Geointeresting Podcast Transcript

Episode 24: Stacey Dixon

Sept. 15, 2017

Welcome to Geointeresting, presented by the National Geospatial-Intelligence Agency. Lately, we have heard a lot about taking bigger risks in technology to create innovative products and processes; a trend supported by the success of tech startups. One particular federal organization leading this charge is the Intelligence Advanced Research Projects Activity, or IARPA. IARPA aggressively peruses ideas that are potentially disruptive for the status quo. It's known for its groundbreaking research and development to address relevant future needs across the intelligence community. At this year's GEOINT symposium in San Antonio, we sat down with IARPA's deputy director, Doctor Stacy Dixon, about her work at IARPA. She talked with us about her efforts to advance careers in science, technology, engineering and mathematics, how she defines success across the workforce, and her predictions about the future of IT. Before landing at IARPA, Dixon was an NGA employee, serving as the deputy director of the Research directorate. She was responsible for overseeing geospatial-intelligence research and development for the agency. Stay tuned for Geointeresting.

NGA: As a woman in STEM, what are some of the challenges that you have had to overcome, and how can we encourage more women to participate in STEM?

SD: So the first thing that happens when I enter a room is I do a scan of the room. As much as I try to turn it off, it's really hard; it's the first thing; you look around and say, "Who looks like me?" And in many ways there are a lot of people who don't look like me in a lot of the rooms I am in now. Not that it's intimidating or that there is any judgment behind it; it's a natural thing you do. You look around and see who is there. So it hasn't been discouraging. I haven't let it stop me from being in a place. I just know that in many places I go I am going to be representing either my gender, my race or a combination of the two. I think it makes you appreciate when you do see other women in STEM, especially at senior levels, and that others have done it before you. You know in theory there are some who have succeeded and rose to the tops of the ranks; you don't always get to be in the room with them as you are working your way up the ladder. It hasn't been discouraging, though. I have found that I can partner with anyone; I can work with anyone. I have had the opportunity, and my male colleagues have been extremely supportive. In fact, I think the men I have worked for and with, and women I have worked for and with — I owe them as much appreciation and credit for getting me to step into new roles. Often times it's your peers who see you at your best and worst, but they see you at your best and know what you can accomplish and what you can apply your skills to. So even if you personally aren't necessarily ready or don't think you are ready for something, they may convince you otherwise. They may ask you and recommend that you step up to an opportunity. Despite the fact that there still aren't a lot of women in STEM that I get to interact with in the intelligence community, especially, it's nice when you do see them. It's nice to be able to help those that are coming up behind and give them something that they can aspire to. It's something I take very seriously.

NGA: I think that applies not just within STEM, but just everywhere; having those people in your career and encouraging you to lean in and step forward — that's awesome.

SD: We call it the positive peer pressure.

NGA: That's great. From your vantage point as the deputy director of IARPA, what sort of tech trends are you observing for the IC?

SD: For us, I think we are looking at two areas in particular: a lot more artificial intelligence. There has already been a lot of investment in the area, but with the existence now of so much annotated data that's out there and the increase in the compute power, I think we are only just getting to see what we are going to be able to achieve in that particular field. The other side of it is biology and synthetic biology — the research that has brought us to the point where we can do geonetting and what impact that is going to have in the future. Aside from sort of scary Sci-Fi movies, I don't think we have really come to appreciate all that is going to be touched by those particular disciplines. The two together, where you bring in the machine learning in addition to the synthetic biology, I think that combination is going to be something that is pretty amazing.

NGA: Wow. Recently, we interviewed Vince Surf, who talked about the importance of taking risks, and you have also encouraged the next generation to try the unexpected to lead to great experiences and opportunities. Can you talk more about the importance of taking risks? How have you seen the community change in that regard over the course of your career?

