

# AEROSPACE

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Ben Iannotta: All right, thank you very much for bearing with me there.

Wanda Sigur: Absolutely no worries.

Iannotta: I gotcha. I'm thinking talk for 45 minutes, maybe an hour, I don't know. I blocked an hour, but we don't have to talk that long. Whatever works, I'm kind of just giving everybody the same amount of time. Do you mind, just by way of introduction, I think you have the copy of last year's article, or the article two years ago that we did when we interviewed candidates.

Sigur: I do. Yes, thanks for sending it.

Iannotta: So what I'm doing is I'm recording, and then we're going to run excerpts in the magazine, and we'll have a transcript online, like a lightly edited transcript. You, we'll probably take out some introductory stuff and small talk and all that. If you misspeak or something like that and you want to clarify later, we might bracket in, you know, Wanda followed up to say X, Y, Z; that sort of thing. I don't anticipate anything like that, but I always like to have a process in place for that if it should come up. But it should be just kind of fun, a good chance to hopefully get good turnout of members voting on you guys. And really an informed electorate, you know? Who you are, what your thoughts are. So I have your candidate statement here, and I've read through your bio info. So if it's OK, I wanted to ask you a couple questions about the bio section that you sent along.

Sigur: OK.

Iannotta: So what are you currently doing? If anything. If you have a position. I just don't know.

Sigur: So, I am currently an independent consultant. I have the opportunity to work for a number of different clients who range from, work for the government, to large industry, but mostly I've had the opportunity to work closely with new organizations and businesses. In fact, most of them incorporated in 2018.

Iannotta: OK, great, that sounds good. Are these like new space businesses?

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- Sigur: Absolutely, folks that are enthused about the new opportunities opening up in space. We have great ideas for how to transform the industry and have committed their time and are looking for investors and how can we make a new reality happen. So it's a very exciting opportunity for me, and I get a chance to leverage my experience and contacts. I'm actually learning quite a bit about how to get things done, after all these years in industry. Seeing them in action and getting engaged in the things that make them passionate has been extremely fulfilling.
- Iannotta: Yeah, it sounds like it. In the notable section – and you don't have to do it right this second, you could follow up later – what I'd like there is, an example of an achievement by Lockheed Martin that you're proud that you contributed to, or you led, or was your brainstorm, or something that's an achievement.
- Sigur: OK, I'll gladly do that. I frankly turned that in before I read what the other notable sections looked like.
- Iannotta: Right.
- Sigur: So I appreciate the opportunity to redo that.
- Iannotta: Yeah, no problem, just give it some thought. If you could do it by like — today's Monday right? If you could do it by end of the day Wednesday — that'd be tremendously helpful. We're on deadline next week.
- Sigur: OK.
- Iannotta: Then, OK, so on the age question, always a favorite. Can I twist your arm? What's your concern?
- Sigur: Only because, why? If you give me a good reason of why that that's important? I've always thought that was [inaudible] to include.
- Iannotta: Well I guess because it's part of who we all are. Where we are in life, and how old we are. And really, just, some readers will think, "Well that's crazy you included that," and some won't think anything about it, and others will think, "Oh, well that's interesting." You know, just a fact about who you are. And I just, you know, my concern is, you know, I want to be consistent with everyone. When I looked at it, I kind of said – I was with my associate editor, Karen Small, and we kind of, I kind of said maybe we should just see if Wanda would mind if

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we kept it "really?," because I don't know. You know, it's kind of like, I don't know, it's a good question.

