Start-Up Boot Camp for University TTO Professionals and Inventors

Session 6: Gauging Economic Impact and Outcomes

Presented by:

Hello everyone. My name is Cindy McManus and I'd like to welcome you to today's webinar entitled *Start Up Boot Camp for University Technology Transfer Professionals and Inventors, Session 6, Gauging Economic Impact and Outcomes*. It's my pleasure to introduce your moderator for today's session, Mr. Gerard Eldering of InnovateTech Ventures. Welcome, Gerard.

Gerard Eldering: Thank you, Cindy and again, I'd like to welcome everybody to today, our final session of the Start Up Boot Camp series. For those of you who've been on for the whole series, hopefully, you've found that we've met our goal and provided you with the detailed guidance and advice that you need to take a startup beyond survival, onto rapid growth and ultimately to that liquidity event and again, my name is Gerard Eldering. I'm serving as the moderator and I'm President of InnovateTech Ventures which is a technology transfer venture creation firm in Virginia, outside of Washington DC. So, in our previous five sessions, we talked a lot about the big picture around university startups, early decisions such as feasibility, bootstrapping, team building, financial issues, business plans and pitching techniques. Well today, we're going to talk about the end point of the university process, outcomes and impacts and talk about tangible issues like growth and exits and broader economic impacts to the startups but before we go into that, let me introduce our panel members.

We have with us today, John Casey, who holds a number of different positions and roles affiliated with George Mason University. John is a director of the Mason Small Business Development Center Program, also director of Mason Venture Mentors and an entrepreneur-in-residence at the George Mason University School of Public Policy. John's been a lifelong entrepreneur. He served as CEO of Caucus Systems, Vice President of Baranof Software, Director of Advanced Systems at Phoenix Systems and a number of other positions and has an extensive experience with startups and the entrepreneurial process and is a great advisor to many entrepreneurs in our area.   Also joining us is Ed Nortrup and Ed's a patent strategy and execution expert with a wide range of industry experience. He's a prolific inventor with 72 patents issued in his name worldwide. He also serves in key legal and engineering positions ranging from Director of Resource on through to in-house IP counsel and also general counsel for startup companies. Also rejoining us is Charles Cella, who's a patent attorney and co-founder of GTC and he's very, very experienced in both the patenting and licensing fields. He provides patent strategy licensing and technology transactions services with a broad range of clients ranging from industry leading software companies on through to the inventor only startups and Charles previously served as CEO of BountyQuest.

Also, joining us again is Paul Rauch. Paul is the founder of the Evan Law Group LLC, has prosecuted many patent applications in a wide range of areas, including biotechnology, pharmaceuticals, semiconductors, software, business methods and on and on. So, we're glad to have our new speakers with us today as well as our returning speakers. With that, I'd like to move to our next slide and talk a little bit about the agenda for today. We're going to go through and talk about a number of issues around sort of the end game, in some senses, of the startup process. Part of that is the growth strategies that startups have to go through the issues that they have to address but also looking at the exit strategies, specifically on the merger and acquisition or IPO of a company, where there's some liquidity event, some exit for investors and potentially universities that hold equity as well and then we're going to spend some time talking a little bit about kind of the broader level, almost policy level, economic impacts of the startups, which is a very important and relevant subject. In fact, I just recently mentioned to the panel earlier that Kauffman Foundation have released a study, I believe today, indicating that startup companies have been the sole source of job growth in our country over the past 15 to 20 years. So that subject is very relevant today.

Before I turn it over to the speakers though, I'd like to go over a quick series recap and just talk a little bit about what we covered in our first five sessions, hopefully all of our listeners today were able to participate in all of those sessions. So let's go to our series recap slide. In our first session of the series, Brian and Jack from the University of Utah, talked to us about a lot of the decisions that are made early in the process of deciding to create a startup company and figuring out how to go about doing that and building the right team for that. They talked about things ranging from starting lead startups to the importance of recruiting advisors that can really help the startup get through those early rough days.

The next session, we had Brian and Jack back again to talk to us about money matters, a lot of the issues around the financial aspects but also related to that, equity allocation, valuation, who owns how much of the company and they, with some of our other speakers on the panel walked us through term sheets which was very helpful.

In the next session, Jim Chung talked to us about creating solid business plan, again accompanied by a number of our other speakers and went through the basic components of a good, effective business plan, highlighting some of the things to avoid and some of the things to focus on and talked about mistakes to avoid, such as telling investors that we have no competition.

Well, the next session was funding options and opportunities. We had Kef Kasdin, Bob Okabe on to talk to us about the specifics of going out and finding that money for that startup company. They talked about a lot of the turn-ons and turnoffs, pros and cons in a range of different funding categories, ranging from angels and VCs onto bank funding and various government funding programs and then, in our fifth session last week, Bob and Kef came back and talked to us about pitching techniques, how to get what you want, talked about going in front of the investors and all of the issues around that, ranging from the elevator pitch onto how you get access to potential investors and also some of the common blunders to avoid in there and throughout these sessions, we've had Charles and Paul, Adam and several other folks joining us and helping out addressing both legal issues and other broad issues in the series.

So, with all of that material, we now have moved on to our final session today and as I've indicated, we will be talking about kind of the end cap of the whole start up process. We broke in the series, the sections today into three parts. First, we're going to talk a little bit about growth strategies, if we can go to the growth strategies slide. We'll touch on a couple of issues that the startups have to deal with as they're growing through that growth phase. Now, this like probably many of the subjects in our series, we could easily devote an entire hour and a half or more to the issues around this but we're just going to spend a little bit of time talking about marketing, freedom to operate for the startup, stakeholder outreach and some of the issues around later stage funding. So with that, I'm going to go ahead and turn it over to Paul and Charles and ask them to take it away.

Paul Rauch: Earlier in the series, we talked about freedom to operate opinions being something that was too expensive and quite frankly, pretty mature to be done early on in the process but once we get to marketing and sales of products or products prepared by processes, as well as perhaps importation of products or offers for sale, then the freedom to operate issues become much more important. Since revenue is hopefully now coming into the company and we have a lot more at risk, it becomes worthwhile to spend the kind of money that's necessary to carry out something like a freedom to operate opinion. I'm going to talk in more detail a little bit later on in the talk today on some more details about freedom to operate opinions.

Other things that need to be considered during marketing issues that relate to patents and patent rights are the offers for sale are considered an infringing act. So it's important to address that but also those offers for sale can compromise the patent rights. In the United States, it's those activities that generate revenue, those activities that are part of exploiting your invention for financial benefit, that tend to be the items that compromise the rights. Fortunately, in the United States, we have a one year grace period but outside the

United States, there is no grace period, except in unusual circumstances. So if foreign markets and the patent rights in those foreign markets are important, you need to consider how that can impact it, if there are things you have yet to seek a patent on.

