2012 GeoDesign Summit: Welcome and Opening Remarks

Esri president and founder Jack Dangermond shares his vision for the 2012 GeoDesign Summit.

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Video Transcription

00:01 Geodesign's pretty interesting, isn't it, don't you think?

00:04 I love it and my old professor Carl Steinitz actually…I would credit him as starting it. Don't you think you started it, Carl?

00:11 No, you didn't. Who started it? I'm not quite sure.

00:15 But anyway, I'll tell you what.

00:16 It's now got real steam as Shannon really mentioned, and it's worth…worth spreading and worth growing and worth doing.

00:24 I think we're just beginning to see where it's going to go.

00:29 Before we get into my short talk, I just want to acknowledge you for your work and also who you are, and also being here.

00:38 And also, take just a second like we've done in many conferences before and have you introduce yourself to one new person…

00:43 …so we can start off the conference right. So could you turn around and introduce yourself.

00:47 Tell somebody who you are and what you're doing. Do that now.

01:01 Get out of your seat. Out…out.

01:31 Okay. Good. That's enough. Good. Thank you.

01:42 Perfect. Thanks. Good. Excellent.

01:52 That's good. Thank you. Good. Good. Perfect. Thanks.

02:00 That's what you're supposed to do at the conferences, meet new people…

02:07 I really want you to do that like every moment. Don't be shy about it.

02:11 And something about human beings make us a little shy about, ah, meeting a new person.

02:16 This conference is not going to be that way. You've got to step out.

02:20 As you already probably are experiencing, there's a lot of different disciplines.

02:24 You're thinking everybody's like you. They're...in this particular room, it's quite the opposite.

02:29 People are coming from lots of backgrounds and lots of interests, and that's what makes this fun.

02:34 Your work is right across the board in the design area but right across the board in the technology area as well.

02:42 And it's...it better than any talk or discussion is demonstrating really what...what's going on.

02:49 Some of you are working on planning cities, planning regions, planning countries, planning bikeways...

02:54 ...planning capital improvements, planning the Hajj, all sorts of interesting things.

02:59 Some of you are designing and managing transportation networks, laying them out, planning for them...

03:04 ...designing the impacts of them, et cetera.

03:07 Some of you are laying out utility networks, and that's very exciting, both electrical...

03:12 ...and telecommunication and pipelines and the like.

03:15 And others are designing buildings and designing campuses and designing facilities of various types...

03:21 ...all using GIS and related geospatial technologies.

03:28 Some of you are optimizing for getting the advantage in business.

03:32 There are a number of you here from exactly that field.

03:33 ...and reinforce and establish this network that's starting to emerge.

03:35 And this...this likewise, is...illustrates the broad diversity of what this field is that we're talking about about geodesign.

03:44 Is what actually gets me so exciting...excited is that this is not just the classic design field.

03:51 Its sort of mixing of science and design goes right across to all of society.

03:58 As Tom Fisher said a couple of years ago here, our world is changing rapidly, and the consequences of this are frightening at times.

04:08 They're challenging all of our organizations. They're challenging society at large.

04:14 And this spans every issue that we read about in the newspaper.

04:19 It's kind of hard to get a handle on all of these issues.

04:23 Some of us were in a talk with President Clinton about three weeks ago...

04:27 ...where he talked about all the policies about discussion about climate change and population.

04:33 And he says, You know, I'm not really sure that all these discussions are going to matter.

04:39 And there's sort of silence in the room. Well, what's he going to say?

04:43 Well, he said, What..."What I actually have faith in is real projects, and so I'm dedicating my life to doing projects in Africa...

04:50 ...or in Latin America or in India doing real work," and it just sort of like rung a bell in my mind.

04:58 He's not simply talking about policy changes at the global level, he's actually saying where it really...

05:04 ...where the rubber hits the road is doing real project work.

05:07 And isn't that really what geodesign is about?

05:10 I mean, integrating into our thinking the science about, that affects these changes...

05:18 ...but making it real in building things or preserving things or constructing things.

05:24 It certainly rung home with me.

05:28 Okay, a little bit of abstraction thought.

05:31 Geospatial systems are helping us understand these problems and these issues and these challenges.

05:38 They're converting data into maps, so-called information.

05:44 They're integrating mapped datasets through map overlay and integration and modeling...

05:50 ...to create a kind of knowledge about how things are working.

05:54 And one of the great...the great contributions that the web is making is more collaborative sharing environments...

06:02 ...that is, allowing us to bring our knowledge together, not just like in this room but explicitly over the web...

06:09 ...to create better understanding.

06:11 These...these...these trends are half of the story. They're the sort of science understanding part of it.

06:19 The thing that we need to do is link that, all of that information knowledge, with the design process with tools, with methods...

06:27 ...that actually allow us to create sustainable designs, sustainable environments in the future.

06:33 That's the plot, isn't it?

06:36 Isn't that why you're here, linking these two different things together?