- Sigur: I think "Really?" — is actually a perfectly acceptable line to put in there.
- Iannotta: Right, we smiled and that's fine. I mean, if you're comfortable with it, because you know, the other two people provided their ages. So I doubt anybody would go, "I'm not voting for Wanda because she said 'really?'" You know? But, I wanted to disclose that, you know?
- Sigur: If I was hoping it would provide an opportunity for dialogue, if someone thought that a point of interest and I get the chance to meet folks, I'm certainly willing to talk about what that type of a question means to me.
- Iannotta: OK, you mean on the age?
- Sigur: Yes, and anything that's still stereotypical, that message is the kind of answer you'll get from me.
- Iannotta: OK, well so-
- Sigur: Something that forces dialogue, Right?
- Iannotta: Yeah I mean cause, cause kind of what went through my mind was, OK, I'm trying to treat everyone equally but for whatever reason, oh boy, you know? I suppose this is dangerous territory, because I don't really know if I have data on this, but you know our society for whatever reason, I feel like women, you know are made — I feel like a lot of times men feel like they are hitting their stride and women feel like, you know, they've got to, not — they're concerned about revealing their age. I don't know, I could be wrong.
- Sigur: If that's a perception you have, then it's true for you, but —
- Iannotta: I don't know.
- Sigur: That's fine. I know that's not an uncommon question and certainly it was part of the last exposé, and describing the candidates. So we can talk about it.
- Iannotta: Yeah, well I think it's interesting. I mean I don't want to overdo it as a big deal, but you raise a good point, because in a job interview we don't ask how old people are. But, when somebody runs for political office, we definitely ask how

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old they are, right? So, you know, other than you are a functioning adult over 18. I suppose we'd ask that in a job interview. Anyway. But I don't want to belabor it, if you don't mind, we can sort that out later. For now we'll go with "really?" If you become uncomfortable with that, you know, or change your mind, whatever, you could let me know. Would that work?

Sigur: That works just fine.

Iannotta: OK, good. So, if it's OK I'll just jump right in. So, I know you know I've looked at your resume and your bio. So – but just tell me about when you became involved with AIAA and what prompted you to become involved?

Sigur: Sure, I became an engineer after spending time in school following a passion for learning and focusing on great grades. Focusing on contacts that I thought would help me land a job, and I was very fortunate in having all of those things aligned and my first formal job as a graduate engineer was with Lockheed Martin. And I soon realized that getting a job was just the beginning of the journey, and fortunately the AIAA chapter, the local AIAA chapter, was very active, and in that setting I was able to understand a bit more about what a career looked like. Which is very different from executing as an engineer. It's very different from the assignments, which are hopefully if you've got a good boss, pretty easy to understand. Understanding what a career was like, became something that the AIAA organization and engagement with AIAA taught me. So that was my earliest experience with AIAA, and I think that it still provides a level of foundation for early career professionals and can be a means to having them understand what it's like to do more than just execute on the engineering piece.

Iannotta: OK, what's some of the early involvement you had with AIAA. Do you remember how it helped advance your career in any specific ways?

Sigur: Surely, AIAA was then and it still is the gold standard for technical achievements. I had a boss who had a perception that for technical professionals, a paper equals one year experience. So if you're able to do enough good engineering and scientific work, document those data, have a conclusion, and write a paper. It was an indicator of a year's experience. So as you can imagine, being involved in AIAA from the perspective of getting smarter, meeting senior professionals, and having those tough dialogues. And having your hypotheses challenged, and making sure your data were aligned. Those things were critical in my early years as an engineer. So that fundamental role, AIAA played that, and continues to play, were extremely important. But

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more than that, I had a chance to get involved in the local chapter's outreach efforts. So with that I got involved in helping to get speakers and gradually for a few years and showing some initiative became secretary and treasurer and then vice president.

Iannotta: OK, so here you are, you know 27 years later. Maybe? Oh I don't know if I have that number right, apologies. Here you are some years later, you want to be AIAA president. What do you see as the roles of the AIAA president?

Sigur: So let me take you on a journey, I guess. So when you called, I was watching some footage from the OSIRIS-REx satellite, which today reached the orbit around the asteroid Benu.

I heard: Yeah, I heard.