In most foreign countries, the important element is not the economic exploitation but rather it's a non-confidential disclosure. A non-confidential disclosure in this context means providing sufficient information that the other party could make and use the invention. When I say non-confidential, there must be at least an understanding that the information provided is not for the public. It's meant to be kept to themselves. The non-confidential disclosure does not have to be in writing, does not have to be explicit, although I would highly recommend having those things and typically, most countries that view a non-confidential disclosure as damage in patent rights, give you a special grace period, e.g., Europe will give a six-month grace period. If your expectation of non-confidentiality, I'm sorry, if your expectation of confidentiality is compromised by the other party, no fault of your own, then they will give you six months to get your patent application filed.

There're some other things other than simply discussions that can be considered non-confidential disclosures. In the context of the sale of a product, it's the perverse engineer-ability of that product so that the party who receives it, can determine how to make it and how to use it. In general, most products I would describe as reverse engineer-able, compositions can be analyzed by chemists, biological materials can be analyzed by biologists, devices and things of that nature can be examined under the microscope and effectively reverse engineered. Sometimes though, reverse engineering is not really possible. A good example of that would be a very complex process that results in a product where those elements that are necessary to get the structure are not apparent from the structure itself. I don't have any really good example I could provide to you right now but it's that reverse engineer-ability that could be viewed as a non-confidential disclosure. The important thing to remember is before information leaves the company, either it needs to be protected by some sort of confidentiality or your patent applications need to be on file. It's the best way to deal with that issue. Okay. We can move on now to the risk management.

Charles Cella: So, in earlier sessions we talked about the situations of in early stage startups being under the radar screen as a result of being too small to be worth chasing and that often items like freedom to operate opinions are too expensive and really too premature to develop and this is just a note that as you move to marketing products, that changes completely and drastically, you move from off the radar to clearly on the radar for third party patent issues and also the product is now understood, it's not an undefined idea but rather, is something that's actually is being brought to market and it brings the issues of managing third party patents much more to the forefront as soon as a product is actually being launched. That doesn't change the fact that freedom to operate opinions are very expensive. So many companies in the early stages of marketing products don't have the money to do a major full on freedom to operate study and need to find some other way to thread the needle between being on the radar but not having the money to fully address the potential threats.

So, you know, that leads to these risk management activities that we've identified here, one of which is inbound licensing. Often at the stage of an early stage company, turning to potential patent holders and obtaining licenses can be less expensive than waiting until you're making a very significant profit. So, we found it to be fairly successful to pursue licenses to a patent or to a technology in those early stages where relatively favorable terms can often be obtained before you become a very rich target. We've also found it to be a good time to think about acquiring IP, you know, often in the early stage it's possible to identify IP that's orphaned inside universities' IP that is held by individual inventors and the like and again, you know, before you are the deep pocket person on the other side of the deal, it's often easier to get a relatively good price in an arm's length transaction with an individual inventor, e.g. And then, you know, really critical, we think is to develop – to start to develop operational design guidance memos so that where there are third party issues, you are steering the team, the product team away from areas that are known threats and there's an art to doing this without getting on notice of too many third party patents becoming at risk of being a willful infringer but on the other hand, trying to avoid accidentally or intentionally designing into third party patents and at GTC we have a process that we call a broom clean process, in sort of in contrast to, you know, an absolute crystal clear freedom to operate, you know, the idea would be to make sure that issues are clean enough that you have a diminished risk of a third part claim and that you're generally operating your engineering and product plans in a way that's steering away from the known threats and into white space, recognizing that that may not be bullet proof but that at a high level you can often learn quite a bit with an investment of a smaller amount of effort.

So, this is a sort of foreshadowing as we move sort of down the timeline later in the slides and as a company grows and becomes larger and looks at things like IPOs and exit, as we will talk later but at the first moment of beginning to market a product, it's critical to revisit IP issues that, you know, may have been set aside in the early stage for reasons of cost or a lack of maturity of understanding of the product. Once the product's ready to be marketed, those IP issues need to be much more actively managed in terms of the risk that they create and I think that makes us ready for the next slide.

Paul Rauch: This is Paul again. I just want to make a quick comment under the risk management about IP acquisition. Intellectual property is like any other form of property. When times are good, it's expensive and when times are bad, it's cheap. Today, right now, is one of those rare times when an enormous amount of intellectual property, particularly patents are being abandoned or are available for bargain basement prices. A first aid's often the same time when other people don't have a lot of cash on hand but that's something to keep in mind that the business cycle goes up and down all the time, typically five to seven years and so there's often periods in there, where opportunities will show up to acquire intellectual property. So moving on to some other growth issues. I think an area that is underrated is dealing with employees and employee turnover. When you're growing, you're hiring but you're still going to be losing employees. Often as you grow, managing the employees is much more difficult because you typically are understaffed in the management area. So, it's important to protect company property in that turnover process. Trade secrets, in particular, need to be protected. Trade secrets, when you're a very small company, everybody knows about them, everybody uses them and everybody knows that they are important to company property but as a company grows, the law requires that the trade secret not be broadly broadcast to all the employees, particularly people who have no need to know that information. So once you start to exceed 10, 15 employees, it's important to limit the important trade secrets to those people who need to use them. It's very important to maintain a trade secret that the people who know it, know that it's a trade secret, know that it's important company property and treat it as such.

Some things that are overlooked as important trade secret, company property, could be customer lists or supplier lists, contact information with those customers and suppliers. So not just scientific processes or things people think of like the Coca Cola formula and in fact, data, particularly databases, that kind of knowhow, that kind of information can turn out to be very, very critical to provide significant advantages for a company. Often these things are not recognized as trade secrets so it's always a good idea to look at what you're holding onto, what are the things you are putting money into, into developing and look on the broad horizon, look on the long term. Something that you add incrementally to, a little bit every couple of weeks, over the course of years, is a gigantic investment and needs to be treated like it's a valuable piece of company property.

That leads me into protection of data, data in particular can be very important and often unrecognized as to it's value. There are few, not well known instruments to protect your data and protect your data from theft. One of the most important statutes around is the CFAA, that's the Computer Fraud and Abuse Act. This is an act passed by Congress for the primary purpose of preventing hackers from getting in and stealing passwords, stealing customer account numbers and things of that nature or carrying out malicious acts on other people's computers. But today, the CFAA turns out to be the most important tool to protect a company from malfeasance by departing employees when it comes to electronic information and data. The scenario is almost always the same. A computer is damaged, destroyed or stolen and then the employee leaves the employer.The CFAA is an important tool and it's important to let your employees know that there are laws out there and the CFAA is not just a civil law, it's also a criminal law and that they should be aware that leaving the company with company data is not allowed and is a crime. Prevention is the best way to go. Okay, we can move on to preserving margin strength growth.

