Roundtable: Prince George's County and The Innovation Ecosystem

July 24, 2023

Dean Chang (00:00:00)
Welcome, everybody. I'm Dean Chang. I'm the University's Chief Innovation Officer. I like to always start by saying Dean is my name, not my title. I was appointed Dean by my mom. It just helps clear some confusion up right off the bat.

Congressman Glenn Ivey (00:00:14)
She had a vision. Yeah.

Dean Chang (00:00:16)
She knew I had to be in academia. Exactly. It was Mom's. So I'm delighted to welcome you to not only the University of Maryland, but the Idea Factory, this building that we're in, it's a fitting place for today's conversation about invention and innovation. I want to thank Anaum for an awesome tour of Startup Shell. Thank you, as well as our robotics center. Just real quick, I have to say, University of Maryland's brag points, we've been ranked a top 10 College for entrepreneurship for eight straight years. We're ranked number seven this year number four among public universities. But University of Maryland, entrepreneurship is not just about starting companies. It's about creative ways to tackle the biggest challenges that face our communities and face our planet. And so everyone, whether you're at a startup at a large company, in government, and nonprofits, it cuts through all of us. It cuts through all of us in this room. And so I'm really excited to have this group, and to have this discussion here today. So just want to welcome you to the University of Maryland. I think David and Frank also want to give a quick welcome before we let our esteemed Congressman kick it off.

David Kappos (00:01:22)
Yeah, well, great. Well, thank you very much, Dean, and congratulations on putting together a fantastic program and this wonderful, wonderful facility. I just want to welcome everyone on behalf of C4IP, the Council for innovation promotion. I'll turn it over to Frank to say some more words about that for a moment, but we're super pleased to be helping to put this program together and to spend time with Congressman Ivey, and we'll look forward to a great discussion this afternoon, Frank.

Frank Cullen (00:01:49)
Thank you, Dave. Thank you, Dean also appreciate the wonderful tour and amazing things going on at the University of Maryland. So I want to thank the Congressman for making time today to be with us very special to have you as a guest, and also appreciate your leadership on so many of these issues in Congress. Thank you, Congressman. So for those of you who don't know, I'm Frank Cullen. I'm the Executive Director for the Council for innovation promotion, C4IP. We are co chaired by two former USPTO directors, David Kappos, who's with us today and Andre Iancu. And the whole purpose of C4IP is to try to speak about the important role intellectual property plays in driving our innovation ecosystem and our innovation economy. We saw some of that on display today. And we're very excited to learn more about it during today's discussion. I'd point out that one of the most important things about intellectual property policy is has traditionally been bipartisan and even nonpartisan, it's about American success. And so from our standpoint, we think it's tremendously important that we bring people together to have conversations such as today, around these tremendously important issues, and to see some of the amazing work that's

happening in the innovation ecosystem, as we saw just a few moments ago. So Dean, I want to thank you, I want to thank the entire group at the University of Maryland. Anaum, thank you for the great presentation earlier today. And thanks to the students for all the amazing work that they are doing, and look forward to the conversation.

Congressman Glenn Ivey (00:03:17)

Okay, yeah, well, I want to thank you all for having me out. This is a neat opportunity to see what's going on right in our backyard. I live in Cheverly, which is five miles from here, something like that, to my kids went through University of Maryland. So I have a real attachment to the place. But I have a couple of other motives to one is that the University of Maryland is an incredible engine for economic growth here in Prince George's County in the region. And I think we've been under utilizing it and under appreciating it. And what I want to do is see if we can do a better job. We in particular, the government, you know, federal, state and local, of making sure that we're getting the message out of what dynamic things are going on here at the university, not just to the general public, but also to the scientific community because I think, I call it a research triangle between here, you know, NASA, NOAA's nearby, the Agricultural Research Center. I mean, it's the opportunities are really enormous, I think for the work that is already being done and more work that could be done. So I want to certainly be in place to help do as much as I can to move that forward for all of us. The second piece, though, is I am on the Judiciary committee's IP subcommittee. And one of the things I realized about Congress I worked there before but it was a long time ago is that we were just rolling out email when I was there in 1987. So what I've seen over the years is as a couple of things, one Congress thinks that it can do all things in all areas at all times. And currently there's a push to roll back expertise, and you know, in the form of agencies and departments in the federal government. And so the sort of counterweight on that is, you know, I love to come out to areas like this. NASA, I went to a little while ago as well, so that you hear people talking about really deep concepts, and you know, cutting edge matters. And I go back to Congress, and everybody's down there thinking they know all of this stuff. But I've been reminded and humbled by what we don't know and what we need to learn to make sure that when we start trying to make laws, we're not getting in the way and, and slowing things down. One of you, I forget which one, but you mentioned something about AI. And AI is one of those same topics, this is why we're members of Congress aren't even pretending to know what what it's about. On it's on the one hand, there's, there's, you know, obviously tremendous possibilities. On the other hand, there's some scary possibilities as well, and watching you all do your demonstrations. And I've got images of the Terminator going through my mind, you know, and remember the guy who's he's got the hand and he said, we found it. And that's how we feed. Okay, so that's in the back of my mind, too. But it's important for us to make sure that we work closely. We legislators, we government officials, work closely with the people who have their hands in the middle of it, have their minds wrapped around it, know what it's doing, know where it's going, and can find a way to communicate that with us. So we can work together and making sure that the United States, maximizes the potential of what we do here. And I want to make sure that the University of Maryland is at the forefront of that. So thanks for having me out. Again. I you know, I told Virginia, I was going to be a frequent visitor. She thought I was kidding. But I'm gonna have office space here pretty soon the way I'm going. But I want to thank you again for bringing me out and educating me on so much of what's going on here today.

Dean Chang (00:07:02)
Thanks. So I think everybody should have a packet with bios, but I thought it might just be helpful before we launch. We're gonna hear from everybody here, but maybe everybody can just introduce yourself really quickly, who you are. We'll start with Anaum even though you heard from her again, but I will start and just go around the table before we launch into the first discussion topic.

Anaum Khan (00:07:21)
Absolutely. My name is Anaum Khan. I'm a rising senior studying computer science. I was a previous executive director of Startup Shell, our student-run incubator, and I also led two of our largest collegian hackathons, Technica and Bitcamp, super excited to share about what we're working on and supporting student entrepreneurs. So thank you.

Charles Grody (00:07:40)
My name is Charles Grody. I am an alum of the University graduated in 2020 with a mechanical engineering degree. The reason I'm here today and my claim to fame on campus was that when I was a student, I once had a really good idea on the toilet. I came up with a water conservation product based on observations I made of wasteful water consumption of the toilets on campus. I filed for multiple patents as a student and afterwards one of which has been granted and I've been working on this full time for about a year and a half as well as participated in multiple University of Maryland organizations and won some pitch competitions here. Thank you.

Bob Nye (00:08:26)
This is useful technology. I like this, useful, at least we can understand it. Yeah. Bob Nye, I'm a general partner for a firm called JMI Equity. We're probably the largest venture capital and growth equity firm in the mid-Atlantic. So we have raised $10 billion over the years, I personally have probably invested half a billion dollars in DMV-based startups and growth companies and my partner's multiples of that so really exciting to be here. What a neat complex, thank you for having us. This is awesome. And by the way I came in the main must be the sell weekend campus during a guide you in and it looks beautiful on the campus looks unbelievable. Gorgeous a lot of construction. Looks really neat to come in the proper entrance and get the whole thing.

Dean Chang (00:09:13)
Oh, good. I'm glad I glad he didn't get waylaid by the construction. Yeah. Great to have your I saw I introduced myself already. I'm the Chief Innovation Officer. I just coordinate and lead the innovation entrepreneurship and economic development ecosystem here at the University of Maryland.