Sigur: Which to me, that's magical. The fact that we're able to do those types of things just blows me away. And I consider deep space — and we had a landing on Mars last week and I had the great fortune to meet some folks Thursday and Friday of last week who were talking about challenges in aeronautics with a focus on autonomous flight and urban air mobility and I am just solely impressed by how fast the world is changing, and aerospace, and how exciting it is. And then I, then kind of poking, look at what the numbers are for AIAA, and think there is so much happening in the world today, you would think that there would be a clamor for everyone to become part of the largest professional, technical society in aerospace. I think AIAA is that society, but I don't see the numbers reflected in the numbers of folks who are opting in. But what I do see are folks more excited about the things that we do every day than they've ever been before, and people asking for new answers. I think that marriage of excitement for what we do and for AIAA is an opportunity for me to get engaged.

Sigur: I still remember what AIAA did for me back in the early days. It established a foundation. It was tutorial. It was a chance for me to meet folks that helped my career go forward. It hasn't changed its charter. I'd like to take the passion that I have for making an organization that has this level of potential and capability, be that foundation or floor for people that are asking those tough questions and are opting in as engineers. An organization for a journeyman, to say "This is where I can learn. This is what it takes to be successful in this career." And finding those answers in the AIAA seems to be something that, if I could help make it happen, would be extremely rewarding.

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Iannotta: So you want to, it sounds like you want to be president because you think you can help increase membership?

Sigur: I can increase membership, but more important than the numbers. I can help make those folks who are opting in to this exciting industry be more capable. Help raise the force so to speak for engineers. It's something that I am doing and will continue to do regardless. So, the passion I have for making folks successful in this industry, particularly as early career and midcareer folks, is extremely important. I see that there is a possibility for a more diverse – in fact a mandate – for a more diverse workforce, and they have an even greater need for someone to help them understand the fundamentals. And AIAA seems to me that type of an organization that could provide a way for those things to happen.

Iannotta: So you've kind of touched on a conundrum I see. I work at AIAA, so of course I want us to succeed. I mean, I have a vested interest in us succeeding. But you mentioned OSIRIS-REx getting to Bennu. You're working with new space companies. Companies are working on urban air mobility, electric VTOLs, you've got rocket re-usability by SpaceX and Blue Origin, and others coming. So all these great things are happening, and yet AIAA's membership is declining. So, why does, you know, the aerospace community still need an organization like AIAA if they're having so much success? And yet our membership is declining.

Sigur: So to reframe your question, you're asking why does the profession need AIAA?

Iannotta: Yeah, it just seems like they're doing really well. I mean, and of course we have a lot of great members, but what are some of the reasons – would there be more success if we had even more members?

Sigur: I absolutely think that's true. I think there would definitely be more success in the industry if we have a stronger AIAA. I think there is a value prop for professionals in joining AIAA. I think there's also an opportunity to provide unmet needs by changing a few things and strategizing a bit differently within AIAA. So to frame this, what I see is excitement, is drawing a number of new professionals into the organization.

I get the chance to work with amazingly talented folks, who have almost just embarked on their career. They are very excited about doing something differently, but they have a passion for doing things faster than ever before, and have a need for demonstrated mission success in very difficult missions. Wouldn't it be fantastic if they were able to take advantage of the resources

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that AIAA has, the expertise that AIAA has, and engagement with fellows and others to provide that safety net of information and data that allows for them to be successful? What we don't want to have are folks that are investing in a new vision of space or aeronautics and find themselves marred in failures. That is a risk without taking advantage of the wealth and knowledge that exists. I think AIAA represents an organization that has all that capability.

Sigur:

For the folks that are entrepreneurial in spirit and are starting in these new arenas, certainly that seems to be an attraction that would have them flock to AIAA, but for those folks who are engaged in traditional businesses, I think **that being able to not just have them engage with the smartest folks on the planet in our business, but also have them become aware of career opportunities and how to grow their careers, would make it a more attractive group. As you know, you're in AIAA, an employee, the numbers of members are dropping, but most significantly they're dropping in the midcareer range. The senior members and members, folks that are of that level of career expertise. The 10-year professionals are not finding AIAA to be their organization of choice.** I think that can be and needs to be turned around in order for us to be the professional organization, professional industry, I guess, that we could be.