Charles Cella: So, now we're into the growth stage of the company, we've launched a product and are having success and growing revenues and finally, some of the positive sides of the patent world emerge, perhaps have your own patent or beginning to get noticed and have allowed sort of patent office but likely growth attracts competition, the followers start to appear and you're facing new issues related to having that growth be undermined and one of the, you know, critical things to do is to seek to preserve margins in a company and one of the things that many early stage companies can't afford but as you move into the growth stage, need to plan for is having that war chest to pay for enforcement of patent rights. An issued patent can be a significant deterrent for competition, just by it's existence in the world but it's rarely enough to stop all competition so as the company grows, having significant funding start to be set aside to plan for patent litigation as necessary or copyright or trademark litigation or even trade secrets in some cases but having that litigation fund can be a very significant fact in turn is having the ability to establish credibility to be seen not only as having patents on paper but having the capability and the willingness to serve those patents and if the companies that established that drum beat protection through assertion that often end up producing the highest valuation is because they have the revenues valued but then those revenues are believed to create – it is believed that those revenues will continue to support high profit margins because the IP is there to keep them from having competition undermine their ability to establish high price in the time margin. I'm going to turn it over to Ed Nortrup to talk about alternatives to litigation, including establishing a licensing program that goes hand in hand to your product.

Ed Nortrup: Yes, thanks Charles and you know, as Charles points out, these things are very expensive and you're likely at this stage, in the program – we definitely do have a little bit of a noise chattering in the background, I'm not sure – I don't think it's my phone, seems to have gone away, seems that at this stage of the program, you have a lot of needs for the money that you have but you also have a real need to protect your margins and you have an asset, hopefully at this point, your patent asset that can be deployed and but it's not cheap to deploy so we've been in a number of situations where we've done this with finesse. It might look like, from the outside that it's more of a root forest to be honest but internally it's very much finessed. You need to appear to the outside world that you are interested in aggressively defending your rights, you need to demonstrate that, otherwise you have no chance of protecting your rights, people would just stomp all over them. So there is this real need to appear as though you're aggressively protecting your rights. Now, as an alternative to litigation though and litigation is where a lot of the money leaks out, you know, patent litigation involving, you know, just one or two patents, can be a multimillion dollar project in and of itself.

So, many times having in place a strategy that includes licensing is, it's important, it doesn't always work but it should definitely be considered. We've been in a number of situations where, at first, the company's desire was not to license anyone that was considered a direct competitor in the field and let's just try to eliminate them from our field altogether. That's a very expensive proposition. If you – but we've gotten those companies, a lot of those companies, anyway, to take on a licensing program where they understand that part of the enforcement, part of the maintaining of margins is really just appropriately taxing your competitors. If you can tax them, not only are they being taxed, not only is there products being taxed with this royalty burden but that money isn't going to some government agency, that money is coming to you so it's actually increasing your margins while it is decreasing their market share applying pressure to them and you're increasing your overall margins.

So, an enforcement plan that includes licensing to one's competitors, tends to be less expensive and it also tends to be one that is quite effective at helping you maintain your margins. While you're in that process though, this black bullet on the slide where it's suggesting that you have to avoid unfavorable precedents. It's very important that you don't give up your litigation positions while you're negotiating favorable licensing deals. It starts to become easy to enter into licenses where you say, because you're not an infringer, I will let you get away with the following thing for cheaper money but you have to be very careful because you need to constantly protect yourself from taking positions that deteriorate the real litigation value of your patent because sometimes you do have to litigate and many times somewhere along the way, even when you're in a licensing program, you do wind up by getting in a litigation and that brings up another alternative when you are litigating, you know, many times it is a good strategy to pick, you know, you really want to pick the defendant and sometimes you want to pick the defendant because they represent a huge opportunity to you. Maybe there's a lot damages there to be had. That's possibly one way to pick but sometimes you're really not so interested in fighting the fight for that reason at the moment, sometimes you're really looking just to establish credibility in your patents, you know at first, when you get your patents issued, everybody says well, they're junk, they're not worth anything. USPTO is issuing things they shouldn't be issuing but once you get a few licenses under your belt and once, if you actually get a couple of licenses under your belt and get a litigation win under your belt, all of a sudden, the credibility in your patent portfolio goes way up so does the value in that patent portfolio.

So sometimes you pick a defendant that is just a defendant that will probably roll over relatively easy and even if you don't go very far in the litigation, the fact that you file one and you settle it, is typically viewed as a win that establishes credibility. So, definitely the type of thing where you have to constantly demonstrate to the world that you are an aggressive defender of your IP, you just always have to do that, otherwise it loses tremendous value and then at the same time, your internal procedures really can be, you know, modified where you can have an internal strategist say that is much more money conscious to get you to this credibility point of view and also maintaining value your margins. So I think that brings us to the next slide.

Gerard Eldering: Thanks and I want to just talk briefly about stakeholder outreach which is much less tangible issue but really quite important. Startup companies need to think about through their entire lifetime, the first question is really who are the stakeholders there and certainly investors, key customers, the technology transfer office that licenses the technology are all on that list but there's many others as well. Those include key suppliers, distributors, the inventors that are involved in the process and maybe as the company matures, the inventors are less involved but they still might have some equity and certainly a lot of interest. So one important element is for the startup management team to always keep in mind who those stakeholders are and then, it's recommended to develop a good regular method of communication with those stakeholders and with some of today's – the email tools and various products out there, it's simpler to be able to send out messages periodically to the group letting them know what's going on, what's the status of the company. There certainly can be advisory boards and some of these folks will be on the board, the actual board or the advisory board and get some information that away as well. When I think about this subject one item, an article I read a long time ago, that comes to mind was a survey done of venture capital firms asking them which of their startups in their portfolio they felt best about and then the study went on to look at those companies and look at their performance across a bunch of different metrics and what the study found was that the correlation of the venture capitalist feeling good about the companies wasn't related to the performance of the company or how fast it was progressing or the return it was bringing or anything like that, it was actually related to the frequency of quality communication between the startup company and the VC. That was the biggest thing that impacted the investor, the venture capitalist feeling good about the company and I think that speaks very much to the point of stakeholder outreach.

It's important to try to limit surprises and some of that is just letting folks know early on when there looks like there might be an issue that might be a problem with the product release date or a key customer or something like that, especially with folks like investors that's very important in there and then the last item on there is to talk about successes and I think, from my own experience, when you get wrapped up in the small business and startup fees, it's easy to have your nose to the grindstone every day and not be able to take that break and talk about the small successes and that can be very important as much for the internal team as it is for those external stakeholders and I've seen some startups that will set some pretty, what appear like pretty small milestones along the way, you know, such as getting whatever the halfway point of the version one product release but they'll make reaching that point a milestone and they'll celebrate it's success when they get there and that can achieve all sorts of positive benefits. So just some important points to think about. With that, we'll move on to our next slide.

Ed Nortrup: Yeah, great. Yeah, so and really, to underscore that as well, one point on the last slide, really just to say that, you know, do you have to reach out to your advisors, that you have and it's always, always important to do that at critical points. So now, you know, as you're getting into these later stages whether these are later stage funds raising or whether these are later stage acquisition discussions, there are quite a few pitfalls that you can find yourself tripping over and it's really quite a terrible thing if you run into one of a significant IP issue at a pulling in diligence, you're either looking to the money or you're looking to be acquired and you're stuck on IP ownership issue or you're stuck on an IP infringement issue and they can really derail the whole event and if they don't derail the whole event, they delay the whole event if they don't just delay, they reduce your value quite significantly.