SD: I think there are times when it's easier for agencies to take risks, and there are times where it's really hard. When budgets are tight, it's harder. But those are also when taking those risks provide the opportunities to do more than you ever thought possible. There is a growing appetite, I would say, for risk taking. The question is, do we see it demonstrated, and if someone takes a risk and they fail, what happens to them? What happens to their career? What happens to their program? What happens to their confidence the agency has in them? That is probably the one thing where I watch it. I hear people talking about risk more than I necessarily see, and this isn't particular to NGA; this is in general with really any business. We all talk about the fact that we want people to take risks, and we want them to fail early, and then there's a penalty for it as well. The goal is to not have the penalty. At IARPA we try to encourage risk, and we are having the conversation about if we are going to fail, let's fail fast; just so we can divert the investment into something else. That means that we look for positive lessons even when we aren't able to accomplish the goals and milestones that we have set out for whatever reason. Generally speaking, we set milestones that are very challenging, and we may not reach them, but we still may discover some things along the way that are very useful for the community, very useful for scientific discipline, and while it's a failure because we didn't accomplish the goal we set out to accomplish, it's still a success because something was able to be useful. I definitely see, personally in my career, that risk taking has been about being able to step out into opportunities; not being afraid to shake things up and let go of the comfort of going to the same place that you know, the same people, and knowing that you can be successful in other environments and other agencies and other disciplines, fields, what have you. It gets harder as you get older, but it is something that has helped me to get unique skill sets that I can add to my own personal portfolio that I don't think I would have had or certainly would have taken me a lot longer of a time to get those same skills if I could have managed to get them in the same place.

NGA: How has that diversity of experience informed your career?

SD: So part of the way it's informed; it is being able to be successful in so many different areas that are so unrelated. It makes you more confident that you can take on challenges that have

nothing to do with each other, so that part of it has been really helpful in letting me know that I can really undertake any path that is provided in front of me. As the opportunity comes I shouldn't be afraid to step out on to it because I have been successful at other things in the past, and I can use those same skill sets going forward in the future. Specifically, I think all of those opportunities have helped me get to where I am today. I am really leveraging a lot of those same skill sets now at this current job. Being able to be comfortable around with the interactions with the Hill is one skill set I think is extremely valuable and will continue to be for any government officer. It is helping now as we navigate the budget cycles. It helps as we try to gain advocacy for our programs; all of them individually. Working with the different agencies — and when I started at the CIA, one of the first things they tell you in the training is, "You are an intelligence officer first." I took that to heart. Being able to work at various agencies and really to be able to dedicate myself to the mission of those agencies is part of that initial indoctrination where I am not specifically trying to make one agency better or only focus on one thing. I am looking out for the broader community. I think the jobs I have held, as well as the rotations I have held where I stayed at one agency but then was rotated to another; that's provided the same opportunity to really contribute to someone else's mission and learn more about the missions within the community.

NGA: What are some characteristics of a senior leader mentor that enable a creative workplace for innovative solutions?

SD: I would say in the creative environment especially, you need to allow people to have time to think about things that aren't necessarily the main thing they are supposed to be working on. We try to encourage our program managers to spend some time during the week to think about new programs, new projects, which can be very difficult when you are on the timelines you are on. How do you carve out the time to think strategically, to think creatively? It is really important to do those things. As the leaders of these organizations, we need to set those examples. Close the door if you need to, or walk around if you need to. Just sort of be in places where you are willing to take the time to ask questions and to encourage the kind of creativity and "what if?" scenarios; discussions that don't always happen if you are on a tight timeline. We talk about trying to find ways to sort of, by process, figure out ways to make an organization more creative and innovative. I don't know that necessarily — there are some processes that I think can, but there is such a thing as being too rigid and trying to engineer creativity. And so sometimes you need to let it happen, and that's the natural thing; not rushing people to come to solution; not rushing them to get to something that's practical. Let them stay in that place where it's about the "what if?" for a little bit longer and then kind of guiding them to a place where you can come to something more practical later on.

NGA: I think it's really interesting to hear you say that because I think time is the secret commodity of the intel community. Something we talk about all the time — giving more time to decision-makers through intelligence analysis, so it's really interesting because I completely agree. Time allows you to be creative, and then you have the time aspect of you have got to give people information yesterday. What piece of advice would you give to someone considering a career in the IC?