Iannotta:

Do you have any sense of why people in that demographic tend to leave AIAA?

Sigur:

I think I do. I have a little bit of insight as to what's going on. It's always putting together materials to summarize the things that I do and professional organizations and track where I have been involved. I've been listing all the presentations I've made in the last years of my career. It seems that I was making a presentation every week to somebody, but not all of those places were either AIAA or AIAA-related. They were organizations that were focused on career development, on supporting the needs of diverse populations, whether it was NSBE, the National Society of Black Engineers, or National Management Association, some group that focused on how to get folks to move ahead in their careers. I think people are active, they are engaged in organizations, but not necessarily engaged in AIAA because it doesn't focus on what helps them move forward. So there's certainly an opportunity to make presentations and to write papers if you are technically oriented, but the organization hasn't necessarily met the developing – developing needs of midcareer professionals.

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Iannotta: So, is it because maybe when I get in my midcareer, maybe I'm a manager. I'm no longer a day-to-day engineer, so I don't need to publish papers. And maybe I think I have the basic technical underpinnings that I need. Could that be what's happening?

Sigur: I definitely think that that's part of it. So I think that there's been certainly over the last couple years a very successful push for early career professionals to get involved with AIAA. I think if you look at the numbers you'll see that those numbers have grown. An early career person is looking for – perhaps even college students – they're looking for more knowledge about the profession, they're looking for opportunities to present their papers perhaps. They're looking for contacts to get them into the industry.

I think a midcareer professional is looking for something different. They're looking for perhaps some information on where they are in their career and what else they could be, so something that assesses their career status, some communications training, as you know a good communicator can have quite a bit of an advantage over someone who is struggling, some way to vision a career trajectory. At least in the jobs that I've had that's been a big request from folks: They want to know what they can be when they grow up, so to speak, even though they may be five to 10 years into their career.

\ Leadership: leadership challenges are often presented in folks who are often asked, well, do you want to be technical or do you want to be a leader? That decision is a tough one, understanding what directions careers can take and how they can still have fun and grow depending upon what they decide. And I think in many cases in a career, my personal experience is that folks are struggling with how to provide value not just to their boss, but to their boss's boss. So those kinds of conversations are I think part of what a midcareer professional wants to understand.

And there are experts within AIAA and tools that can help provide that. So my experience with career pathing, I think, is something that would be of value to bring to the overall population and would perhaps address some of these gaps and hopefully attract more folks to the organization.

Iannotta: So, I wanted to circle back to something you said earlier. I noticed in your candidate statement, you know, you talk about growing an inclusive culture. Could you talk about that a bit? You know, what you mean, in what kind of sense you mean culture, and what the benefits would be of that more inclusive culture.

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Sigur: When I speak of an inclusive culture, it's one that recognizes the space of successful engineer organizations maybe 10 years from now, 15 years from now, 20 years from now. It's an organization that values people. It's various points in their careers as we've discussed, whether they're new professionals, midcareer professionals, or the seasoned professional who's had the opportunity to work in every program and seen every flavor of problem. I think we need to cultivate certainly that entire spectrum of experience in AIAA.

But also, I think that the face of the successful engineering organization will reflect the various communities that are producing engineers. Whether it's young women as well as men. Whether it's people from diverse ethnic backgrounds. All of those folks should find that they have a welcome place within the engineering community. When I spoke to developing tools that encourage the journeyman as well as the people that have, the [inaudible] and presenting papers. That's really what I'm talking about. Where do they find that they are getting answers to their career challenges as part of AIAA as a professional organization? And when they get those answers or find themselves to be successful, they now will help to create the other side of the value proposition for leaders. To say we want members who – we want employees who are members of AIAA to be part of our organization, because we fill those gaps. I see this as being somewhat of an integrated solution that encourages inclusive participation from age groups, from gender perspectives, from ethnic perspectives. So that's what I generally mean by an inclusive organization, one that feels welcoming to folks wherever they are in their career.