At GTC we do a lot of IP diligence, we do a lot of buy side IP diligence, really done hundreds of acquisition diligence work over the past couple of years alone and you realize that the companies that are nicely and neatly tied up on the inside from an IP perspective, run into far fewer problems. If I were and then some really do get derailed, it's just not a scare tactic, it is really a problem and this first one on here, the first bullet where we have ownership and chain of title, I would say one of the most significant trip points these days for a technology company comes with improper use of open source, it's not so much about patents, it's much more about open source although there're definitely patent ownership problems that trip things us as well but on the patent side of that world, many times the companies are doing things correctly but they might not be papered properly and there's something that can be remedied fairly quickly although, you know, definitely I don't want to say that there are never like real problems over there but they tend to be of the variety that can be fixed and the patent work also tends to be the type of thing that companies do with seasoned outside counsel and that seasoned outside counsel is really tending to those things properly.

Co-development on the other hand, is something that's really an internal job. It's not something you've hired your outside counsel to regulate for you, to manage for you in any way, shape or form and that tends to cause a lot of problems. I shouldn't say no companies do that, we also have clients that we do set up open source policies for, we do audits to make sure they're on track, part of that broom clean program that Charles mentioned earlier is a project where we go in and help the company either do a self-audit or we do an audit ourselves to make sure that open source is properly being used. It's not that it can't be used in a proprietary software plan, it's just it needs to be properly used and we have definitely seen situations where open source usage was improperly used to a point where it needed remediation, it needed, all the open source needed to be removed and code needed to be regenerated and that all had to be done before that code base could be integrated with the acquirer's code base and in those situations, you wind up by losing money on your deal.

There's a tangible remediation program that is required and that tangible program winds up by carrying a price tag then it reduces your value and sometimes very significantly. Other times you find that it doesn't just need to be remediated but there's actually real problems with copyright infringement and you know, to a point where the company doesn't look like it owns any of it's code and there's a situation where the value of the code may be completely diminished and/or they may have to go out and, you know try to fix things in a world of, you know, open source generators that are difficult to deal with, you know, difficult to get a handle on. So, over difficult to negotiate with, I should say.

So, I would say number one on the list for a technology company is to make sure that you have a proper open source policy inside but even after you have an open source policy, you need to audit your own code base because whether you have internal or external developers, you don't know what they're all doing. They're all trying to meet timelines and as a result, they are using open source and they might be using it improperly so you need to do audit to keep an eye on those things, otherwise really nasty things can happen to you in diligence. In addition, you do have to watch on the patent side and on the trademark side that your chain of title is appropriate and done correctly and you have to watch the license agreements and the developer agreements that you have. Again, very important that when taking technology from a university, that that license agreement gets done appropriately so there aren't a lot of questions about it. If it looks like there are problems with an agreement for technology you've licensed in, these things are going to have to be remedied in any of these diligence projects and they can delay things, you know, quite significantly. If you are developing technology in another country, it's an absolute must that you get proper counsel for that country. There are again, many situations where we see people outsourcing co-development to India and then using a US development agreement and the US development agreement, even though it says at the bottom it's governed by US law, doesn't contemplate Indian law at all and unfortunately, Indian law rules a lot of IP ownership issues and you can wind up by just plain not owning the code even if you feel like you have developers' agreement in place. So there's another place where, you know, your diligence in your process has to be tend to pretty early, otherwise at this stage, you run into big problems.

We're going to touch on, you know, the emerging focus on FTO, you know, and I think we're going to get that a little bit more in a few minutes as well. The aspect I want to touch on right here is that another area, I would say really the second area that winds up by causing the biggest problems that I see in doing patent diligence is when the company doesn't wrap up it's files appropriately when it has received a notice of infringement, an actual notice of infringement or that the company has done some freedom to operate study and they haven't concluded it, maybe they concluded it but they didn't do it in the files, so when you pull out the file, you know, there's a threat letter or there's some internal notice or email identifying the patent that is at issue and then there's no conclusion and those cause major problems and it causes that file to have to be reopened and when you reopen it, you're reopening it in front of the company that's doing diligence on you which makes it 10 times harder. So again, you know, just to state, you know, very firmly that wrapping up those files in a professional, sound way with good competent legal advice very important, otherwise it delays things pretty tremendously and in that vein in particular, are threats of trade secretness appropriation. Sometimes it's not just a patent identification, it's not just a hey, you've infringed on my patent; it's hey, you've also stolen my trade secrets and those types of claims, the trade secrets are gnarly, very difficult to eliminate entirely but it makes it all the more important to eliminate them and properly wrap those files up before you get to this stage, before you get to the diligence stage where it can really negatively affect you. So, I'll stop there and let's us go on to the next slide.

Gerard Eldering: Great, thank you. We're going to move to the next section now where we talk about the whole exit issue when a company's getting ready for that liquidity event or IPO and the first thing we want to chat about, very briefly, is when and how to seek a buyer. Again, it's another complex area that one could spend quite a bit of time to get involved with and our attorneys and other speakers can jump in here at any point but I think the first consideration is who drives the decision and in my experience in most cases when we have investors involved, certainly institutional venture capital in many cases angel investors, they are going to be in the driver seat on that decision of looking for a buyer, trying to exit, trying to sell the company in some manner and in some places, in some situations they will completely control that decision. In other cases, where the company's been bootstrapped or built through some other means, the management might have that opportunity, the ability to make that decision on is it time to try to sell the company and the only comment I throw in there with this is I would encourage individuals sort of not be too greedy about things and if there's an opportunity to make an exit which meets some personal goals and you have the ability to control that situation, I would encourage them to look closely at that. I have seen numerous situations where someone has missed an opportunity for an exit and never got it back and that's difficult.

A number of decision factors to be made when contemplating whether to go out and look to sell the company, you know, what's a competitive environment? Are there competitors coming up on you quickly, large ones that might take over, might degrade the value of the company if it's not acquired by one of those folks where are you in the life cycle of the company. I've seen software products out there that might only have a year or two lifecycle and at least as in the form of a small company and they need to get picked up quickly or there's other cases where a company has 5 or 10 years of strong growth ahead of it still and that should be factored in and then certainly the market conditions which has been a big factor over the past couple of years. There are numerous issues around the preparation for an exit and just a couple of areas to consider. Certainly the tax planning. I was with an M&A group recently and they suggested planning 18 months to 24 months in advance of trying to tell the company to begin the process of the tax planning. Certainly positioning the company, communicating with the market place or with the customers in the environment out there, you know, I think some companies along the way go and seek opportunities to win awards and things that will raise their visibility in legitimate and ethical ways and then certainly need to think about the preparation, the management but also the employees and getting a message around to employees that you're looking to sell the company could have a very serious impact on the performance of the company from day to day and finally, the process of seeking a buyer also can be quite involved in complex.

There's a number of different types of folks out there that can help with that process. For larger sales, investment bank group may be appropriate. There are other versions, there are numerous attorneys who can actually help play some role in the brokering and sales process and certainly just business brokers that will deal with smaller opportunities and so that's part of the process and with that we'll move on to the next slide.