David Kappos (00:09:34)
So David Kappos, I'm a former director of the US Patent and Trademark Office during the Obama administration. I'm now a partner at the New York City law firm Cravath. And also the co-chair as Frank mentioned, earlier of the Council for Innovation Promotion, which is a nonprofit, bipartisan organization to promote strong and effective intellectual property rights.

David Iannucci (00:10:01)
Good afternoon. I'm David Iannucci. I'm president of the Prince George's County Economic

Development Corporation. We are the business voice for Prince George's County in the Angela Alsobrooks administration. I, too am an alumna of this university. I'm guessing maybe before anyone else in this room when I was a government and politics major, and we did not spend much time on this part of the campus. So it's good, this is really fascinating. We are all about having the companies that you are creating, finding a home in Prince George's County in the region, certainly in Maryland, but primarily in Prince George's County, and helping you grow our local economy. I want people to think of the brand of Prince George's County as some of the things we saw in the robotics lab downstairs today, because that's it's very exciting. And we're very, very proud to have you the flagship university, be in Prince George's County. It's our most important economic asset

Husein Sharaf (00:10:55)

Good afternoon. Hi, I'm Hussein Sharaf, I'm actually a living beneficiary of my friend here, David's organization. So CEO and founder of Cloudforce. Cloudforce is a consultancy based out of National Harbor, we essentially help large organizations to strategize and adopt cloud technologies, primarily, primarily Microsoft's cloud technologies, including AI, open AI, copilot, all that good stuff, much more practical use cases than the Terminator death situation, helping people to find information that they might take a much longer time to find otherwise. But we've been working with the Economic Development Corporation for many years to support our growth. And we are now one of the fastest technology employers in the county that's growing at a rate of about one engineer per week. So, super interested to be involved in this conversation, and obviously, to be connected to the university. Thank you guys for having me.

Frank Cullen (00:11:52)

Again, Frank Cullen with the Council for Innovation Promotion, I just want to reiterate what Dave said, you know, we were formed primarily, to really help folks understand and not just the policymakers, which of course, we're grateful to have the congressman here. But folks who in their everyday lives are seeing the quality of their life improved by the amazing innovations, and creative work that are brought forward within the IP sector. This is really what makes us the most competitive and economically successful country in the world. And we're really at a crossroads where those policies that support that great economic engine is at risk. So having leaders like the Congressman on the Judiciary Committee, which has oversight on these important intellectual property issues, having folks who can actually bring incredible new innovations and products to market, like what's going on every day here at the University of Maryland. And of course, having venture capitalists who can bring funding to these great innovations. It's all part of an ecosystem that has been uniquely the genius of America. So from our perspective, we think it's tremendously important, we continue to highlight these important issues, and also the great work that's going on in places like the University of Maryland.

Dean Chang (00:13:05)

Alright, so we're gonna dive into two topics. The first is the elements of an innovation ecosystem. And the second is intellectual property and innovation. I'm going to lead the first and David Kappos is going to read the lead the second. So I've got five questions that we'll delve into related to the innovation ecosystem, but I thought I'd set the table and just maybe say, what is an innovation ecosystem? Before we talk about it, maybe we should define it. I think of it as

an ecosystem that helps people and companies develop an entrepreneurial mindset. So they can pursue their innovative ideas and solutions, and thereby spur economic development or societal impact, and also an element of preparing the workforce to participate in that innovation economy. So within any successful overall ecosystem, there's a diverse mix of key stakeholders. We've got leaders from many of those key stakeholder groups sitting around this table. And it's always really valuable to get these groups together to hear from one another. We've all got valuable perspectives, we all can learn something from each other, and that we can each take back to our own jobs to help us do our jobs better. So that's what we're going to try to do with these five questions. The first, I'm going to queue up Anaum to talk a little bit about diversity, equity inclusion with respect to the University of Maryland's innovation ecosystem. The reason I'm bringing this up is so according to the 2020 census, Maryland is now the most diverse state on the East Coast. Pretty cool. University Maryland is located in a racially and socially, socioeconomically diverse Prince George's County, our student body is majority-minority. So we've got a lot of really interesting ingredients for more innovative outcomes that come about from more diverse teams. So Anaum, could you share a little bit about how DEI is a strength here at the University of Maryland and our innovation entrepreneurship ecosystem, especially things like Technica for instance.

Anaum Khan (00:15:02)

I can talk little bit about Startup Shell. But I'd also love to touch light on a really cool organization on campus called Technica. So we're actually the world's, I directed the world's largest hackathon for underrepresented genders and tech. And so what a hackathon is for context, it's like a 24 hour competition where people can build any project that they want. So they come in maybe with an idea, they form a team of two or four participants, and then they all spend the 24 hours coding up, or building any project of their choice. You get to see that the strength, really, of our ecosystem is the diversity of its builders, right, especially at the University of Maryland, we attract so many different students from so many different backgrounds, right. And so I think Technica is building a key player of making sure that people from you know, women and nonbinary students feel comfortable ideating and being part of the ecosystem. And then where that kind of goes beyond that weekend. And beyond that competition is also at Startup Shell, right. And so we have a really cool partnership with Technica. Specifically, with the the new idea factories that were at the heart of campus, and we attract such a diverse crowd of students, right. And so how to really support them and make sure that they feel that they can build here. So a lot of the events that we have is like during Women's History Month, we have a female founder or founders panel, which has been a really cool event to just see what you know, current students and also, alumni students are building right now to hopefully motivate a lot more female entrepreneurs. And also during Black History Month, this entire building turned into a showcase for black creatives, black builders, and it was a really cool event to just showcase the talent at the University of Maryland and hopefully, invite more students from underrepresented backgrounds and entrepreneurship, to find a place here and to really make sure that they know that there's a lot of other people like them building. So hopefully to help motivate more people. And so that's been a really core focus of what we're trying to do at Startup Shell right now given that we have access to such great resources, right now, it's really important for us to now take the extra step to make sure that we're inclusive of everyone and our incubator. I know we talked a lot about it during my tour, but the strength of our incubator is not only, you know, the really nice building, they're

really nice resources, they help a lot. But really, it's the core focus of the people that you're around every day, that really motivate you and build your products like, I wouldn't be able to have built a product, I met my co-founder at Startup Shell, and impact, I wouldn't have imagined impacting 1 million people. When I came into the university, I didn't really know if I even wanted to be a CS major. But seeing how much support there was specifically at Startup Shell specifically, like finding a home in Technica has been a great journey for me to be able to do what I did. And so I'm really hoping that it kind of transcends beyond this year, and we can hopefully, launch more startups in the future. So yeah, that's a little background about what we're doing at UMD to support female and just more diverse founders

Dean Chang (00:18:43)

Thanks so much Anaum. And that's just really the tip of the iceberg of so much more that goes on beyond what just what Anaum just talked about, I referenced the county. And so I thought maybe we can zoom out to Prince George's County, where we sit. So David, with Prince George's County Economic Development Corporation, you want to share a little bit about how you're fostering this innovation ecosystem, both now and towards the future.

