gabriel Danz^[sp?]. I'm sorry, no, I take this back. This was Sean Carter on the Graphics Desk that did the Flash. And what we wanted to do was try to tell the story of Iraq casualties in some sort of context and as the war was going on. There we go. Yeah, this was... So the analysis tab is where you can see in context where casualties are happening, percentage, breakdown on branch of military. But the cool this is this, this exploration tool, where you can sort of drag it around and see very clearly how this war has changed over time and where the hot spots were. That one, I think, was the one that first got people really excited about doing more of this stuff internally, at least on the database side. And then, oh, please work. That's Buy/Rent. This is almost up. I'm just going to... Heck with it.

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And then the last one I'm going to point out is our elections coverage, which we've worked on, again, extensively with the Graphics Desk. And we have another freaky genius on the Graphics Desk who does a lot of mapping. We generate the... My team generates the data that underlines -- underlies this map. And I'm pointing this map out for a particular reason, which I'll get to in a second. But this map is where -- is one of the ways, one of the many ways we present election results in real time. So if you come here on an election night, you'll see things changing, depending on what state is up. So if you roll over it, you can see, okay, stuff is going on there, stuff is going on there. But the really cool thing about it is it's got two levels to it, so you can zoom in, and then you can really see graphically what the actual -- what the story is, how things are developing. And this is a pattern you're going to see over and over and over again this election, this primary, for however long it goes on, with Obama winning the urban areas and Clinton winning the outer areas.

Now, the reason I talk about this in particular is because on Super Tuesday, that map was the highest traffic page on the site. That map was. It wasn't a news story. It wasn't our other coverage. It was that, that map. People were coming to it, and coming to it, and coming to it, and coming to it, much to the system's administrator chagrin, I might add. But, you know, that's a good problem to have, right? Over two days, the traffic there was enormous. So that's one payoff to this sort of approach is people want it. People want this. So people are desperate for this sort of information presented in this way.

And then, I'll leave this to the end. I was sort of hoping to run out of time, so that I wouldn't have to talk about our opinionated failure. But the one that I showed you at the beginning, this one didn't work. This one, we've spent a week working on. Five people crunched, munched, pulled this all together. It looked great, worked great. It drew flies. We had page views that were probably pretty good for a small university college paper website, but not for The New York Times. So why? Why didn't this work? Well, the problem with this site is it violates one of my little bullet points earlier. There's nothing to do. You can't do anything with this. It just sort of sits there. You go, it looks nice, and you go, "Okay, now what?" So that's sort of a lesson. We learned a lot from that. That when we do these things, it needs -- you need to give people -- you need to get to that point of true interactivity.

And lastly, and I will finish now, there is one... A lot of the attitude, a lot of folks say, "Well, okay, that's fine for The New York Times where you've got 8,000 people working on this," but the truth is that most of those graphics I showed you were small teams of two or maybe three people. That football one was five people, only because we were just absolutely like, you know, crunching it on deadline. But it's mostly small teams of two or three people. And if you look around, you have the data in-house to do these sorts of

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things. Chances are you have the expertise somewhere in your newsroom, or if not in your newsroom, in your website. You just need to utilize it and martial it in the right way to get this kind of stuff done.

So there you go. That's my contact information. And with that, I'll pass it on.

[Audience applause.]

Howard Finberg: Thank you very much, Aron. Instead of the bar, I have some Excel spreadsheets I'd like to show you later.

Aron Pilhofer: Awesome!

[Both laugh.]

Howard Finberg: And last, but certainly not least, is an old colleague of mine, Paige West, who abandoned me for MSNBC. Not that I haven't forgiven you, Paige, but just for the record and the World Wide Web.

Paige West: [Setting up microphone.] Okay. Well, thanks for sticking around. I'm going to talk about both multimedia and interactivity. I have two projects that I want to show off. They are quite different. One I would categorize more as a multimedia presentation; one with more interactive. And I think the debate about whether to use this kind of stuff is largely over. Everybody is doing it. What I would argue is that we aren't -- we haven't perfected it yet. Nobody has perfected it. Nobody is really doing a really great job of integrating all of these media together. We have multiple mediums, but are we integrating them in a narrative?

I'm going to pick on my own organization first ... to demonstrate this. This is a very typical presentation of a story on MSNBC.com. Actually, it's under our new site, the NBC Sports site at this point. But it's a very long column of text with some, you know, multimedia elements hung off to the side or maybe down at the bottom. For example, here's a video tease. You click the video tease. You pop open another window, you get a video. When you watch the video, you actually, if you've read the article, you actually hear in the script entire chunks of the story or you hear quotes that were in the story. So we haven't given our audience anything new in this video. And in fact, if they read the story, we're wasting their time, because they aren't getting anything new.