Ed Nortrup: And I wouldn't mind just making one point on the investor versus managers who makes the decision and it's just to point out that it's important when you bring on investors that they have the same view as you on what makes sense, what are the metrics that makes sense to sell the company. You don't like to be in a situation where you know, you're looking to exit the company at a hundred million dollars valuation and the, you know, the investors are looking for 10 times that. It causes a tension between those two groups so you'd like to make sure that that is aligned.

Charles Cella: I would like to make a point about positioning the company. Very often we find that intellectual property again can be brought in to very expressly position the company for M&A. Often, you can identify the technology value proposition that would result from integrating a company's technology with that of a respected acquirer and that integrated technology combining, you know, your product with theirs may well be patentable as a result of sort of inheriting the novelty of your own technology and laying down patent that are explicitly on that integrated product, you know, that relate to the value proposition of the M&A deal. We have found it's a good, in some cases, a very significant sum on the scale in terms of valuation and also to help position the company to be attracted to a buyer, you know, among the group of companies of similar technology being the one that had the IP portfolio that most expressly relates to the value proposition that the corporate development person inside the buyer's looking at it can really move you to the top of the list in positioning the company and I think now we are ready for the next slide.

Paul Rauch: So we're revisiting freedom to operate. The freedom to operate opinion we touched on a little bit early in the program and in that context, in the early life of a company, it's simply far too expensive to do it and it's too early, it's premature. The freedom to operate opinion depends very critically on exactly what's being sold, on exactly the processes that are being carried out and it's also very important to look at the specific activities the company is carrying out and distinguish those from the activities that are being carried out by the company's customers as well as it's suppliers. Another important aspect of freedom to operate is not just the liability created for the company itself but again, for the company's suppliers and customers. That sometimes takes an intimate understanding of exactly how the business is operated and those details are not always worked out or finalized early on in the company's life. It is very commonly the case that things change as time goes by.

So, freedom to operate has two important parts. The first part is the freedom to operate search. That's the process of discovering patents that could be infringed by the activities, that's discovering the patents that's typically carried out by a searcher. Many law firms carry out the search functions in-house. Very often those are outsourced to professional search companies. The next stage of the freedom to operate opinion is the analysis of the each patent that has raised a significant liability issue. I've estimated the cost here at about $10.000 for the search. That can be quite variable but tends to much less expensive than the analysis of each patent. It's very rare that a competent, freedom to operate analysis of a patent is going to run under $20,000. I've just virtually never seen it. Often, with very complex patent portfolios that have to be analyzed, the cost can become extraordinary. $100,000 is not uncommon.

Part of preparing these opinions so that it's a competence opinion is putting it in writing. Freedom to operate can be used for business planning and in those context it doesn't always have to be in writing but if important company decisions are being made, it's a good idea to have documentation to support those positions but when liability is the concern, when it's actual activities are carried out and determining exactly how much risk, financial risk is involved, it's very, very important to have a competent opinion. Competent opinion means that it's in writing, that all the parts of the patent, as well as it's history of prosecution in the patent office has to be examined in detail. Everything should be laid out quite clearly and although today, you don't have to present an opinion of counsel to avoid triple damages, the opinion nevertheless should be written in a way that you prepare for it to become unprivileged, no attorney-client privilege on that document. It is a privileged document but the circumstances may require that you present it to potential buyers of the company or that you present it to people who want to sue you and it's important that it has been prepared in a complete fashion, should be compact, it should be self-contained, all the parts it needs are there and that you are prepared for the information that it contains to become available to other parties. What about the timing of an FTO? Well, the closer you are to the markets, the better. If you're selling things you know what you're making your money on. You know how you're making your money. You know the activities you are carrying out. Sometimes that's a little late but the important thing to remember is that your liability under patent infringement is typically proportional to the amount of money you're making through those activities. It's not always the case but it's almost always the case. If the company has enough financial strength, then it's a great idea to carry out the freedom to operate opinion before you start accruing the liability but it is not unacceptable to start the process. Make sure things are going the way you hope they go and then provide the funds necessary for that in-depth analysis. It's important to remember that if there're changes in the product design or changes in the business strategy, it's very important to adjust the opinion accordingly. Very small issues, very small changes that look rather insignificant, can have profound effects on the final result. It's also important to remember what markets you're actually selling in. Typically, every country has their own patent system. Although Europe is viewed as a unified patent system, it's not really unified. It's unified for obtaining a patent but infringement issues and therefore, freedom to operate issues are a country by country analysis. The US is not the same as Canada or Mexico and the complexity of these issues grows as we start to do other activities in other countries, e.g., manufacturing in China, importing into the United States, possibly finishing something in Canada and then selling it to Europe. These are all possible combinations and an analysis needs to be carried out for the different activities within the different countries. They all have their own patent systems, they all have their own laws and it's important to get competent counsel in the country of interest where the activities are taking place.

So, we mentioned before there are a few ways to address some of these risks. One important area is getting a patent portfolio. We've had a lot of discussion about the importance of patents and patents being directed to the, what was the term used? Value proposition of the company or what other companies are looking for when they want to purchase your company. The patent portfolio is also a very important risk mitigator for freedom to operate. Typically the scenario is a competitor who has patents that are in the same field as your patents are in and carries out activities in the same markets that you're carrying yours out in. If they come to sue you, your best defense is to find a patent in your own portfolio that you can then assert and get for them. Therefore, it often makes sense that if ideas come up within your company that you're not going to go through with but that relate to competitive products or competitive activities, especially if those activities appear to be something similar to what your competitors are or may be doing. Obtaining these patents is far, far less expensive than the cost to obtain an analysis on them. It's hard to really say what a patent costs but it's often the case where the total cost over the entire life, including the preparation of the patent issue for use in the entire prosecution will be under $30,000. Sometimes it's more like $50,000 if it takes longer and it's more complex but it is extraordinarily rare that it ever rises to numbers like 100,000 and you could be certain that whatever you pay for that patent, it's going to cost a competitor about twice as much to determine their liability under that patent. That's not to avoid the liability, that's not to defeat the liability, that's simply to determine how much it is. Licensing could be very important in that context also. Obviously, if you license the patent, you can't be sued under it but those are long term strategies. Those strategies need to begin in advance; they need to begin before the markets are answered. Other areas to mitigate this freedom to operate risk, one is business insurance. Insurance is changing, insurance changes all the time but it is often the case that the business insurance will cover patent infringement under the appropriate circumstances. It's very important that if you get into a litigation situation that all the insurance policies are analyzed carefully and a claim is made to those insurance policies, wait for the denial, make sure the lawyers look it over carefully, that it actually is the case, cause that could be incredibly important to the survival of the company. You also want to avoid willful infringement. I mentioned earlier that a freedom to operate opinion can be used for that purpose. This is a changing field. There are changes in the law in this area but in general, if you have a reasonable, good basis for your position that you don't infringe a patent, it's unlikely that you're going to be hit with willful infringement. That's a really big deal. Willful infringement is triple damages. So, your liability being proportional to the amount of money you're making on the product or in that market now suddenly, if willful infringement is found, you have triple damages. It's way out of proportion and it can kill the company. So let's go on to considering an IPO.