Iannotta: Do you think — I'm switching gears on you — but do you think AIAA's revenue is a sound metric of whether we're providing adequate value to members?

Sigur: I don't get the question.

Iannotta: OK, so, well at AIAA there's a lot of discussion about, you know we need to increase revenue. So, if you increase revenue, does that mean you're serving members better necessarily? I'm just trying to gauge that.

Sigur: Well, maybe, maybe not. If you look at the AIAA revenue stream, predominantly, this is predominant revenue from the sale of publications and other products, right?

Iannotta: Right.

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Sigur: I think that in and of itself is reflective of the value that it provides to a certain population. The numbers of folks that are finding these products useful are the ones who are providing the funds. As you provide things that are of more interest, then certainly the revenue stream will increase. There's going to be some opportunity to get some revenue from additional members. I think certainly that would be an indicator of the value that AIAA provides. It probably merits some consideration as you look at other ways to generate revenue. I'd like to make AIAA more accessible as an organization. As I mentioned before, I want it to have a vision of AIAA being inclusive, which means that it's more than just those top folks who get a chance to attend forums, but perhaps using digital media and other tools we'd be able to reach wider populations and provide ways for them to express their competence and capabilities. I think that within that framework there are also ways to increase revenue.

Iannotta: I gotcha. So, what do you think about AIAA's strategic plan? Do we have the right plan?

Sigur: I think that the way the latest movements in the AIAA strategic plan are definitely in the right direction. The new governance model is of particular interest, in that it encourages a more accessible organization. I think that is absolutely critical to bringing in more people and having them feel that this is their organization, and they can feel some ownership in the way things are moving forward. So I'd say for folks that have been working this over the last five to 10 years, the movement is very clear, and it's in fact one of the reasons why I would like to get personally involved in executive leadership. I'd note that the strategic trajectory I think is very, very promising.

Iannotta: What are some of the interesting technical or, you know, related areas where you think – well that really interest you and where you think there could be an opportunity to find members? You know, what are some of the interesting areas where you think AIAA hasn't reached into. I don't whether it's marketingwise or outreachwise or where do you think the growth areas for membership are?

Sigur: I think that there's certainly a number of key technical areas, and there are opportunities for answers, so to speak. It's why AIAA there will be more interest and engagement, and a lot of those are forward leaning, and we talked a little bit about autonomy and urban air mobility. I think those are emphasized and AIAA will get more folks interested. They're hot topics, so cybersecurity – are important – but I also think that there's another piece of – let's start with commercial space. Where the engagement of the entrepreneurial and intrapreneurial mindset will not only draw folks to AIAA but also service a need

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for us to start providing communication tools for folks that want to make more of their own personal careers.

I think that commercial space is a huge draw for a number of folks. The ability to do things like use small satellites in order to not only grow, grow space, but increase interest in science and access to space will be big, big draws for AIAA. Most recently the InSight mission for example has those two little satellites on it with, I guess, optics as well as GPS. But those two little satellites provided a story that local news media glommed onto, that the big satellites that are already around Mars, couldn't. The fact that that got so much airplay, so much visibility to me indicates that there is something there. There is an interest in folks, in having access to space that they never have had before.

I know that when I talk to the folks that were in my team about humans in space, there were a number of people who felt that human exploration really belonged to astronauts, and as people were telling those stories, it was interesting [inaudible] you could see some of the professional eyes glaze over. Space is not a place that belongs to just a few folks that are just very lucky to go into deep space. They want to own space, they want space to belong to them, and I see that in the so-called New Space companies that I work with now. We need to make things more accessible. And to bring those visions and stories into their own hands I think will be extremely compelling, if we're able to make that part of AIAA's value prop.

lannotta: Okay, so, going back to membership – [telephone noise] you okay?