David Iannucci (00:19:08)

Thank you very much. It's really a pleasure to be here. This is so important to the message we're trying to send out about what Prince George's County is the brand of Prince George's County. And I'll talk about a couple of perspectives when building off what you said the diversity of Prince George's County we think is one of our great strengths. Our workforce is one of the most educated and workforce with people of color. Prince George's County has more black engineers, computer scientists than any other county in the United States. When it comes to the wealthiest census tracts in the United States that are majority African American 25 of the 50 are in Prince George's County. So we like to think that the workforce is one of our great strengths, this institution graduates more people of color, in technical degrees than almost any other institution. I have second by one measure. So we think that's one of the great assets of Prince George's County, but then there are the assets that to the University of Maryland. Goddard, Noah, and so forth. And these are the creators of the startups that we're talking about here. Our vision is to capture these startups in Prince George's County and have the majority of them stay in Prince George's County, we have a variety of resources that we work for, Hussein is a living example of that. There's there are various incentives programs, tax credit programs, we have many partners and the state government that we tap into, that can bring resources. So we want the companies that are here that are ready to make that next step and go out of the university and become part of the ecosystem, the economic ecosystem, that is Maryland, the United States and the county, that there is a place for them here, whether it's real estate, whether its workforce, whether it's assistance or financial access to venture capital, and so forth. There are tremendous resources that we want to bring to bear there. There are actually four incubators already in Prince George's County. And this is clearly one of them. We have to understand how to take advantage of it. We have in our own building in Prince George's County. In the Economic Development Corporation, we have an incubator in our building with about 20 Some companies, Lisa Moran is back in there and she runs her incubator. The United States Department of Agriculture, just up the road here to one of the world's largest research universities for agriculture, not universities, but largest agricultural research facilities. So this is a hotbed for research and development. We

personally, I'll give you an example talk about quantum computing, where the university is one of the leaders in the world when it comes to quantum computing. IonQ is headquartered in College Park, the world's best-capitalized quantum computing company. But quantum computing is very competitive. We all know that China, Australia, Germany, Chicago, Los Angeles, these are all places that are crowded trying to grab it. Our vision is that Prince George's County, the Washington Metropolitan Area is the capital of quantum, we have a lot of work to do to hold on to those some of the leads that we have now. But the message is to all of your, your 220. That was a shocking number, by the way 220 startups that are here, that there was a place for them a support mechanism for them in Prince George's County.

Dean Chang (00:22:12)

That's great. And hearing a lot about the municipal aspects of and county and innovation in the county, which is great, as we know, and ecosystem requires a strong partnership between those public pieces, as well as the private sector. So let's turn our attention to the latter. Love to hear from Bob and Hussein to share their investor and industry perspective. With respect to innovation ecosystems, we've got experts that can kind of comment on that side of things. Maybe we'll start with you, Bob.

Bob Nye (00:22:42)

Yep, happy to I mean, one of the things people forget when they think about ecosystems is that there's all these little different pieces that are required. That's kind of the point. It's an ecosystem. And so what I find is, you everyone compsci, engineering, mechanic, mechanical engineering, that's easy. Compsci, not! Congrats.

Bob Nye (00:23:07)

So the point is, all of them could get fantastic, low-risk, high-wage jobs coming out of college. So to choose going down an entrepreneurship path, is a really risky thing to do. Right? You know, a lot of first-generation Americans, you don't see them do that, right, they go into different things, we know I'm going to make this money, I'm going to know I'm going to make it with low risk. I know how I'm going to do that. So if you're not exposed as an undergrad to these types of things, it gets really intimidating to ever think about it. And then what's interesting is, once you get going into it, you have to be exposed in undergrad. And then somebody said, you might have said earlier, you have to give be given the freedom to fail. So the vast majority of these things fail. And so you have to have that soft. So you have buildings like this, that the lights are always on, the computers always work, and you have to pay for them. And it's okay, and you have to make payroll. And so each one of these things, takes you to the next step. So when did you found the company, how many years ago? Okay, 2010. So that's a perfect one. It takes a long time to build these businesses. So the average company we invest in is around 25 million of revenue. The average company we invest in is 15 years old. It's a lot of toiling away. Everybody thinks it's romantic and sexy, and everything's great. It's a lot of late nights, it's a lot of missed payrolls, hopefully not, it's a lot of we'll pay you in stock, it's really hard to build these businesses. So if you don't have that whole ecosystem, and you don't get supported along the way, people get off, they get off the rails, they stop. Because there are plenty of great jobs in America. And the last thing you need is if you don't find success at the end. If there aren't great examples of success, people won't do it. People won't fund it. People like us won't fund it. You won't get the

vision. He was talking about somebody you sold a company for a billion dollars here, there's a reason you said that, you're not doing this for fun. So if you don't see that ecosystem where I can be supported along the way, and I see what success looks like, and I'm willing to take that risk with my life, my career, my family, it gets really hard to sustain. And to your point, that's why these things tend to happen in really micro areas. So there's a reason, you know, Silicon Valley produces so many companies, there's a reason these things happen in small areas, universities are often a huge part of it, they've got the scale to afford to support these things along the way, they've got all these really young, smart kids coming into it. But it is really tricky. If you don't have any of the parts along the way, it sort of can fall apart pretty quickly, which is why it's really hard for these things to be built. And then once they get going, it's really hard to stop them. That's the really neat thing. If you, if you really get it going, it's really hard to stop.

Dean Chang (00:25:57)

Alright, so you're on the funding side and talk about sort of the stage where you invest and Hussein kind of talked about, it's been, what, 13 years? And what happens before that that point that Bob's talking about you want to share either that specific perspective of your own company, or more broadly?

Husein Sharaf (00:26:15)

Well, yes, it's a lot of late nights, it's a lot of sweat equity. It's a lot of finding people who are passionate about something where there is not an immediate payoff to, you know, push really hard when no one's looking when no one's asking them when no one's you know, there's not a boss who's forcing them to do it. I think that, you know, areas like Silicon Valley, and New York and others benefit from having a lot of those success stories where it's just sort of, it's contagious, right? Like, you see all these people around you. And they're all doing these really interesting things. And there's people that are having massive exits that, you know, go off and live on an island somewhere with a big boat, right. And so it gives you something to strive towards. I think that while Prince George's County, I think has a way to go, DC in general has had that buzz, I was born and raised here. So I grew up in Northern Virginia actually moved to the right side of the bridge here in Maryland 10 years ago. And I've stayed here ever since. But obviously there is a tech ecosystem here in the DC area, a lot of which is fueled by the federal government. I started my career at Booz Allen working as a systems engineer for the federal government, I learned a ton about consulting and about infrastructure in general, and leverage that knowledge to start my business almost 13 years ago, I would say that we could benefit from more, I guess socializing of success stories, and bringing together successful entrepreneurs, along with, you know, budding startup owners and folks that are in the incubators, to give them something to strive towards, and to really celebrate the wins and connect these two different communities. That is one area where I feel like we have, you know, potential opportunity here in Prince George's. And it's something that I've been working towards with the support of folks like David and others, to really build more of a tech ecosystem, just around workforce success and business success and venture capital and PE, and kind of bringing those things together in a way where it is more cohesive, the way that I've seen it in Silicon Valley and other areas.