Next we have a slideshow. It's a completely, you know, it's a profile of a woman who is a football player. The story is about women's football teams, but it takes you into a different page and it gives you the story about her. And if you want to go back, you got to click the back button. There isn't a context to it. Then we have this box full of links, which, you know, would you

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know that if you clicked on one of those you would get a nice interactive map that shows you where in the country all of the football teams are? Whoops. Sorry. Go away. Or if you click on another one of those links, you go to another page and you get this tabbed interface that profiles more players; although, that's a little confusing, because we also have it down here embedded on the page. So again, if a user is going through these, again, we've wasted their time. We've taken them someplace they might have already seen. And then finally, if you are extremely inspired by this presentation and you just can't wait to tell other people your story, you can search through these links and find a link to tell us your story, and you go to a page where there's just this really sterile form and you input your story, and you don't know what ever happens to it.

So I said I was going to pick on our site first. We're not the only ones that do this. The New York Times does this. I picked this last night. CNN does this. They have tabbed their interface, in fact, to have 'read,' 'video,' and 'interactive.' And, you know, one of the things that we've been talking about is that these things all need to be put in context. And if you actually physically separate them all, I think you're removing a lot of the context.

So we have been experimenting with a presentation format that integrates all of these media into one narrative. And it is a linear presentation; although, you will be able to skip through it. But this, it was an interesting experiment. It was an experiment both in the presentation and in the actual workflow for the reporters that worked on this, the reporter and producers. Usually, the reporter just went out into the field and did a lot of interviews and found an angle and then told the photographer what the angle was going to be. And then he went out and he got photos to match it. And maybe they worked on a video together, but in all likelihood, it was a video that kind of repeated what the angle of the story was going to be. And then they just threw it online. And probably at the last minute, they asked somebody in the interactive team to do some cool interactive to round out the package, right? The interactive producer has no idea what the story is, didn't go out on the scene with them, wasn't a part of any of the conversations, and then they are supposed to produce this really cool interactive.

So what we did with this experiment was the three people working on this had to sit down. They had to plan. They had to go through the story ideas. They had to analyze the subject matter. They had to come up with basically a chapterized storyboard. And they went out and they tried to get the story in that way. The reason for that is because, you know, you've got to have transitions between all these things. If you've got three people out there working on three different things, then they are going to come back with very disparate elements, which is what you see when you are presenting them as a spine of text and little ornaments. So these guys went out. They found the story. I mean, it's not like we found the story we wanted to find. We made sure that we got the information that was going to fit into the structure of the

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story. And so I'm going to just play you a little bit of this. I probably won't play the whole thing, because it's about, I think, a seven-minute experience. But it's called Battle of the Bags, and it is about seemingly a very dull subject, which is paper versus plastic.

[Video plays. No audio.]

Paige West: So then we, you know, we just asked a bunch of people on the streets, "So now we're going to get your opinion. What do you normally choose?" Plastic. [some laughter] "What factors most important in your decision?" "And which do you think is more environmentally friendly?"

Audience Member: No idea.

[Audience laughter.]

Paige West: No idea. So now you can compare yourself to 95,000 other MSNBC.com users, who took this survey. And 41% of them, the majority of them, are taking plastic based on its reusability, but they all—[laughs]—the majority of them think paper is a more environmentally friendly product. So that's, you know, that's an interesting finding that people are actively not doing what they... Well, maybe they don't care, I guess. Next we go into... Next, this is a brief sort of background on the resources to create paper bags versus plastic bags. This is a backgrounder on recycling. Then we get into... [No audio.]

Audience Member: Austin, Texas.

Audience Member: [Inaudible.]

Paige West: So in Austin, the city is putting in place a voluntary recycling program with a goal of reducing disposable plastic bag use by [inaudible]. So you can try and find your own city in here or a bigger city near you. It gives it... We... It was very difficult to try and do the whole country, because it's in all sorts of different states of the legislature. So these are the ones that have been pretty well documented. And we can add more. This is a growing list. As laws get passed, we can add to it, so it's constantly up to date. [Video plays. No audio.] So we asked these two people. We called them. We asked these two people the exact same questions, and we have their answers. [Video plays. No audio.] So, obviously, they are, you know, advocating for their particular industry that they represent. And you can hear all sorts of different questions related to that.

[Video plays. "While plastic and paper..." No more audio.]

So here, we can scroll through different reusable bags. This is talking sort of about the fashion behind it. And you know, these tiny little ones. One big

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issue with reusable bags is that everybody gets them. So here's this solution that you can just drop right in your pocket or in your computer bag or something. So then we go -- then we have an interview with an expert that talks about how to analyze your decision when you are at the store. And then finally... [Video plays. No audio.]