Charles Cella: So, we've talked already in Ed's presentation about late stage funding about some issues that come up in the intellectual property area, ranging from diligence on chain of title, FTO, etc. but additional high impact factors that can come up during the IPO process really include validation and support for statements that go in the S-1 registration statement for the company. The companies, especially for technology centric IPOs, which are the kinds of things that, you know, eventually come out of universities and in many cases, very often makes strong statements about the effectiveness of the technology, the uniqueness of the technology, the benefits that it provides, the company's ability to, you know, convert those into high margins, etc. and the intellectual property component of an S-1 can often be a very powerful supporting element to the rest of the differentiation that's being presented there and so, we found very often that there could be a high impact on the IPO story, provided that the intellectual property story is told well and there's often a disconnect between sort of a traditional approach where IP is presented, sort of in raw numbers. just a count of the number of patents and in a very formalistic way versus presenting the patent assets themselves as assets of the company that are critical at presenting them substantively with visual presentation and a story telling dimension and you know, that approach to supporting an IPO through intellectual property is something that again, we've seen a good amount of success with, through IPOs, you know, happening over the last decade.

The other thing to keep in mind in the IPO process is the flip side, which is that you're including in that registration statement, many risk factors and risk factors related to freedom to operate are ones that are very often of most concern to the underwriters' counsel and can even derail an IPO. The general thinking by underwriters' counsel is that any sort of lawsuit following sharply on the heels of a public offering which could diminish the price of that newly public company is truly catastrophic so, while late stage diligence investors start to become interested in freedom to operate issues, they become absolutely critical and central in the diligence that takes place during the IPO process and so, if we're, you know, following back through our whole sessions from our under the radar, not so worried about it stage, before seed stage funding, you know, it becoming increasingly interested as we move into having a products to market, you know, now as the company starts to move to being a public company with publicly stated risk factors, the third party intellectual properties, you know, issues, you know, start to come to a crescendo and we'll talk more about that in the context, I think, of the next few slides so let's go to the next slide.

So now, we're moving from IPO to exit. Some people think of an IPO as an exit but the IPO, you know, you're still often have the same management of the company but when you move to real exit, you know, M&A transactions, intellectual property issues, again, you know, can be critical and Ed has talked about some of these issues already so I will turn this back over to him. I know he's already talked about the ownership and chain of title issues, especially relating to open source but I think he can probably now speak to issues relating to non-competition and trade secrets and asset quality that tend to come up in the M&A context, even more strongly than in late stage funding.

Ed Nortrup: Yeah, and that's exactly right. It, I love the conversation point where it just becomes increasingly important and when it comes to, you know, those non-competition obligations, you know, they can come in a number of forms but you, you know, you can enter into agreements where you are really agreeing not to offer your products or services or development to a category of company and that can be very impactful on the acquirer. If you have carved out a set of companies that you're not going to sell to that the acquirer has in their suite of companies that they sell all of their other products to, it's a problem. So you have to, you know, think long and hard about any time you're, you know, putting in restriction on who you're selling to, and who you can do work for and those are definitely big stoppers and I mentioned quickly earlier, trade secrets but trade secrets are really problematic if they are left sort of in that unintended to file that I was describing. If an acquirer approaches you and starts the due diligence and they find that file where a company a year ago or six months ago or even two years ago, although they do start to grow stale, but had given you warning that they believe you stole some trade secret from them, that is quite problematic because it's really hard to prove that you didn't steal it. It's much easier to come to a resolution with the accusing party. You can talk to the accusing party and say, well, I didn't have access to that material. I only had access to this material. I couldn't have taken that. Let me show you what I developed and I will show you that it does not look like yours. You can have a discussion with the accuser, maybe, that can come to a resolution of some sort or another. Maybe that ends up in just a dismissal of a claim, of an agreement that there was no claim and many times, you see those types of disputes start with a misunderstanding and stop with an actual letter that says, there was a misunderstanding. Sometimes there, you know, much more than that and they require litigation but if they are not closed out and now you're trying single handedly, unilaterally, without the accuser around, trying to show to someone else, trying to show to me, that you didn't take anything, when, especially if there was access of some sort, there was a coordination or collaboration between the parties and there's a file that says there was a misappropriation, it becomes ridiculously hard to eliminate the possibility that there was actually a misappropriation.

So, I've had cases in diligence where it is come all the way down to the point where I'm talking to my client who's the would-be acquirer and we're saying, we're together, we're saying, I think the likelihood of an actual misappropriation here having occurred is way less than 1% but when you try to look at what the trade secret actually is alleged to have been, if I've had situations where it is alleged to have been the core nugget that started the company and as the core value proposition, you say, what could be the value, forgetting about the probability of success at winning, 99:1, just say what's the value of the trade secret if indeed, it is a trade secret and if indeed, it was stolen and you say, it's the entire value of the company. So, it's a bet the company kind of a risk, it's a catastrophic failure although the risk is extremely low but with that kind of dynamic, it can cause acquisitions to be halted. It might not cause a financing round to be halted, they may say you've got to go clean that up with the accuser and we'll finance you anyway but at that M&A transaction, it may just stop the transaction altogether while you either go try to clean it up or do something else but I have seen it cause like termination of the process and like a request to go clean it up before it starts again.

So I think that's the big one, the big additional one I wanted to talk about on this slide but also, just reinforcing that all of the files in this regard, whether it's ownership, whether it is, you know, a trade secret allegation and a patent infringement allegation, copyright infringement allegation, where, you know, whether it's any other type of matter that needs a legal opinion, that those files be clearly wrapped up in a professional way. So we can go to the next slide.

Yeah, and I can continue to talk here for a second, after Charles, if he wants to weigh in at any point or anybody else for that matter and it's just to say that we've talked a lot – in the last slide, we talked a lot about risks, you know, there're two sides of the patent equation or the IP equation, you know, there's the what does the company own and what does the company infringe, you know, what are the possibilities on both sides to that equation?

In the last slide we talked about the risks. On this side, it's much more about well, what do you have in your war chest you've hopefully built along the way to help you in your exit and maybe, instead of talking about abstracts just talk about specifics and I was inside counsel on a lighting company that built a very significant patent portfolio and not only did it do a very good job of helping the company maintain margins, a very good job at that, it also enabled the company to establish a licensing program and as we were talking about earlier in the presentation today, some of that licensing was to direct competitors, those other companies that you would like to see disappear from the market entirely but appropriately taxed in this situation. So that we were fine with those competitors existing knowing that they were taxed and they were giving that tax money to us but they also – we also developed for them, a licensing program into ancillary markets, into markets that the company was not going to have time, energy or bandwidth to go into directly with products but we had built IP that covered products in these various markets. So we built a significant patent licensing revenue stream. So as a result, in that IPO and later in their acquisition, the IP portfolio was valued very high. It took what was probably a one times revenue lighting company into like an eight or a nine times by the time the acquisition happened, eight or nine times revenue type valuation because of the very significant margin protection and the very significant licensing program. So that was a great example of how IP can very significantly help in valuing the company on exit.