Dean Chang (00:28:20)

Thanks, Hussein. And I'm gonna, the next question is really more you both touched on it, we cite

commonly Silicon Valley, or we'd like to be like next, next, Boston, whatever. So, I want to talk a little bit about, are there lessons to be learned from other innovation hubs and ecosystems. And I'm going to open this to everybody. But I want to start by saying before we get into maybe citing other places, and what they're doing well, I think we should acknowledge all the things that we're doing fantastically well here. David talked a little bit about being the capital quantum I mean, IonQ, it's less than a mile from here. If you give, it's just that direction. If you start walking in less than 10 minutes, you'll be at the headquarters of IonQ. It's the first-ever publicly traded billion-dollar pure quantum computing company. And it's a success story that's built on years of cutting-edge quantum research, not only here on this campus, but joint research with NIST we talked about before partnerships with Prince George's County and the state of Maryland, key partnerships with industry and investors, all making Maryland at least for the moment, the capital of quantum. And the semiconductor played a similar role in creating Silicon Valley that quantum could for our area, but we need to continue investing, we can't stay in place because everybody wants to be like us. And so that is an example where we are a model innovation ecosystem that the rest of the world is looking at, which is pretty cool. And I just want to mention one other because it relates to like the CHIPS Act. So our NSF I-Corps hub, the University of Maryland is one of only 10 universities in the entire country selected by the National Science Foundation to create a national innovation network. And so we are we were awarded his $15 million innovation hub or I-Corps hub award for the entire Mid-Atlantic region. And so what, what is that? So the basic idea is that if you get all the universities in a region to work together, that's going to turbocharge the innovation economy. Basically, the rising tide raises all boats kind of philosophy. So it's kind of similar in some ways. I get the reasons why it's not. It's kind of similar to this athletic conferences where you have these powerhouse schools. All right, right. They're all banding together to make the conference better resourced and more impactful. So, when we won this award, we were tasked with going to find other schools from Pennsylvania, north to North Carolina to be part of our mid atlantic hub. So from Pennsylvania, we got Carnegie Mellon UPenn, Penn State, Maryland, we have Johns Hopkins, we have Virginia Tech, UNC Chapel Hill, NC State, George Washington, Howard, Hampton. Awesome. But unlike athletic conferences, the NSF I-Corps hubs were tasked by NSF with sharing our resources with all the smaller schools in our region. So for example, we now run joint innovation programs with every single HBCU in Maryland, Morgan State, University of Baltimore, Bowie State, Coppin State. So, in addition to NSF funding, we get money, fund money, money from the EDA, from organizations like TEDCO, and others to help each of those HBCUs build some of the innovation ecosystems, like the one that Anaum described at Startup Shell, and to provide more startup resources for more startups from the entire region that are trying to become the next IonQ. So I just want to, like give ourselves a pat on the back, before we get into, you know, what are the what other things we should be doing, but I'll kind of open up maybe I'll start with you, Charles, since we haven't heard from you. But just in terms of an innovation ecosystem, anything you want to add from your perspective?

Charles Grody (00:31:49)

Well, from my experience at the University, I feel like there is already a strong foundation for an innovation ecosystem. When I first had my idea, I knew immediately that there are different offices that can help from fundraising in the Office of Sustainability, to testing out market viability with the Do Good Institute, as well as the NSF I-Corps Foundation, which I used for, to help me learn how to do customer market research. As well as raising funds, like the Pitch Dingman institution,

all of those were great ways for me to validate that I have an idea, I need a little bit of funding, I need to learn how to make this product. And they were resources there that were able to help me. One thing that I've always felt like could be beneficial is a pipeline that goes beyond just innovating and creating the ideas. One that potentially could help with connecting to customers in the greater Prince George's County area. The University does a great job of hosting events like this or pitch competitions that bring in local community leaders. I met potential customers, like for example, the owner of Busboys and Poets once through a pitch competition, who was able to help me help fine use his restaurants as a location for me to install my products, opportunities where we can bring in leaders from the community to help invest or allow students to try out products is definitely something that would continue to be beneficial here.

Dean Chang (00:33:30)

So I'll open up the floor to anybody here, just either the gaps in our innovation ecosystem here or other models we can look towards or even doing what I did, and highlighting things that we're doing well, anybody want to add anything? Yeah, please.

David Iannucci (00:33:46)

I think one of the challenges is kind of communicating the success stories, because sometimes when we're talking to ourselves, and that's one of the mysteries of how you get the message out. I have a number of folks who are one of that photographer, they're right there, he's taking my picture. But we're going to put this all on our various social media, we're going to put it on we have 30,000 people on our E-newsletter. You know, I spent a lot of my time Economic Development Corporation worrying about restaurants and grocery stores. But the truth is, I'd much rather be talking about IonQ and robots like I saw down there, and Goddard in a lot of my speeches. I talked about Goddard. And I want the people to think about Prince George's County. Right now on the planet Mars, the Perseverance and Curiosity spacecraft, the rovers there. They both have significant instruments built in Prince George's County that are operating right now. You know, by people who work in Prince George's County. The same thing for the James Webb Space Telescope. Massive parts of that telescope were built in Prince George's County. I want that to be the brand of Prince George's County. So one of my messages as to all the students here to the startup series, we can collaborate with you and simple marketing getting that message out and getting out much larger audience and then just in the county, frankly, the whole Washington metropolitan area in the state of Maryland as well. So understand that you have partners who want to share your success story, because, frankly, it makes me look good too.

Dean Chang (00:35:12)

Anybody else on the ecosystem?

Charles Grody (00:35:15)

To build off of that, from my personal experience of when I've been connected with people, like, leaders within the county, and I have a success story, it's great for me to be able to relay that to other students who I see who are a couple steps behind where I was, or earlier in their college career. So that's, I just want a second-year point there.

Congressman Glenn Ivey (00:35:38)

And just a couple of other sort of additional thoughts. We have, I think, 136,000 K-12 students

in Prince George's County, and we got our on the street, and Devon High School formed a partnership with NASA. But one of the things I was hearing, in one of these meetings I was doing on Friday, from someone who's starting up cable companies like this, and he's, he was talking about the visa situation, because he can't get enough people here in the United States to take the jobs. Well, who can do the jobs? And so one of the things he was saying was that we need to fix the pipeline. Well, one of the pieces of that is getting the kids interested and, well, interested is a piece, knowing that it's even out there as another one, I mean, the entrepreneurial thing. So for a lot of kids, they'll they can be very entrepreneurial about things they know about. So, you know, the music, business, rapping and all that stuff, very entrepreneurial folks in my generation, you know, some of them did, okay, Jay-Z is a billionaire right now. And I think it's doable, but we just have to sort of get them to expand their horizons and realize that there are other possibilities. Even if you aren't, you know, the, the computer science person, there are other jobs in those, those companies that you can do. So I think we need to expand that. And the other part is sort of the synthesis of, you know, connecting up with other players in fields that can be used as donors to, you know, people who donate the capital to get it started, people who talk it up so that the as this area, for example, or just a particular business, sometimes word of mouth can make a huge difference. And then the last piece, I think there's there's a very human element that we should keep in mind, we were just talking a few minutes ago about one of the people who has one of these kinds of businesses here. And he's saying, hey, you know, we could really expand if we did a couple other things. Childcare is one of them. If we had more childcare, in this, in this immediate vicinity here, I could attract more people to work in these businesses. But right now, they're not coming. And that's one of the factors. So there's a lot of things we can do that aren't super expensive, and would be kind of, I think, very impactful if we do them the right way.

Dean Chang (00:38:07)

I'm so glad you mentioned the K-12. I'll just tie it back to the Technica hackathon. And I'm talking about, I mean, that's not just students participate in the 700 ish or so I mean, it's people from College Park, Prince George's County, but also nationwide, a lot of them K-12. And so when mentioned Technica, but also, we just gave a grant to a nonprofit called Qubit by Qubit, that's going to reside here, right next to the hotel. They are a nonprofit that tries to teach K-12 teachers, how first of all, what the heck is quantum? And then how would you possibly teach it to like, say, third graders in a way that it makes some sense. And the goal, the reason we think that's important, it's we invest in them, we want them to do this kind of thing. And in a pilot in Prince George's County first, because regardless of whether those kids end up with careers in quantum or not, and if they do, that's great, but it's also that they will feel empowered that wow, I, I know what that is, and I could do anything. If I understand quantum, I could do anything. So that's such a key piece of the ecosystem that sometimes we forget, we kind of focus on just the companies, but there are partners like Qubit by Qubit, events like Technica that are really critical in that ecosystem. So I'm really glad you brought that up. In our last couple minutes before we transition to topic to just the question of what should Congress's role be in spurring innovation. The CHIPS Act is fantastic. It's a great start, that National Science Foundation hub that I was talking about is funded from the CHIP directorate, which was created in the CHIPS and Science Act. So I'll let our Congressman Ivey kick it off. Just you know, what, what kinds of things might we be looking for should we be supporting from your perspective?