Sigur: Yes.

lannotta: Sorry, I heard a click. Do you think as far as AIAA targeting membership growth, do you think that the membership goal is realistic? The growth percent that's been set?

Sigur: Absolutely, in fact I would like to beat the goals.

lannotta: Right.

Sigur: I think that – So I don't know if I handed [inaudible] in any of the information you read, but I do have a vision for AIAA. It's a statement that I'd like folks to start using after changes are made. [Inaudible] to join AIAA because it helps members succeed. But not only does it help members succeed but it helps them succeed faster. I think that view – that view of an organization that focuses not

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only on its own charter, but on individual charters. On the kinds of things that motivate and inspire individual members to succeed. That switch in view will provide an opportunity to outreach a bit differently, and that will start to engage folks that are working at other organizations, to help their careers run solid. If they can find those answers in AIAA, I think that they will gravitate towards the organization. So yes, I do think that there's an opportunity to grow the organization significantly by [inaudible] folks that —

lannotta: So more than the 3 percent goal that's in the strategic plan?

Sigur: I do.

lannotta: Yeah, I know well that would be great to see play out for sure.

Sigur: So let me ask you, what organizations do you belong to?

lannotta: [laughter] Well, the National Press Club. That's the only professional organization I belong to. I've got, you know, interests of an outdoorsman, so I'm member of a couple of different organizations: Trout Unlimited and Bonefish Tarpon Trust. I think a lot about that, about, you know, what I get out of those, and, you know, it's interesting because the reason I'm a member of those, right, is because I want there to be clean water with healthy fish for myself and future anglers. So it's kind of a — I don't want to say it's altruistic — but it's not just about me. So I don't know if that applies to a professional organization.

Sigur: Sure it does.

lannotta: Right, because, like, National Press Club, same way, right? I think I'm helping press freedom, right?

Sigur: Exactly, so just as you described, why do you feel it's worth your time and money to participate in an organization that there's no difference between your goals and objectives and why other people join organizations. Because it helps make the environment better. The environment that they work in better, and more available. And because it provides the interactions and networks that they need to have in order to be successful. That is true for I'd say just about everybody. When you're able to answer those questions for the folks are not, they hand up and down and say yeah, that's the group that's doing that. Then they will find time and money to participate in. I think that's the nature of the challenge for AIAA.

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The other piece of AIAA strategy is that it's all personal. So as we talk about AIAA and the big numbers and the big publications and the big forums, we need to recognize that the AIAA that a person experiences as an engineer is the AIAA that touches them at their job. That touches them as part of the kind of the things that they do. That touches them as a perception that their boss has of the job that they're doing. That outreach I think is something that's worthwhile, and that's going to be part of why we can turn AIAA around as we start to talk to the individual leaders as to what their members are looking for and how we can get them engaged to help answer their own questions.

Iannotta: Right, what – of course in this day and age we've got the internet, and Google, and all sorts of ways that people can get information. So what is it that you think membership in AIAA gives people that they can't get those other ways? Maybe from your experience?

Sigur: From my experience you can get tons of data. Tons of stuff. It's like too much stuff.

Iannotta: Right.

Sigur: As you look at the web, how you frame a question, what you ask. I mean you can get papers. You can get more papers than you know how to put your head around. What you don't get necessarily is information that you can use. You don't know who the expert is. You don't know all the kinds of things that you read, which ones worked. You can spend tons of time and energy filling your head up with stuff that may or may not be useful. I mean you're in this business, you know that there's just tons of information.

Wouldn't it be great if you were able to call the guy? I mean that's what's the difference between people at the top of the organizations and folks that are working in the trenches so to speak. They know the guy. They know the person who actually executed the task, that did the task that's representative. They know who's in charge of the organization and who actually makes the decisions. They know how to sort through the data to get to the essence of what makes a technical decision correct, or a business decision correct, or a career decision correct. When AIAA can motivate its resources [inaudible] it becomes an extremely powerful organization. I know that that's how I've been able to use the contacts that I've made through AIAA and I think that having that accessible to folks is a big deal.