We have, you know, we've had in earlier cases, acquisitions, let the lighting company was about seven, eight years old when all that transpired. We've also had some software companies pretty quickly actually, get acquired pretty early on and when you look at those transactions, the IP portfolio tends to be like – so the IP portfolio in the lighting company. Let's just back up one sec, was very mature, had a lot of credibility in the market place, had a lot of licensing revenue and it had won patent litigation. It was very mature and valued very high for those reasons. In the earlier companies, in the software example that I'm trying to get out of my head, you realize that the patent portfolio was not nearly as mature. It was all in a pending state and so the credibility, the market of credibility of the patent portfolio was not as high but it still proved to be a very valuable asset on their exit primarily because we had a very good patent strategy established that was written so that we could guide them through what that pending patent portfolio was ultimately going to mature into and we had a patent road map and a patent plan that showed that this patent portfolio was going to be a significant obstacle in this market place. So, it's at least that some on the scale, you know, it was very clear that the acquirer in that situation was looking and saying, yeah, I really like the product. I want the product. I like the software. I like the team. I want to acquire them but also, I see that this patent portfolio is going to get in our way so it definitely adds to the value of the company and it stops the company, not stop completely a company from thinking about alternative solutions to entering that market but it certainly pushes them in that direction.

Gerard Eldering: Ed, this is Gerard, thanks, that's been a great coverage of this area. In the interest of time, I'm going to jump in and just move us ahead a little bit and we're going to skip over some of the remaining case study slides now and go right to the economic impact slide and I apologize but I want to get John up on the podium and then if we have some time left at the end, we can come back and go over any other material so John, will you take it away?

John Casey: Sure, hi. Just delighted to share some parting thoughts on tracking local job creation and measuring economic impact. As Gerard mentioned during the intros, I was a co-founder of several startups, I guess between 85 and 95 and back then, my priorities were focused on putting cash in my pocket through either, you know, sure the profits were equity ownership but I was a member of the research faculty at Mason and an entrepreneur-in-residence at our school of public policy. I have a personally have a different set of priorities. Let's go to the first slide, I guess we're there, sorry. I've seen firsthand that our priorities for tech transfer out of all, have been my five years here. We've talked already about how important small businesses are to the US economy. The SBA stat that I often see is that small firms generate 64% of net new jobs over the past 15 years, clearly there's a common sense notion that small businesses are a key component but why is regional economic development important to a university like Mason? Well, for one thing, state funding for public universities, while it's been on the decline, is still an important piece of the university's funding pie and by playing a role in local economic development, a place like Mason has a better chance of getting ongoing budget support from Richmond, from law makers but also there's a focus on building partnerships with local corporations in the Mid-Atlantic area that might provide support of different kinds, including funding to support different university initiatives. So the university's goals for regional economic development are part of the evolving reprioritization for the tech transfer office as well and in regards to the university's mission for education, that focus on regional economic development allows our students to get practical experience that enhances the educational role of the university in significant ways.

The third point is why is new venture creation a key part of this regional economic development? Well, John Fraser at FSU, talked about how a chunk of the licensing activity that any university generates, creates economic impact outside of the university's region. Economists who've researched this in a study published by SBA, say that the impact of new venture creation, although they called it a horrible term, Small Firm

Establishment Births. The economist say small first establishment births, which we call new venture creation, have a larger impact than any other factor on gross state product or GSP on state personal income, code word for their tax revenue and total state employment and regardless what the economist call it, we call it new ventures created and jobs, jobs, jobs is clearly the new mantra. So these translate to a new mandate for some universities that I'm definitely seeing up close here at Mason. A focus on new venture creation, not in lieu of tech licensing but definitely on top of tech licensing, per se and this has created a lot of new challenges for my friends in university tech transfer in Virginia and elsewhere. These trends, however, create great new opportunities for entrepreneurs in the university ecosystem since now people on the inside, like myself and my colleagues are putting more priority on creating new startups. So the potential for a gung ho entrepreneur to get involved with a startup company based on Mason technology or another university's technology is greater and greater. So the next slide, please.

So, I want to briefly touch on current models, two of which were referenced earlier in the boot camps so I'll be very brief with them. The University of Utah folks talked about the 90 to 100 startups they've created in the last five or six years. That's a track record that I'd love to be able to emulate and they talked about the challenges vis-à-vis driving the economic development. There're also challenges in measuring the same thing. John Fraser at FSU provided a draft list out of AUTM that University Technology Managers Association that had a list of 16 proposed metrics, ran two pages. I won't repeat it here. Another example earlier was the UBC's slide which I thought was a nice graphic format for presenting their metrics and there were three that they talked about, total number of employees and spin off and affiliated companies, total revenues of those same spinoffs or affiliated companies and then third, revenues generated from tech licensing and non-spin off or affiliated companies. So I think that kind of reflects the current models. The "kiss" approach to keep it simple, silly approach goes to a comment that Melba Kurman who is at Cornell, an ex-Microsoft employee who's now handling their marketing and outreach, she made a comment at a tech transfer conference I went to, a three-day conference and it was a couple of years ago and the fact that I still remember it years later is probably a testament to the power of the idea. When she was asked what she does for metrics or what they do for metrics at Cornell, I believe I'm quoting accurately. She said, "basically it's the number of new ventures created period" and that idea of focusing on a simple metric like that really resonates with me as a former private sector guy coming inside the university environment. So I wanted to turn to the next slide which talks about an approach that I have seen work here at Mason and other universities in the Commonwealth of Virginia. My working title for this talk was Zen and the Art of Measuring Economic Impact and Robert Pirsig's book, Zen and the Art of Motorcycle Maintenance has a quote, "Other people can talk about how to expand the destiny of mankind, I just want to talk about how to fix a motorcycle," and I just want to create new ventures and as an entrepreneur-in-residence type, you'd expect me to have that bias but my colleagues want to do more than just "fix the motorcycle" so in some cases, these differences in philosophy affect how we measure things here and how different people think about impact but this approach the SBA uses with the SBDC program that started back in the Carter Administration is a useful model here at the Mason Small Business Development Center we offer advice to hundreds of businesses every year and we make a special focus on our own technology transfer or university spin outs and affiliated companies as I know my other universities in the Commonwealth do. So we try to leverage all of the SBDC program resources to help faculty and grad student entrepreneurs working with Mason intellectual property and we collect the data and measure the economic impact the way the SBA wants us to and it's. you know, that program's been around for many, many years and it's the same set of data collection and measurement as used at our 29 small business and all centers around the Commonwealth of Virginia and I know that because Mason manages the State's network.