Congressman Glenn Ivey (00:39:58)

You know, at the moment, I'm in the Do No Harm stage from a legislation standpoint. You know, some of the things that my colleagues are, are putting in, in or you know, are passing out of the House, I think are counterproductive, to say the least. But I think if we could do more along the lines of, you know, to spur innovation, whether it's tax breaks, or actual financing, or the like, I think that's a big piece, I think the visas we were just talking about, I know there's a real push to try and everything is, you know, do it in America sort of deal. But I've always been a big fan of, of, you know, the United States and sort of the Statue of Liberty version of that the Ellis Island, not that my relatives came that route. But that doesn't mean that nobody else can. So I think we should try and do as much as we can to continue to draw that talent from around the world. One of the guys that was talking to me the other day was saying with the visa issue. And he referenced this specifically, but he said, I can't get enough of the visas to get the engineers in that I need. But I can get them in Canada. So I've now instead of building another office here in the United States, he's New York City-based, instead of doing it in Manhattan, he's doing it in Canada, because he can he can get the people to go there. So I think we're missing that message as members of Congress. And so I think that's another piece that we need to push. But, you know, I think it's in addition to sort of legislative I think there's, I'll call it the cool factor, maybe. So Prince George's County is also known as basketball county. And one of the things that I played basketball when I was in school, but that was tell you how far back that was. That's before the three-point line. That's before the 30-second clock. So it's been a while. But here in Prince George's County, we have a lot of people who are men and women who come up and they compete against each other. And you know, you have fantastic talent that rises to the top, because of the competitive environment. And we've got all these structures around them to facilitate that, from the beginning. So it's, you've got AAU competitive, you might not know this, but national competitions, you know, fifth and sixth graders, they're flying around the country to play basketball, and they've already got college coaches watching them. And there's funding to do it. And, you know, I'm thinking like, well, do we have the same kind of equivalent for science and tech, or any academics for that matter, we got DeMatha High School down the street, they've got I don't know, like 15 Hall of Famers that have come through their good academics program. But you know, we could do equivalents of that, I think if we try and approach it differently, and you can draw more kids, the kids that want to come and do it, and compete for it, when they see the back end of it. And you know, one aspect of that, and I'll stop, is paying for college. Because it's become just prohibitively expensive. There's sticker shock for a lot of parents now. So if their kids can't get a scholarship to go to college, they don't even send them. The movement, though, in part, though, is to also if your parents are making under a certain amount, and I love to tell kids this, if your parents are making less than $100,000, they can go to, I hope the University of Maryland, but I know they can go to Harvard for free, right? So we need to get that message out. We also need to expand that especially since affirmative action has been taken off the table except for military academies. And make sure that we're pushing this as early as possible as often as possible, and as broadly as possible. So we're reaching more people. So there's millions of people we're not touching at all, we can expand that pool and touch, you know, pull them into this, I think can make a tremendous difference. Maybe we won't even need as many visas as we need right now to get the work done here in the United States.

Dean Chang (00:44:09)

Thanks for that very broad brush and a lot of really key topics. This is a great time to transition to our discussion topic too. So I'm going to turn it over to Dave Kappos.

David Kappos (00:44:21)

Thanks, Dean. And for Congressman Ivey's last comment, I can add one thing I strongly agree functional visa programs, mentoring, developmental funding and etc. are all really important to an innovation ecosystem. The other thing that's the subject of this panel is strong and effective incentive systems to cause people to spend their efforts smart people like those kids we saw downstairs to spend their efforts working on innovation in the first place and to cause economic resources like those that Bob stewards to be directed toward, toward that kind of work. And the incentive system that we have for our world in general, and that the US pioneered for the world is the intellectual property system. So that's the focus of the second part. You know, I thought I'd start by just telling a couple of stories from my recent experience, both of them, coincidentally, involving Maryland. And in one case, I was asked recently by a wealthy investor, billionaire that funds startup companies in an investment pool, they're sometimes called investment clubs. So not like a VC or a PE, but private people who pull funding, and they were looking at making an investment in a Maryland-based autonomy solutions company that had developed technology to add autonomy solutions to existing vehicles. And they called me in to evaluate the patent portfolio of the company and advise on whether they should put the next level of funding in something like five or $7 million dollars. And I looked at the patent portfolio, and I came back, had a call with them, and I said, Look, if this company has great management, you should make an additional investment. If this company has great trade secrets, because they've got proprietary software, something that can't be reverse-engineered, you should make an additional investment if this company's got like a time-to-market advantage or something else, make an investment. But I said, you guys, I gotta tell you the truth, I would not make an investment based on their patent portfolio because it's much too vulnerable in today's environment in which innovation that's based on software is basically questionable in terms of its patentability due to some decisions by the Supreme Court in the last decade. And that conversation unfortunately caused the investors to step away from the investment and cause the company to not get funded and caused the company to go away. I assume there are hundreds or 1000s of other IP attorneys in our country giving that same kind of advice right now, in that same circumstance, because it's the only advice right advice to give. Now on the other hand, I also advise recently on biopharma technology coming out of not the University of Maryland, but Johns Hopkins, and NIH. And in this case, clearly patent protected, clearly not a problem, there are some innovations in that area that are much less protectable. But these ones were very protectable patent protection in place, we were able to evaluate it, we're able to recommend strongly. And now we're in the billion-dollar range, right? So you're talking serious money for investments, and economic strategic economic event. And that was all simply because the intellectual property rights were clear, effective, protectable, dependable, you can give good advice then to the people who are coming in with economic additions in order to build a company based on that. So I tell those two stories, kind of, uh, you know, good news and bad news and good news to start out the discussion to say, on the ground, where real decisions get made, and where people are advising people like Bob about making big economic investments, whether they're $5 million or $500 million to build a business, it winds up coming down to whether there is some sustainable source of competitive advantage.

And there's gotta be some source. It's either network effects, right, it's time to market advantage. It's something else, or it's an intellectual property position, protectable innovation in the form of trade secrets, or patents, or maybe copyrights in many cases. And if that protection is in place, funding proceeds. And if that protection isn't in place, funding simply doesn't proceed because these guys are in business. The people who have the economics available to invest are in business to make more money from them. I'll tell you one last story. And then we can maybe turn to some questions and get the panelists involved. And Congressman Ivey, you were saying you came back from New York City. So that's where I live and work. Now I'm not originally from New York. So it's for me, it's kind of like I'm a Californian, so it's like being on an international assignment dealing with New Yorkers. It's a strange culture, but I was in a meeting with a you know, like the 70th floor of one of the skyscrapers in Manhattan recently with a general partner in a PE firm that invests partly in innovation-based enterprises. And we were having kind of an intense discussion about an investment they were thinking about making. And at the end of the discussion, you kind of lean back. And he says to me, well, look, sonny, here's how it works for me. He said, every day, when I come into the office, my job is at the end of the day, when I leave the office, I have to have more money for the people whose funds I am shepherding here. And he said, so look, if you fancy lawyers, with all this intellectual property can provide me with the incentives to invest in your technology, I am happy to do that. But if you can't, I'm gonna go buy pork bellies, because that's what makes my clients the most money. That's my job. So it really hit me hard in the sense that, you know, this is a guy who, he does care, but he doesn't care. He cares about making the best economic return for his clients. He doesn't care if it comes from the stuff that we all care about in this room, like great technology from great universities, building jobs and opportunities. The guys who are stewarding that level of funds, guys and gals who are stewarding that level of funds, they have a set of incentives and constraints on them, that is entirely based on economic opportunity generated by some sustainable source of competitive advantage, again, and that comes down to a strong and effective intellectual property system. So that's sort of the world that we're living in, you know, if you will, where the rubber hits the road, we've got to have a strong patent, trademark, trade secret, copyright system we have historically in this country, we have led the world for over 200 years. And that enabled us to go from being a backwater agrarian country to being the dominant tech power for the world, despite the fact that we've got what 5% of the world's population. So with that, you know, I thought I'd turn back and maybe start, Dean with you to get you back on the mic here, you've done it all right, you worked for a tech company, you have been dependent on intellectual property, you've seen what happens when a big behemoth is able to come in and just sort of walk into your apartment in effect and say, Oh, I kind of liked that, I'm gonna take them. And if you want to stop me, well, fine, I've got an infinite amount of money, you come after me, and let's see who wins that fight. Tell us about, you know how intellectual property really works from the viewpoint of a non-lawyer, right, but a tech person and an entrepreneur.