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- Iannotta:** So like having a network of friends, acquaintances, experts you know that can help you solve whatever problem you're going to end up encountering in your professional life?
- Sigur:** Exactly, but more than that, they know where the data is. They know what report you needed to have have an order to make a successful conclusion. They know that as you're looking at —
- I'm working with a company now that's working on design trades and we were able to bring in an expert who was able to sort through all that information and was able to cut months off the schedule. Having the insight to be able to put your hand on the resources, or know which of the resources are actually critical and pertinent to your problem at hand. Those are the kinds of things that networks, that having access to the right information can do. I think AIAA is an organization that can make that happen.
- Iannotta:** Well I know in my journalism, this definitely comes up now and then where you know you'll ask somebody a question and they'll say, "Well it's just right there if you Google it." The thing is, if you get to the right person, you can get your question answered a lot faster with a lot more confidence, and you can state it a lot more confidently if you actually have that expert on the phone with you. When you rely on Google or reading your interpretation of a technical paper, I just don't think you can be as authoritative, from my experience.
- Sigur:** Oh, absolutely. I couldn't agree more. I also think that there is more data – well put it this way: The fact that there is so much data, makes you even less informed than you would be then if you had spent that time working on a test, or something that was directly related to the problem or issue that you had to resolve. There are so many things out there that it's, it can be more of a distraction than a help. Having the expert and knowing how to get down to the right person or report or government agency has and can make all the difference in being successful, on time, or just getting stuck in the forest for the trees.
- Iannotta:** Have you seen one of the focuses of AIAA is to be the leader in curated aerospace content? I was curious, you know, what your thought is about that, and maybe you could real-world it. What that means to you, if anything? Curated aerospace content.
- Sigur:** I think that's an amazing goal, but it frankly needs a bit more work in order to reach a successful conclusion. That is an extremely important objective in a

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technical organization. I think that there are some disciplines that are doing it very well, and others there are some challenges and opportunities to head in that direction. The more focused the questions and issues are, for example, I was talking to some gentlemen about hypervelocity challenges. Because the numbers of experts are limited, they are able to direct the numbers of engineers that are trying to work through those problems very well and very efficiently. In some bigger areas, it's a lot more difficult.

lannotta: So, like, obviously you had a great career at Lockheed Martin. A major company like Lockheed Martin, does it have a need for an outside group to curate aerospace content? Or does a big company like that kind of do it itself?

Sigur: So yes and yes.

lannotta: All right.

Sigur: A big company has access to large lessons-learned databases, for example. It has a, probably, a great number of experts that are involved in similar problems. And if the challenge is something that's basic, well I try to find the best analysis tool, there are probably lots of folks that can guide you toward something that might be useful –

lannotta: And that's probably part of the – [Crosstalk] I'm sorry, I spoke over you. Please continue.

Sigur: Oh, I was going to say that's just part of one of the benefits of working for a large organization, they have that type of information and data and experts that can guide you. Even very specific answers. Let's say tin whiskers or something along those lines of rad-hardened electronics. They probably have [inaudible] can tell you what's the best thing to use and what's the history.

lannotta: You said tin whiskers, right?

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Sigur: Right. Tin

Iannotta: T-I-N whiskers.

Sigur: Right, tin whiskers. A specific problem that's difficult, it's a challenge, but an organization will probably have a rich history of test data and experience and programmatic examples to guide you down the road. But if, on the other hand, your question is something that's a bit more difficult, or not necessarily cleanly resolved, say, for example, you're trying to develop the most effective, low-cost, high-production tool for mining on the moon. How is that going to be in the history, or database of an organization? Those tough problems that require you to be smarter than anyone's ever been before require access to resources and people that have done things across the world.