So, you can change. I go to the grocery store about ten times a month, because I buy one day of food at a time. I use about two bags. I usually -- I'll go 50/50. If I reduce my consumption by 50%, I would save 72 bags of paper bags a year, 72 plastic bags a year. And if you change it, you see your -- how -- what your little change in behavior, what that's going to do. And then you can multiply that by, what if 50% of Americans did the same thing? Now you start to see, you know, billions of paper bags are saved, billions of plastic bags are saved, and that amounts to about five million trees -- billion trees and 303,000 barrels of oil, which we talked about oil in one of the earlier videos. So it's a really interesting way to sort of take what you just learned and see how you could make a change in your behavior and how that could impact the world.

And then right here, you can go straight to a discussion area on our community site News Vine, and we've got lots of comments. And people were debating whether it was plastic that was better or paper that was better or canvas that was better. And it just -- it went on and on and on. It was a really great discussion. And I will go back maybe to PowerPoint now.

So we led them straight into the discussion. And after they'd had this experience and had really kind of learned what their impact could do, they could talk about it. And some of the -- some of the responses were really great, and several of them actually spoke to the presentation format. We got things like, "Kudos to the professional presentation that doesn't give you the answer outright, but makes you think about it for yourself." "This analysis is great. I wish these interactive investigations existed for all sorts of products." "The article and mode of presentation was excellent. It should be mailed to all village, city, and state government officials." "Great design on this feature." "This report was one of the coolest things I've seen on the news site." "I was duly impressed by the savings and resources that even a small percent change in habits can make." So we just felt like we were really talking with people and getting them to think about their behavior.

So that is what I'm calling an integrated narrative. I don't think that this is something that's sustainable for every day. I think this is something that's special that you, if you had a feature that you know you're going to be putting a lot of effort into, then think about it beforehand, and plan beforehand, and get everybody on the same page beforehand. And in fact, this is something that, you know, we talk about differentiation a lot. This is something that differentiates you, and this is something that advertisers are extremely interested in. Because this was an experiment, we didn't tell sales about it,

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and we got in a lot of trouble, because they came in and said, "We could have sold that for like thousands and thousands and thousands of dollars. And you didn't... Why didn't you tell us?" And so, you know, it was a really good lesson. [laughs] Don't cross sales.

Audience Member: [Inaudible.]

Paige West: Oh, we haven't, and no, we're not. So finally, to change the scope a little bit, here we have something. Here we have a database driven application. This is a mashup of Virtual Earth, which is a mapping tool quite similar to Google. And we use Map Point Services, where we uploaded a database full of bridge inspection data obtained from the National Bridge Inventory, which is a study or a database hosted by the Federal Highway Administration. We had an investigative reporter, Bill Dedman, submit a FOIA request to get this information, so it's not something that just any citizen journalist could have gotten and created. Lots of citizen journalists can create mashups with a map. This had to... You know, it took some work to get this data. He analyzed the data. He honed it down to some really significant findings, and we... You know, he came to us and he said, "How about if on a map we just show this route and all the bridges that are along it and what their status is?" And I said, you know, "Why? I don't care about that one route that I'm probably never going to go on. I want to know about the bridges that I go over."

So, well, that was supposed to go to the website, but... Ah! So I'll just tell you about it, because I'm about out of time anyway. Basically, what you can do is you can come here, you can enter in your own start and end location, and what you get is your route mapped out with all of the bridges along it that satisfy certain criteria, like, it's within .2 miles of your route and it carries traffic of greater than 10,000 cars a day. So I would never have believed it. I live in Seattle. It's a lot of water there, but I never would have believed that I cross 42 bridges on my way to work every day. And that's because bridges aren't just things that go over water. Bridges are over overpasses and on-ramps and off-ramps. So you go over or I go over 42 bridges a day. I had no idea. So that in and of itself was just an amazing sort of relevancy to me.

And that's the thing that I think you can do with this database journalism, is you can have these massive amounts of data that make a huge national story relevant on a personal level. You can then explore the individual bridges and you can get specific information about each one. And then over here on the left, we had ways to filter. Now it's going to go. [laughs] We had ways to filter and sort the data, so you could look at bridges by their status or whether they were late or on time, etc.

So, I think I'm out of time.

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Howard Finberg: Thank you very much.

[Audience applause.]

Howard Finberg: Thank you, Paige. We have time for five minutes worth of questions. Anybody? Step up. Don't be shy. I'm not going to let you go until we get at least two questions, one from each set. I will start the questioning. So, I'm going to say the first question is for Alberto. You know, how do you judge a successful graphic? What are the...? I mean, you laid those three criteria. I mean, but do you look at a graphic and it has to have all three of those criteria?

Alberto Cairo: No. Is this on?

Howard Finberg: Yeah. Make it green now.