Dean Chang (00:52:59)

Or, and I'll try to keep this short, because I definitely want to hear from some of our other panelists, too. But yeah, even though I've been here at the University of Maryland for 16 years, my first career, which was almost as long as that was out in Silicon Valley, with the robotics haptics company that was spun out of a robotics lab. And so we, I'm fast forwarding, but we had some pretty cool technology, some products that did so-so in the market, and we were starting to gain

traction. And then basically some big company solar technology, I mean, when I say stole, like literally, we met with them, we showed him our notebooks, they showed interest in working with us. And the next thing we knew they were coming out with their own products that were exact replicas of what we showed them what we shipped to them that they had, and they're using their labs. So so we got involved in some patent lawsuits. I won't get into there was actually well, the most prominent one was against Sony, it was around their PlayStation with the rebel DualShock technology and then PlayStation. And I guess, the crash course I got was that the patent is really key. But I had no idea that there's all kinds of IP strategy. And so what I'll what I'll summarize is like, for instance, no one told us that the more amazing your innovation is, the fiercer the litigation will be as big companies try to kill you off. That was like a shocker to us. We thought $25,000 was expensive for the cost of patent attorneys surprise and prosecution, whatever. Our legal bill at the end of trial was not $25,000 it was $25 million. We had no idea. We were fortunate to have one of the best IP law firms, Irell & Manella, and lead attorney Morgan Chu and also David's colleague at C4IP Andrei Iancu, as part of the legal team and helped us win an $87 million judgment from Sony, and I share that number because, 87 million, when we met with Sony they said our technology was worth only five figures. So essentially, they pay us like, one 1000th of that, $87,000 and then go away. And they said, If you don't take that number, we're gonna make it really bloody for you in court. And we didn't even know what that meant. But now I know what he meant: $25 million in legal bills. So. And it's just very frustrating because you think about it, that they were trying to get our technology, not even for pennies on the dollar, like $87 million to $87,000, one one thousandth of a dollar. So a 10th of a penny on the dollar is what they were ascribing as the value of our technology when clearly that wasn't the case. And I know that was 20 years ago, and it was even harder or easier, I should say, now, it's much harder with this. I'm not as familiar with it, but the Patent Trial and Appeal Board, but from what I understand, this is probably a terrible analogy, but it's kind of like to me, we issue academic degrees here. And the idea that somebody can come up to me later on and say, Hey, I see you got a bachelor's degree from so and so? Well, you know, I don't think your psychology paper was that good. And you didn't really seem to understand organic chemistry as well as you should. So we're going to challenge the fact that you actually have a bachelor's degree. What? So I'm a little bit worried that our gold standard for acknowledging what is an innovation is being chipped away. Because in my experience, it's really key to have those protections. So I'll stop there.

David Kappos (00:56:24)

But another short, just a short vignette, from when I was at the patent office, your story about the you know, sort of you didn't know that things would be copied so fiercely. You know, you get a lot of sort of calls and meetings, in strange circumstances, they're in the government, I'm sure you see a lot of these Congressmen Ivey, a CEO of a company came in from North Carolina, and they were making a rather innovative travel trailer, kind of like a Swiss Army Knife thing. You towed behind your car, you get to a campsite that pops up, there's a sink, there's a grill. Totally cool. So the CEO shows me this. And I'm sitting there saying, Okay, well, that's interesting. Is there some way I can help you, sir. And then he shows me a second picture of the exact same thing. And he said, we got a call one day from a gentleman in Shenzen, China. And he asked to buy one of each of our products. And he said, I don't need a discount, just ship them to me. And so we thought it's all going to be fine. We did, we didn't hear from him again. And nine months later, an exact duplicate replica of all of our products with them even positioned in the same way

in the photo for marketing. And, and so I reflected on that, and asked him first of all, did you get any patent? No, we're a small company. We didn't. Did you get to design patents? No. Do you have a trademark? Yeah, no, no, no. So the answer to that was, Well, sir, you become a part of the great labor arbitrage, where if you make something and you don't protect it, and it's good, right, if it's not good, you it's no problem, nobody will copy it. But if it's good, you can be sure somebody will copy it. And they will copy it, where the cost to manufacture it is lower, whether that's in China, or Vietnam, or Mexico, or whatever it is, that's what will happen, you can be sure of it. And that's what happened to you, so the point there is, as you said, if you make something that's good, you can be sure it will be copied. And the only way to address that is going to be effective intellectual property rights one way or another, I'd like to turn to Bob. So you live in a place where you must see plenty of opportunities, some of which don't really involve IP, and that's fine. Like there are plenty of software related innovations, AI is an area I'm working on a lot now. So much of it is open source based that there are other sources of competitive advantage, but talk about where those cases come up for you where there's some IP component, you just know that unless someone's got a sustainable source of competitive advantage, you're not going to be able to justify the investment.

Bob Nye (00:59:09)

Unfortunately, I've lived through an it's easier to live through it as an investor at some level because you know, I'm diversified. You're not right when you're a company, so feel free on that. I think that, you know, the hardest part is when when they're public and that you know, like the innovation segment and our public investors, the great thing is there's so many externalities, all these other good things happen. So even if they kind of don't nail the intent of the project, so many other good things happen, you know, kids learn, we got other stuff happening. It's great. Unfortunately, to your point, what we do we have one scorecard, which is how much money do we make for our limited partners, and I represent firefighters pension funds, police pension funds, state pension funds bought by parents were teachers in Pennsylvania, so PA stirs. So and we have a great investor in us called Boys Town. It's a orphanage for young men that don't have families, and I always have them come present to our young associates coming up to explain what they do with the money. So how do they think? How do they give us money? And then what do they expect back? More money. And how's that work? And how do they think about funding their own in the down payments, the only way they can fund their programs is through the profits. And so your point is exactly right, the capital goes where it's treated best. And I always find this, you alluded to this, you'll find this fascinating, I was just in London and Berlin. And what's amazing is we have tons of investors here based the United States, very few of them invest over in Europe. When we go over to Europe, most of the people that invest in what we want to do, which is software and technology investing, they want to invest here in America, and we invest in America. And I think that's for two reasons. I think it's one, the culture of entrepreneurship, it is just different here is absolutely different. If you go to Oxford, if you go to Cambridge, this is not what they're sitting around doing. I guarantee you. And they also don't have that society of culture of failures is okay, right, we celebrate failure in America as long as it's in the right way. And they don't have the successes like we have, so they lose the ecosystem. Unfortunately, I also have been noticed through a lot of our companies where, you know, international IP theft is huge. I mean, we invest in software companies, we have plenty, we have big Chinese customers right up until we don't get paid. But they still have the product. I mean, it was great, but now it's not