SD: Come on in. Really, it's a community of great opportunities no matter where you end up. The mobility that you have between the various agencies means that there is no place to get bored. There are so many interesting missions, and at the end of the day, you are really saving

lives and making the country safer, [and] I can't quite think of the places to work where not only is the work really rewarding because you are able to accomplish a goal, but knowing that you are helping your family, community, country at the same time; that you are doing really interesting things. I can't think of other places where you get to do both. I would say, "Come on in." Don't be put off by the process you [use to] get into the community which can be a little longer than other jobs that may come along earlier. It is working for the government, so you aren't going to become rich by doing that, but you will become rich in your experiences, and in the long run, being able to look back — I don't think I have met anyone that says there are any regrets. They don't regret having come into the intelligence community, and it's never too late. You can be in industry or academia and then decide to come in. I would love to see more people going back and forth. There are a lot of ways to contribute to the community even just working for the government on one side.

NGA: Are you starting to see that IARPA — a little bit more of the people coming in and the flexibility there between industry, academia and government?

SD: I think places like IARPA are sort of made for that because people are on term-limited positions. They are there for five years. We want to bring in the best and the brightest from whatever area. So we bring in some from the government agencies, some in from academia and some in from industry. People come in from all sorts of different backgrounds. It would be nice to figure out how to do that from a tradition agency as well. We take more advantage of some of the hiring tools that are out there that are a little creative and flexible; even just making it easier for someone who leaves the intelligence community from the government side to come back after they spent some time out in another environment.

NGA: What is one thing people would be surprised to learn about you?

SD: I come off as very conservative, but I am actually pretty adventurous. I enjoy doing things sort of in my spare time like zip lining, trampolines; you sort of name the sport that's off the beaten path. As long as it doesn't involve bungee jumping and falling, I am good. I enjoy trying things that are a little bit different, whether it's experiences, foods, traveling and going to different countries. One of my favorite things, as strange as it sounds, is to go into the grocery store in different countries. You learn so much about a country by seeing what products are available for the population to purchase; hearing the languages and tasting the foods. It's the adventurous side because at work I come off a lot more conservative than I really am deep down.

NGA: I can definitely validate your adventurous side because I think I have seen a picture of you upside down on a zip line before.

SD: There's the zip-line picture, there's the trapeze picture. Yes, some of those are floating out there.

NGA: One final question — after hearing about some of the upcoming research projects on the horizon for IARPA like [inaudible], I have got to ask, who comes up with IARPA's project names?

SD: The program managers themselves come up with the names, and it's quite a feat of an accomplishment to start with something and then come up with the acronym. That's usually how it works out versus the other way around. For some of the ones that mentioned, we do have a contingent that's very interested in Tolkien. There is a lot of Tolkien references for the Tolkien fans out there. Others are just names that seem to make sense or names that they have liked, and they will find a way to make the program fit into the name. Yes they are very creative, and it can be very difficult to remember all of the names and the acronyms to the names, but we try not to put too many constraints on that because it's something they are going to live with for three–five years. You want it to be something they enjoy talking about but also have a good origin story for how they came up for the whole project in general, and it's important to let them run with that.

NGA: I think that's one thing we can all agree on — more Tolkien acronyms in the IC.

SD: If our program managers have anything to do with it, you will see more.

NGA: Well, thank you so much for sitting down and talking with our podcast, and yes, I can't wait to see what more comes from Dr. Dixon in the future.

SD: Thank you for having me, and to the listeners, keep listening. These are great opportunities to learn about what's happening in the intelligence community.

Thanks for tuning into this week's addition of Geointeresting. The National Geospatial-Intelligence Agency creates greater decision space for warfighters, first responders and national decision-makers, presenting critical context and information to support U.S. policy and civil military operations around the world. Geointeresting is produced by the NGA Office of Corporate Communications. Don't miss an episode, and start subscribing on iTunes or following us on SoundCloud. If you enjoyed this podcast, please rate us on iTunes. Thanks for listening.

Approved for public release: 17-658