Alberto Cairo: No. I mean, I was talking about three level -- different levels of interactivity into an infographic. Not all graphics can be produced using a manipulation level of interaction. Some graphics are better built using the lower level of interaction. For example, if you had to explain... Well, I'll just show an example. If you want to explain how the latest NASA mission works, the only way you can do that is using a step-by-step infographic using a couple of buttons to go forward or back. So that would be a low level of interaction, but it will be a high level of usability and of clarity. I mean, it would be really clear to tell the story that way.

Howard Finberg: And that's success?

Alberto Cairo: Yeah, that's success. Be clear. I mean, that's the goal, be as clear as possible.

Howard Finberg: I have a question for Fernando about your project. Who organized the team around the project and how were they structured?

Fernando Rodrigues: I did it.

Howard Finberg: Hit the green button there.

Fernando Rodrigues: I did it. It was actually like just me, basically, yeah, for two years. Then we added some help. But I was collecting the whole data for two years. And that's something that should be taken into consideration, that in countries like Brazil, you have to go through a very tiring process of collecting the data before you can even start thinking about producing nice graphics and interaction and all that, which is something that you have, if not readily available, but in a much easier way. Like, I was thinking about we have elections this year and would love to have something similar to what The New York Times does, but to have the data break down to

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all the precincts and all that would be very difficult for us, I would think. And I don't know. I would actually love to know how is that process? Do you get that from the Federal Action Commission and then you just kind of -- it's kind of a very huge database, and then you process that, and you kind of have that on the screen? [Aron Pilhofer nods his head.] Yeah, that's--that's halfway through when you have like digital information. And as you saw, for some years, we had information which was actually in paper, which was very difficult to process. So that's another story.

Howard Finberg: Did you do anything else besides that for two years? Was this a full-time job?

Fernando Rodrigues: No. Yes, yes, I did. I sure did.

Howard Finberg: So it's possible to do this and other things at the same time.

Fernando Rodrigues: Oh, yeah. You have to.

Howard Finberg: So let me follow up with Aron on a question, because it's related to this database and the team that you have. And you mentioned that a lot of them are journalists, and you're a journalist, so ... or are they journalists?

Aron Pilhofer: Actually, no.

Howard Finberg: Oh.

Aron Pilhofer: There's... I have seven now. Of those, I would say myself and another of our folks, Derrick Willis is. We're probably the journalist developers of the group and the rest are primarily developers.

Howard Finberg: So, when you hire, does journalism -- understanding news literacy play a role in your hiring process?

Aron Pilhofer: You know, I was hoping, I was really hoping against hope that we would go out there and find a lot of folks who had these latent programming skills working in newsrooms. And we tried desperately to find those folks and did not find them. So we wanted to find people who had journalistic sensibilities, and that's how we sort of described it. And as part of the interview process, there was a lot of conversations about what that means. And we did find those folks fortunately. So they are out there. A lot of folks you never thought they would ever work in a newsroom, and particularly The New York Times, who are now sitting, you know, next to some of the crustiest investigative reporters you'll find, which is, I must say, kind of entertaining at times as well. But that's where we were looking -- the computer science world.

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Howard Finberg: Okay. Questions from the audience? Would you come up to the microphone, please? Uh-huh.

Woman: [Inaudible.]

Howard Finberg: Okay. Shout it out and I'll repeat it.

Woman: Okay. How do you choose your subjects? Your pieces?

Howard Finberg: Who are you asking the question for? Aron? How do you choose your subjects?

Aron Pilhofer: Our group is set up... I describe our group as primarily focused on support. So in about 20%, I'd say, of the projects we've done so far, our stuff, that comes right from us, but most of it comes sort of to us. We'll partner with the graphics folks or with the multimedia group that Andrew DeVigal runs or it's news driven. If there's something that is happening that we think, wow, this would make a great interactive, you know, we'll dive in on it. So it's sort of a mix. We'll enterprise our own, but a lot of the stuff comes to us. So, does that answer the...? Yeah, okay.

Howard Finberg: Do we have a question here? Because I'm running out of questions.

Cindy Royal: Okay. I'm Cindy Royal. I teach at Texas State down the road in San Marcos, and I'm formally a PhD student from here. And so this is for Aron and Paige and possibly Alberto. Given that you need these people with these skills, what should we be teaching journalism students so they can operate in this data-oriented environment?

Howard Finberg: Let's take Paige, and then Aron, and then Alberto.

Paige West: Um...

Howard Finberg: Mike, please.

Paige West: Well, one of the first things that you can do, which is a relatively easy kind of entry point, would be Flash. And I think a lot of journalism schools are already doing that. But I think you have to go beyond that anymore. I think you have to understand databases. I think you need to know, you know, Sequel and how to work with a database, you know, the languages that bridge a database and some sort of Flash frontend if that's what you want. JavaScript, HTML, CFS, all that kind of stuff. I mean, you just have to be knowledgeable in all of it.