great, because they're not paying. So I would say, I started in this business 20 years ago, we spent less time on it, then I think, today, I mean, every company, we have an IP strategy, we've got a whole program, we have to run it. Even for one that I don't think we need to, we got to run through the whole thing. And to your point, if something comes up on uninvestable in that you feel terrible, but it is where it is. And if we've been involved, we got to get all over that. And, and the downside of it is a ton of cost. These things are not cheap. People who are experts in this are very expensive advice to get. You know, it's a little bit like there's you know, right, wrong and tax, because, right wrong and IP, it's very confusing. It's very complex. And there's not a ton of experts. And so it's a huge burden, frankly, on entrepreneurs to have to try and navigate it all. So I think it's I think it's one of the great advantages America has that we do this really well. And we do it fairly. Right, people, you know, you can like capitalism with fairness, that's really good. But in our world, it's really critical. And people who do pharma, bio, med device, I mean, we're mostly software in those areas. It's like, I mean, it is, you know, of the three things, it is number one, in terms of whether you're going to fund something, so it's, it's a big deal. And, it's not, and I will tell you this, if we were to make an investment, and that would go sideways on us, the IP, was an issue? That's not an acceptable issue. I can't turn around to my limited partners and say, you know, we just got the IP wrong. You know, so sorry, we lost your money, that's not a good conversation. You get you get some, you get some passes, occasionally, IP is not one of them, right? You make those mistakes a couple times before they stop giving you money to invest. And so capital goes elsewhere.

Congressman Glenn Ivey (01:03:32)

Can I jump in this for a second? Just a couple quick points. Actually, I know Manus from our days on Capitol Hill, I was lobbying for Microsoft, the firm's now called K&L Gates. And that's Bill Gates' dad, and he was was it WordPerfect, he was in Utah was in your district. And so Microsoft perfected the strategy that you're talking about, for better or worse. And so I've seen it happen from that angle. My brother is an IP litigator at Finnegan. And so he gets the 25 million that you were just talking about. He's living in a much bigger house than I do. But just a couple of things. I mean, I think it would be great to have your voices beyond this room and actually showing up on Capitol Hill. So for example, we've only had one hearing, I'm on the Judiciary Committee, we've had one hearing on this topic. We've had like nine on the southwestern border, and you know, they just did one on hunter Biden's laptop and things that are really pivotal to how the US economy is going to go. And I wish I were joking, but I mean, that's that's really what it is. In fact that the last hearing where we're doing another one of these I was making this exact point. The reason that they're doing that and I'm, the Democrats, we have our issues too, but, you know, they're playing to their audience, they perceive their audience to be interested in the things that are, you know, those hearings go to, you guys aren't viewed as an audience, that's theirs, you know, other than when we're dialing for dollars, you know, you get the quick hit, and then you leave, there's a few lobbyists in town, but generally speaking, they only represent the very largest of the large, you know, Apple and those guys. So when I hear from like, small entrepreneurs, or even, you're not small, but I mean, you have lots of businesses or, you know, there, but it's really, these are guys catching me in the hallway. They had their, their product taken, they couldn't, they didn't have the $25 million, or they sold it for pennies on the dollar, whatever it is. And: Congressman, you guys have, you know, welfare funded, knowledgeable sources of information, people who've lived this, your successors trying to educate us on PTAB, and I have colleagues

trying to blow it up because she's tried to accelerate the process. And they're mad because she's doing it in a way that, you know, wasn't maybe entirely backed up by legislation. But from her perspective, she can't get, we can't get legislation through because we're so busy on the other stuff. Right? It'd be great to have you all come and share those thoughts. The Supreme Court actually, the I think that's the opinion you're alluding to, and I you know, Elena, I think wrote that one, but I mean, it was like, they just didn't know, they just haven't heard from you all. And we're lawyers, I'm a litigator, you know, we're really good in sort of certain areas of stuff, your areas are not the areas of stuff where we tend to be very experienced, which is why you're such a hot commodity at Cravath, I'm sure. So spread your influence, you know, share your knowledge. And, yeah, I hate to be crass, but you know, the resources make a difference too, if you guys had associations or you know, whatever you are going to do to have political influence. Doesn't have to be, you know, formal lobbying, but find ways to be heard, because you have the capability to get people's ears, and you've got the track records to justify it. And we need the information and the insight that you could bring.

David Kappos (01:07:27)
Thank you super helpful.

Dean Chang (01:07:32)
Actually, I so we paint a kind of a grim picture for the startup landscape and so on. But I'd love to hear from Charles because, and again, maybe maybe I'm being a little bit too far out there. But I view you as like the doc Emmett Brown, who invented the DeLorean time machine, right, The tinkerer or the inventor, working on your own. So how's the IP patent experience been formed like that? That inventor of tinkering in the garage standpoint?

Charles Grody (01:07:59)
Yeah. So I have had the benefit, since I first came up with my idea of a dad who has a law degree, has served as general counsel for multiple companies, and been through that same kind of litigation with patents that you have. And he understood the value of investing upfront in making quality patent applications. And so as soon as I shared the idea with him, his immediate reaction was, let's do a patent search. Let's see what's out there. If this is worth pursuing, and if it is, we're gonna go about it the right way. And so originally, he and I were the ones, well I authored the patent application, my first one, and then he looked at it.

Dean Chang (01:08:42)
You were a sophomore at the time? Yeah. So everybody knows.

Charles Grody (01:08:48)
And there were some painstaking afternoons of us reading through this patent application and word by word, to make sure that we knew exactly what it meant, and that we were expressing the idea correctly. And then once I had some success on campus, I filed the provisional and then I started fundraising, I started prototyping, I started competing in pitch competitions, and got some really great feedback across the university. That's when we decided, alright, it's time to take this to the next level. Let's bring in a law firm that my dad's worked with, let's convert this to a utility patent. And let's make this as defensible of an idea as possible. So that in the future, in the event, hopefully, we don't ever come into any sort of litigation, but if we do, let's make it as

easily defensible as we can. And so I've had the benefit of by winning some funding on campus by having some investor support from my family, as well as money that I've raised and earned on my own. I've been able to just barely keep up with the patent bills to file additional applications and maintain them, but I've understood from my dad's experiences dealing with the same thing that you have seen the value of investing upfront. But I also recognize that it's an obstacle that most other, virtually all other entrepreneurs on campus who I've worked with, have not invested the same kind of time and resources into their patents, because they don't understand those risks as well. And, frankly, I don't fully understand them either. But hearing Dean's stories, just validating that the money I've spent on the patents will hopefully be worth it in the long run.

Dean Chang (01:10:36)

And Charles, would you mind if I really briefly summarize your invention? Is that okay? Yeah, go for it. So if you've been to Nationals Park you may have used for Charles' invention, if which, which, which men's room? Is it on the-

Charles Grody (01:10:49)

third plate and third base on the concourse level

Dean Chang (01:10:53)

and it basically automatically flushing the toilet when you unlatch the stall door as opposed to the flaky sensor that I'm sure we've all experienced. But, Charles went to, he actually calculated down to the dollar, how much money in water savings it makes, which is what one over the Nationals? The VP of Operations, right? Yeah. Pretty darn cool.

Charles Grody (01:11:20)

Yeah, the idea is that the distance sensors caused the toilet to flush more than they need to so using the stall latch, guarantees one flush per use, cleanliness, saves water, better customer experience. Awesome. Thank you.