06:40 And, in Carl's book that's forthcoming, we now begin to realize that geodesign is not just a concept.

06:48 It can be thought of as a systematic process of measuring and modeling and interpreting and designing...

06:53 ...and evaluating and making decisions as a process, and articulating that will and embedding that into the workflows...

07:03 ...of how we create the future is, I think, the real plot of discussion here.

07:10 Geodesign, I would say, at a distance is going to be looked back at as an evolutionary step for humans.

07:17 It's going to be something that, ah, finally we connected the dots.

07:22 Finally we began to realize the implications or the consequences of our human action...

07:27 ...and we started not only articulating but then embedding this scientific information in the way we did these projects.

07:36 And this will be done by individuals, individual designers.

07:39 It'll be done in groups, in collaboration.

07:43 I'll be done...ultimately...done by all of society through the availability of this information on the web.

07:51 And it's going to range right across all fields, from agriculture to urban planning...

07:58 ...to...to locating stores to all of those things that we talked about.

08:04 What is changing at the same time as the whole planet is technology.

08:08 It's...it's kind of coevolving with a bunch of changes.

08:12 We're measuring more [of] the planet.

08:16 This is resulting in huge volumes of data.

08:18 Some people are starting to call this big data.

08:22 We're able, in our computing environments with cloud computing, to make that data available to everyone.

08:28 These computers are all getting connected and accessible not only physically...

08:33 ...but also we're layering on top of that social networks connectivity for sharing our information...

08:39 ...in communities effectively, and this is affecting science.

08:43 It's affecting how we approach science.

08:45 It's becoming more, not only quantitative but also more collaborative.

08:50 And it's affecting design, as evidenced in this very meeting.

08:54 Design is becoming also more collaborative and more information based or information driven.

09:00 And as those trends evolve, coevolving are also the enabling tools of GIS and other geospatial technologies.

09:09 We're becoming more multidimensional, three dimensional, more interactive and, yeah, we have a long ways to go...

09:16 ...just like we have a long ways to go in all of these other fields.

09:19 But it is...it is starting to give us a glimmer that we have a chance of pulling this off...

09:27 ...that is, linking together human action and science, human action expressed through design and scientific information.

09:37 For me, I want to highlight two main areas of work.

09:41 One is the GIS on the web, or what I like to call cloud GIS.

09:47 This is amazing change that's happening last year and this year.

09:54 It really allows us to share through intelligent web maps our information in a cloud environment...

10:00 ...and make it available to everyone else.

10:03 But also allow them to share other geospatially referenced information that can be incorporated through crowdsourcing...

10:11 ...or however you want to call it, in this same integrated environment.

10:17 Unlike the constraints that we've had in the past of putting it all into a database with formal data models...

10:22 ...it's loosening up with...with these intelligent web maps.

10:26 And this is creating, I think, a...a new platform for us as designers to think about.

10:33 All the information will be available to us.

10:38 We'll be able to communicate that information in...in a technology platform that's pretty effective.

10:45 This is a little example of a two-hour project that was done a couple weeks ago when we were in, in Abu Dhabi.

10:54 This is the area between Qatar and Abu Dhabi, this sort of large inlet there in the gulf.

11:00 These are...these are coral...coral reefs.

11:05 I called up a service here, in this case showing turtle nesting sites and manatee areas...

11:14 ...and then called up another map service and blended it on sea grass and then called up pearl diving areas...

11:21 ...and also the marine protected areas that already existed.

11:24 Very simple little web map overlays to create a kind of intelligent map.

11:29 Then brought up the...the offshore, you know, the zones of...of ownership and also all the shipping lanes where the oil fields are, et cetera...

11:40 ...and said, well, I could easily now sketch on top of an intelligent web map a new marine protected area...

11:48 ...and then share that with my friends.

11:50 This is what I would call a kind of intelligent web map.

11:53 This map could be shared, and other people could collaborate on it.

11:57 And we demonstrated this in a...in a number of ways.

12:00 This is only an idea in...in making, I mean, actually it's here, but it's...it's an idea that I want to start to get you thinking about...

12:09 ...because I think it will be the foundation for the way information is delivered in the future.

12:15 Intelligent web maps are a new medium.

12:19 They support analytics. They support the ability to drag and drop data onto them.

12:23 They can support sketching. They can support sharing. They can go...they can run on any...be accessed from any device.

12:31 They're a new...they're a new medium.

12:35 And, well, do you follow what I'm talking about?

12:39 It's very exciting to me because there are already hundreds of thousands of maps in this form, and it's growing.

12:48 This pattern is going to provide a kind of infrastructure for us to be able to access the information...

12:54 ...rather than doing all the research to discover it.

12:56 It'll cut the time for accessing for design projects way down.

13:01 It'll mean that we can integrate and synthesize data from multiple sources in real time...

13:06 ...like I did on that little marine planning effort.