I had a recent dialogue with folks that were looking at nuclear reactors for space. The solutions for that were really from across the globe. That's where an organization like an AIAA can provide access to folks that have broad experience, that have different expertise, that perhaps maybe could only have been developed within a government agency – which by the way was the a case here – or a very specialized laboratory, that's where AIAA shines, because it can make those marriages happen that would never otherwise be available to you.

Iannotta: So I'm kind of going over things and I realized, you know, I think we touched on this, but it would just be great for me to ask it again, and so maybe you can really take kind of a clean run at it. So, what do you think the reasons are that AIAA's membership has been declining?

Sigur: I think the organization, as great as it is, has failed to meet the needs of midcareer professionals.

Iannotta: Right.

Sigur: Their challenges are certainly technical, but within five to 10 years of experience, they're probably pretty good technical experts. What they're looking for is not found for most of them within AIAA as it's currently set up and as it's currently being executed.

Iannotta: OK.

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Sigur: However, AIAA does provide many, many resources that could be used to their advantage, and I think an appropriate outreach to them to understand what challenges they have is critical so that we can craft new solutions.

Iannotta: I follow you, so because we're starting to run low on time. Is there anything I haven't asked you, or anything you wanted to kind of chime in with? Maybe I haven't given you all the opportunity to say what you need to say?

Sigur: All right, what I'd like to do, I guess, is just to summarize what my goals and talking points are to you. [Inaudible] adequately represented by questions and answers. So what I'd like to start out with is, I'd like to stimulate AIAA's growth by energizing and leveraging our diverse and across the entire spectrum of professionals. I'd like to address cross-spectrum member challenges.

Iannotta: What do you mean by cross-spectrum?

Sigur: Across age groups. It's more of that early career, it's midcareer as well as seasoned professionals. By refining existing services and developing new services to increase value. [telephone noise] Are you still there?

Iannotta: I sure am. Maybe it's call waiting.

Sigur: My apologies.

Iannotta: No problem. It's not live TV.

Sigur: [laughter] And I'd like to make the organization more accessible by strengthening our forums and taking advantage of digital tools.

Iannotta: Right, yeah, OK. You know, before I let you go, when you get back to your notables section, or maybe you can let me know now. I'm curious. I think I might have read this. I'm curious what the context was for your Silver Snoopy award? You know we don't really cover awards, but we definitely want to illuminate the things you did that were award worthy, if that makes sense? So, I don't know. Was there a particular shuttle project, or station?

Sigur: It was an acknowledgement of the role I played in the return to flight after Columbia.

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lannotta: OK.

Sigur: So I was the program manager for external — the second return-to-flight program manager - for external tank, and we had a big challenge in that the return to flight was a big deal and we wanted to redesign the shuttle. Redesign the external tank that we were providing to introduce no damage to orbiters, and the team did that but they did it — we did it — in the space of recovering from Hurricane Katrina, and 96 percent of the workforce was homeless, and impacted, and worked through that and not only provided a safe vehicle, but we had to crank up production rates to five times what they'd been ever, in order to support fly out of the program. And do that amid personal challenges, so that was where it acknowledged.

lannotta: Something didn't come through quite clearly enough. Support what about the program? When you were talking about production rate. I guess production rate of what?

Sigur: Five times.

lannotta: I'm sorry that — of what?

Sigur: Of the space shuttle external tank. In order to support the fly out of the program. So in the midst of the recovery post-Columbia, the shuttle program was, announced, that it was being cancelled. So the team cranked up production while revising the processes and supported a successful fly out.

lannotta: OK, great, yeah I gotcha then. I just — some of the words weren't coming through clearly. Anyway, all right, well I really appreciate all the time. This is — it's a real treat for me to get to talk to you and the other candidates. I mean, I'm sure it's always a great choice that members have when it comes time to do this, but never more so than this election, that's for sure. Some great people.

Sigur: Thanks for your time.