Frank Cullen (01:11:33)

If you don't mind, I'd like to follow up on what the congressman said. And thank you for that. Congressman, I joined Dave, in thanking you for that. You're exactly right. That's why C4IP was created was to try to make sure we're carrying this message to policymakers in a much more robust way. There are a lot of great organizations in town that talk about IP. But part of it is candidly, it's an issue most people leave to the judiciary committee members, so they don't care about it. But if you walk down the halls of Congress and say, we'd like to see more American innovation, You're darn sure every member of Congress and every staffer, I'll say, absolutely. If you ask him how you get there, their eyes might glaze over a little bit and say, we're not quite sure. If you ask them. Do you want us to out-compete China, they'll say absolutely. So we have to figure out how to better message on this and make it more relevant to your exact point for the congressional agenda, and make it something that also is very, very important to the constituents and their success. And their everyday lives being improved by these amazing innovations and creative works. So we do have a lot of work for us. But I would like to make one appeal to folks that are here. And you know, this congressman, being both a staffer, and now an elected official, some of the most important voices are the voices of your constituents, the people who are actually living in your district, doing the work in your district, and doing the creation of jobs in

your district. What we need to hear from are the folks here in this room, who are going to appeal to their members of Congress and say these are important issues, you need to care about these issues, because these are about our livelihood, our economic well-being, our national security, and our ability to compete with folks like China, who just want to rip off America success. So from that standpoint, we'd like to have many of the folks across America carrying this message to their members of Congress. So it's not just a bunch of lobbyists, like Manus and me carrying this message to the Hill, which we're going to continue to do, and hopefully do that as forcefully as possible. And the one last thing I'd like to finish on is, there is some good news. Right now, there are a number of significant pieces of legislation that can help bring certainty to the marketplace to help investors like Bob and others, figure out how to continue to invest in great companies, that certainty in the marketplace needs to be restored. And we're going to push very hard for that legislation to be supported. And we'll follow up with staff on that.

Congressman Glenn Ivey (01:13:56)

Greatly appreciate that. And if you know, one other quick thing, if you can do show and tell. I know David was teasing me about coming to these because I've been in office like what six months, but I just like every week I'm trying to go to these. But if you can get people to come see what it is to, they'll love to go to Nationals Park. Not everybody's got some quite that sexy, but it helps. It really does help, those of us who you know, I went to law school because I couldn't do the high tech science stuff. When I went to IonQ. They're trying to explain what it was. And I had to stop them and say, look, when I took physics and chemistry, they were just figuring out quantum mechanics, right? So this is all new. But you know if you can see it, it really does make a difference. So see if you can get people to come.

Frank Cullen (01:14:47)

We'll do that here. But we're also gonna do it across the country in districts throughout.

Husein Sharaf (01:14:52)

Can I make one quick comment. So I was probably the other side of the coin whose parents were not as legally adept at as yours, although quick plug for the visa system, I wouldn't be here right now, if it wasn't for student visas allowing my parents to come from North Africa actually to come to University of Maryland, where they graduated. So, plug for the visa system. I actually got to, I guess, experience a far less sexy IP issue, which is actually trademark. So, one of the great things about having a name like Cloudforce, is it's very recognizable, it's easy to remember, it's easy to say, and so many people are like, Oh, that's such a great name. How do you have that name? Well, turns out a lot of other companies also think it's a great name, including Salesforce, including CloudFlare, and including every little random company that sprouts up some in different countries, some in this country. And so we have been fighting battles in every direction, with to your point, very expensive lawyers. Because we probably did not do enough to prepare to protect ourselves from that. And even if we had, I don't know that it would have protected us against the Salesforces of the world. And so I'm still involved in protecting our name today constantly. And it is costing us quite a bit of money. So just I guess my perspective is if there was more, one, maybe support for young entrepreneurs to understand how to protect their, the sexy IP, as well as the less sexy stuff in terms of trademark, as well as maybe some support from public

institutions in the case where a small company is being somewhat bullied by, you know, the giant 800-pound gorilla in the industry. That'd be great.

Anaum Khan (01:16:39)
Going to hop in here, same problem. And I think so we actually connected to U of M Ventures to give us like a guidance on a legal IP lawyer. And I think if there's just more resources like that on campus, like we would have gone ahead on the issues like months before, right. And so I think that'd be a great and tremendous help. And so I really appreciate the work you're doing. So thank you.

Dean Chang (01:17:02)
Oh, just go Go ahead. Good.

David Iannucci (01:17:04)
I'm aware that the University of Maryland law school, my alma mater, actually has a major IP unit that is available in general to support, we've had him speak to many, good, we've had him speak to many of the counties surrounding Washington, DC to make clear that they are resources support companies, and we're trying to, they're very Baltimore centric. Now, one of our challenges is to bring them down here, but it's a major, it's a state resource.

Frank Cullen (01:17:28)
And one of the other challenges is it shouldn't just be in the law school. It should also be in the technology school, people being told, you got to pay attention to your IP once you're actually bringing that innovation forward. So this is something that just should not be from lawyers.

Dean Chang (01:17:42)
I just Patty Campbell over there, do you want to raise your hand Patty, she's headed up the Maryland intellectual property legal Resource Center for a long, long time, really tremendous asset to provide basically the kind of guidance of Anaum and what Hussein is talking about, it's not going to do as good a job as Patti, but it's done by law students at University of Maryland law school. So it's great practice for them. But the benefit to people like Anaum and Hussein is like you actually are. And they're guided by actual, you know, professors and attorneys, and so on. So it's not just law students making stuff up. But it's a great experience on both sides where you're getting some getting an education, so so they going from not knowing what they don't know, to knowing what they should know, and navigating this. And so I guess I'll also make a plug that a lot of our IP that we have to handle at research institutions, and Felicia can attest to this, this is a lot about just staying in compliance with the federal regulations of if you do this research, you have to do these reports. And you have to do this and do that. We don't even have time to get to some of the stuff that we're talking about here. Whereas maybe we used to, but the compliance and regulation and those are really, really onerous. So I think just acknowledging our research enterprise, whether it's federal research labs, universities have this increased burden. And if we want to spur this innovation ecosystem, there needs to maybe be explicit mention of research dollars, also supporting this kind of activity that we're talking about. Didn't mean to kill the room?

Congressman Glenn Ivey (01:19:27)
Well, I do have to take off soon. But I want to thank you all for inviting me to this. I think it's been

tremendously helpful. I'd love to be available to follow up with any of you on you know how to move these things forward, the litigation piece is of particular interest to me, because I've seen what it can do in the negative, and it's tricky to figure out how to adjust it so that it can work in a positive way that doesn't cost $25 million, because you know, you still have this. This is true for just, you know, litigation in general, regular small businesses, it's just a contract dispute can put them out of business, you know, just, you know, depending on how big they are five, figure six-figure, legal fees can do it. So it's a real challenge, but I'm counting on you all to help me figure it out and walk me through it. I also look forward to working continuously with you all, as the young entrepreneurs. You know, one of the neat things about being in Congress is you get to meet a lot of interesting people who are successful and doing cool things. And one of the things I'd really like to do is to connect you all with some of the folks who can help with getting these entrepreneurs, commercialized and making sure the University of Maryland continues to grow this program. I think it's really outstanding. It's so keep up the great work.

David Kappos (01:20:51)

Last comment, Congressman Ivey, first of all, thank you very much for spending time with us today and for being so engaged on the legislative point you made, we definitely have ideas, so we'll be in to follow up on that.

Congressman Glenn Ivey (01:21:03)

I'll hold you to that. Now, whether we can move legislation is another story, but I wouldn't like, I would really like to hear what you got them on.

Dean Chang (01:21:14)

I just want to thank everybody who's here and not just the panelists, especially the panelists, but everybody here, thanks for coming to our campus. Like I said, it's such a fitting venue for this event. If you do have time, I highly recommend going over to Stamp to the Maryland dairy getting yourself a scoop of ice cream when it's hot.