13:11 It'll mean that we can bring this up on any device like electronic tables or...and communicate

about it and…

13:18 …ultimately I think it…it addresses one of the issues that we have in our world…

13:23 …of breaking down the barriers between various groups and teams.

13:28 Okay. The problem is that most of these maps and most of your maps are not very effectively designed.

13:38 I want to hit that one point and then I'll be off the stage.

13:42 How many…how many maps have you seen or, I like to call them geoinformation products, that really are effective?

13:53 I mean, at the User Conference, we get thousands of maps, and I walk around…

13:57 …and I look at them, and most of them are not very…very good.

14:02 Actually, they document what's so, but they're not very effective at telling a story.

14:07 Good information products require good design, and you, especially you as designers, know what I mean.

14:13 You need to understand the issue about what you're going to communicate, and you need to bring the appropriate data to it…

14:19 …and do analytics and manipulation and then come up with a compelling graphic design that helps us understand…

14:28 …so that we can support action…action like geodesign.

14:33 Let me give you eight examples.

14:35 Good information products are timely.

14:37 This is a map that was made by one of our users at NOAA, and it's showing the hourly forecast for when the tsunami is going to hit.

14:47 And look at the map. You can see North and South America. You can see Japan. You can see the hourly forecast.

14:52 This map was used in Hawaii by the mayor to get people out of the…out of the tsunami zone.

14:58 And it made a huge difference. It saved lives.

15:01 This is very interesting, don't you think?

15:04 Nicely designed. You get the idea in five seconds. Bang.

15:09 Okay. You can be critical about the color. I don't care.

15:11 But it did the job.

15:13 Somebody thought about that.

15:16 This is another design that's not so fortunate.

15:18 This is Fukushima. This was done by one of our users over there who was kept in a box for four months.

15:25 This information didn't get out.

15:29 Most of you have read that they evacuated the area around the Fukushima plant about four kilometers, right?

15:35 Remember that? Reading it in the paper?

15:37 You'll notice here that the radiation went way beyond four kilometers.

15:42 The poor people beyond 10 kilometers got radiated, and this is how radiation got in the food supply.

15:47 This map was not disseminated.

15:49 Good products disseminate the knowledge in a timely way. This one didn't.

15:55 Finally, the prime minister lost his job over there because it finally got out.

16:00 And the guy, you know, I don't know what really happened to his career.

16:03 But he designed the product effectively.

16:07 Good information products communicate importance.

16:10 This map of suitability for conservation in South Africa articulates very clearly the hot spots that are there...

16:17 ...and they help us quickly understand the areas of importance.

16:20 And good information products support decision making.

16:23 Somebody thought about these two maps, one where best in South Korea do I locate wind turbines, and where best do I drill for oil?

16:32 These both leverage advanced spatial analytics in their interpretation.

16:38 Good information products illustrate change.

16:40 These maps showing change in New Orleans over the last 40 years or...

16:44 ...climate change that's happening in a more dynamic environment illustrate the point.

16:49 And good information products can show status or situation awareness.

16:55 For example, in the bottom map, where is President Clinton spending money on big issues?

17:02 Or, where in Haiti did the money go for aid funding right after the hurricane?

17:08 Or in the upper two maps, where is the money being spent, in this case...

17:13 ...in the East Coast to the US by the government on some issue.

17:18 Next to it, where should the money be spent? Right? Very interesting combination of maps.

17:24 It's telling us not only the status of our spend[ing] but also the status of where we should be spending.

17:31 And finally, good information products can design the...can design the future if they're compelling.

17:37 The whole geodesign process is about that, in the case of Portland, in the city; in the case of Lithuania a whole country...

17:45 ...or in the case of Gombe, the Jane Goodall's open space and village planning efforts that are here.

17:54 These maps help us understand, and they supported, in each of those cases, action.

17:59 So in summary, it's not just the technology that enables your work.

18:05 It's also sitting down and designing those compelling information products that are timely, that disseminate the knowledge...

18:13 ...that communicate importance, that are...okay, so this is a little pet peeve that I have right now.

18:18 We need to spend more time designing maps, not just producing the bloody things...

18:22 ...and that means thinking out the process of geodesign and communication itself.

18:29 Well, that sort of summarizes what I wanted to get across.

18:34 Interesting, isn't it?

18:35 Information product design. It's one of the keys, I think, to...to geodesign.

18:41 This week, I want you to take very seriously. This is an important meeting.

18:48 I think we've got some important work to do.

18:50 I wouldn't say it's as bold as we're going to change the world, but I think sort of...

18:56 ...sort of what's...what's hanging out here and why I think you're motivated to be here is...

19:02 ...that you'd like to participate in something more than just your own effort.

19:06 It's about sharing information, learning from each other, building this little network...

19:11 ...and advancing the knowledge of what we think really matters.

19:14 So let me again say, thank you very much for being here.

19:18 We're going to see some exciting knowledge exchanged, and we'll have some fun, too.

19:23 Don't make it all too serious. We'll have beer tonight, and, anyway, thank you very much for

coming.