So let me turn to the next slide and talk a little bit about how we collect data for that program. There's lots of challenges any of you in the audience who've tried to get your startups to share information with you, you know that people hate surveys, entrepreneurs don't respond well to either email or paper surveys and trend seem to be that they're less and less responsive, maybe some cases reluctant to share the intimate details we're trying to collect. In other cases, they just are too busy, you know, the same type A driven entrepreneurs that are good to have at the helm of a startup are pretty impatient when it comes to filling out what they call bureaucratic forms but despite the challenges, we've got a model here that works. We use 15 different staff and volunteer business counselors working with these business owners and find that in person, we were often able to get them to, you know, fork over some information on what they've seen in terms of economic development and we've tried to automate more and more of that collection and in some cases we use tools like Dun & Bradstreet to actually just take a look at the companies we're helping that are posted in D&B as anybody with a federal contract probably has to be so we can see what they are putting into the Dun & Bradstreet online system and compare it to what they tell us. On the next slide I talk a little about the what to collect question. In the case of the SBDC program, what you see here is a kind of a clipping from SBA's Form 641 and they call it - previous editions are obsolete. So we collect that because they're a big stakeholder, they co-fund the program along with the university and we're happy to pull that data and we make a best effort data to do so and internally, we have a dashboard that shows how we look year-to-date on each of the key metrics such as jobs created, jobs retained, that might reflect efforts in some centers to keep businesses from going out of business and actually losing jobs.

The next slide show the kinds of survey questions that we ask. It's an ongoing challenge to collect the data as I said. We make a best effort but in the nationwide program like the SBDC, there's 1200 other centers we can look at and compare ourselves with. So internally it's great. They're times, however, I wonder if we're sometimes on the wrong end of the 8020 rule. In other words I am constantly admonishing folks here to make sure we're spending 80% of our time actually advising small business owners and 20% of the time or less ideally, you know, working on internal bureaucratic systems that allow us to do that including the data collection effort. There's a balance, obviously but if you're an entrepreneur like I used to be, getting help from a university's incubator program or SBDC or some other outreach program, you want 80%. 90% or more of their efforts to focus on helping you launch, grow and sell your business. So we have to talk internally about making sure our data collection mechanisms are absolutely as streamlined as possible. Entrepreneurs want the maximum profit potential for their business so that may mean sometimes they're not worried at all about creating economic impact the way we measure it. They want to actually create the maximum amount of revenue or margin on the minimum number of jobs required so those trends are good to keep in mind.

On the next slide, I talk a little bit about how to use the data. We use it internally as I say, with a detailed dashboard that everybody including our volunteer network and see on our wiki that we used to set our own goals and align our own activities in hierarchy from the director, myself to the assistant director to staff counselors, volunteer counselors and half dozen interns and as I mentioned, I'm a fan of that but I rebel whenever that is preventing us somehow, by taking too many cycles for collection but that said, when we do make an adjustment to hit our metrics, it's usually where our goal or metric that's set by SBA is aligned with what's useful to the private sector entrepreneur, this in our company we're trying to help such as raising a certain amount of VC funding, helping them raise that funding per year and I do like outcome base metrics a lot more than activity based metrics so we focus on them as well. Next slide, I'll just give a quick example of how collecting data lets you make strong statements to your stakeholders and this is just a quote that the Virginia network of SBDC's can use when briefing lobbyists on the benefits of the Small Business Development Center.

The next slide shows a good quote from an earlier talk by the University of Utah folks. Again, I think it just succinctly makes a statement that a shareholder of their, I'm sorry a stakeholder of theirs probably never tires of seeing that they're definitely having an impact. So if you remember, Autumn had proposed 16 metrics, University of British Columbia had three, Cornell, I'm thinking had the one which was just count the number of new ventures you've created. Within Mason, our office of Tech Transfer has a list of seven metrics, or at least they're proposed that range from jobs over time to number seven, was actually revenue distributions to faculty and although the ones in between seem reasonable to me and I think that our next slide talks about the path forward for us here at Mason and perhaps for you and that is to adapt to these evolving priorities of your stakeholders to pick the appropriate granularity of measurement for your institution while making sure you don't spend so much time. Maybe we'll be using and measuring that you don't create the value you're geared to create and I'll say there's another quote from the Zen and the Art of Motorcycling Maintenance which resonates with me and that quote is, "when analytic thought, the knife is applied to experience, something is always killed in the process," and like any Zen saying or any other quote from his book, it can mean something different to every person in the audience but to me, at least, the key point is to not let the measurement process kill the essence of what you're trying to accomplish but to focus on clear and ambitious goals of like, our president knows this intuitively. When he's out on the stump, he doesn't talk about the long list, he just says, we've set a new goal of creating 50 new ventures based on GMU's intellectual property and I've noticed myself that when I need to rally people behind my cause or get new resources or get people to kind of heed, toe the line, I cite that same simple metric. I don't go through the whole list, I recite our new mantra of 50 new ventures created. Regardless of which approach you guys use in your different institutions and how you share them internally and externally, I'll just close by saying let's ensure our efforts do indeed generate economic impact and I want to close with a reminder that please do let your stakeholders see those results and continue so that they will continue to support the work you're doing in commercializing university technology. Thanks and with that, I'll turn it back to Gerard.

Gerard Eldering: Great, John, thanks. That was a great presentation. We do have a couple of questions we want to address. During the session we had a couple of good questions on patents sent in on the text chat and I'm going to combine them. One was a question of patent enforcement and the views on patent enforcement insurance which I think we might have touched on already but also on patents a question about the Patent Reform Act of 2010 as it becomes law, what's the impact on the startups and I'll turn to Ed and ask if you can comment on that at all?

Ed Nortrup: Yeah, I read that question patent enforcement insurance is that and I'm just wondering if it isn't the other way around which is you know, defense, defensive type insurance, infringement type insurance. I do know there is that insurance and I do know that that insurance is very expensive, you have to get it very early on because it's like other insurance policies where pre-existing conditions, if you know your infringer already, those things fall outside of what is claimable. I will mention that I have found, I think it was Paul was mentioning earlier that I have found that even with a business policy that does not include patent insurance, I have found that the defamation that is protected has sometimes been useful at ensuring a patent infringement claim. We were sued one time for patent infringement but the suit also included a defamation claim and the defamation claim was covered by our insurance and the insurance company had a very difficult time parsing out how much money was spent on defamation and how much was spent on patent infringement and as a result, they paid for a lot of it.

Paul Rauch: I think, just a general comment. Insurance, especially when an insurance is for a very specialized problem and consequently tends to be quite expensive, it's very important to get a careful analysis of that policy. They always have exceptions and problems and so, the most important thing, I think is to get a competent opinion on the exposure and liability involved first. That makes a huge difference, that makes a huge difference. If anybody can sue you for infringing their patent, they are supposed to do a reasonable investigation but sometimes that reasonable investigation is very difficult for them to carry out and there are a lot of attorneys who love to file the lawsuit and talk about it later. So, I really think the use of the opinions, look for the problems, keep your eye on the patent literature that's relevant to what you do. Although it takes an attorney to really determine what's going on with those, you can have your eye on the art, you can have your eye on what's being issued at the patent office and then you can have an eye on the patents that are being issued to your competitors. So you can get a lay of the land and know something, problem is coming up along the way.

Gerard Eldering: I apologize, we don't have more time to address questions. It's been a great discussion today and I hope that all our attendees have enjoyed the entire session and found it useful and valuable and I'm sure whether you're supporting a startup through a tech transfer office or as a service provider or you're a faculty entrepreneur going out there and creating your startup that the content of this program, you're going to find it very helpful. I'd like to thank all of our panel members today for participating. Thank you.