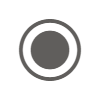
**IP and Tech Transfer-20240112\_120603-Meeting Recording**

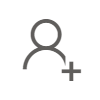
January 12, 2024, 8:05PM

1h 0m 57s

 **Ransom, Scott** 0:03  
We are officially recording.

 **Ransom, Scott** started transcription

 **Ransom, Scott** 0:05  
Welcome everybody to another installment of the ILO module calls. Uh.

 **Sundell, Cynthia L** joined the meeting

 **Ransom, Scott** 0:12  
Cindy Sandell is just rejoined us.

 **Sundell, Cynthia L** 0:13  
Please yeah.

 **Ransom, Scott** 0:16  
And can you guys see my screen?

 **Jafar Razmi** 0:19  
Sure.

 **Sundell, Cynthia L** 0:19  
Yes, I see it.  
It's not in.

 **Ransom, Scott** 0:22  
How's that better.

 **Sundell, Cynthia L** 0:23  
That's good.  
Good, good.  
Alrighty, to let me see who's here because I don't want to embarrass myself by like, talking to Steven Weiner, who is an IP attorney.

 **Ransom, Scott** 0:26  
Alright.

 **Sundell, Cynthia L** 0:34  
Anyway, OK.  
Alrighty.  
Well, today we're going to be talking about IP considerations for iOS, so I'm just putting up this, uh, these notes here and these are my opinions.  
They're not the opinions of Georgia Tech seem matter.  
NSF and please, these are not.  
There's nothing legally binding in anything.  
I want to say you have any specific questions I would you know, speak to your your universities, uh tech licensing office.  
Next slide please.  
All right.  
What is intellectual property?  
So this is a definition from Cornell University Law School.  
It's any product of the human intellect that the law protects from unauthorized use by others.  
Next slide please.  
And so we IP can be protected, protected through a variety of means and for instance through patents, trade secrets, copyrights or trademarks.  
And the aim of IP protection is really to prevent others from wrongly profiting from the creation of your inventions.  
Umm.  
So maybe I also should just start by saying that obviously intellectual property is one of the big outputs that we have from our engineering research centers.  
And again, patents are a very important way of really protecting the intellectual property and they're important instruments for tech transfer to corporations or to start up companies, which is the main way that we get some of our technologies out to the market for societal benefit.  
And what I really want to focus on here in this discussion is just briefly, what is IP, how we protect it, then go into a little bit about the responsibilities of the different ERC stakeholders and IP protection, UMM, and also what we have to start thinking about when we collaborate with entities outside of the ERC and the importance of IP in the context of commercialization.  
So those are some of the topics I'd like to touch on today.  
I do appreciate that ERC's that are in different industries, intellectual property and its protection might not be as important as they are.  
For instance, in my industry and cmap, which is the biotech and Pharmaceutical industry, patent patent protection is very, very important.  
And that's mostly due to the really long product development timelines and the enormous expense that it takes to get some of these products to the market.  
And a companies spend a lot of time and effort around patent strategy and and ways to extend patent life.  
For instance, their new formulations be a drug or something like that, and I know we have some.  
Perhaps we have some experts in the field.  
I'm not really sure you know where you guys all are on your knowledge of this.  
Please excuse me if this is really pretty basic stuff, but when we think about intellectual property and it's protection, there are really four types that we look at patents, trade secrets, copyrights and trademarks, and really perhaps the most important things for an ERC are really patents.  
Trade secrets are also a great way to protect your intellectual property, but they're not as relevant in the university setting, and a lot of times when we in the university also work with companies, I really try to not work in that in the area of trade secrets.  
It's very hard to do that when you have students next slide please.  
So what is a patent to patent is a legal document.  
It's really the right to exclude others from making using, selling or import or importing the claimed invention into the patent jurisdiction for a period of time.  
And when I say patent jurisdiction, it's usually by it's by country.  
You can do you know European patents are actually a region and a period of time is 20 years, and patents are an extremely important business asset.  
Now the patent doesn't give you the right to market anything.  
It gives you the right to exclude others, and that's kind of an important distinction.  
And in terms of patents, there is different types of patents and utility patents, which were really are the most relevant for an ERC, which really are involved involve processes, machines, companies composition of matter and any kind of new or useful improvements thereof.  
But there also are design patents and plant patents.  
Next slide please.  
And so when we start to think about patents and inventions, there are four major or really three major requirements for something to be patented or be considered a patentable invention on #1.  
It has to be novel and this is this is really important also in the context or of an ERC.  
Novelty.  
It is something that is not already known to the public or disclosed to the public through publications or, and we can go into a little bit.  
I'm going to go into some details of what some what concern public disclosures consist of.  
There are some exceptions.  
So in the US, you can disclose something publicly, but you will need to file within 12 months to be able to surmount this patent disclosure bar.  
In most other countries, you need to disclose you need to have to have disclose the invention before you publicly discuss it, or you would have to have filed your patent before you discuss it in public.  
Umm.  
Also there's a non obviousness requirement, so this is really something is considered an obvious improvement over the prior art is not considered an obvious improvement of the prior art if someone of ordinary skill can is able to.  
Know how did I do that?  
Non obvious not considered an obvious improvement over the prior art to one of ordinary skill in the art.  
Umm.  
Also you usefulness it has to be something useful and things that are not patentable or things like laws of nature and everybody usually gives an example of E equals MC squared natural phenomenon like unmodified genes or let's say you discovered interesting bacterial clone through doing evolution in the lab.  
That would be something that be a national phenomenon, natural phenomenon and not not patentable, but if you had introduced through genetic engineering some kind of change into a bacteria or into a specific gene, that could be considered something patentable.  
Umm, next slide please.

 **Ransom, Scott** 7:42  
Cindy, before you go, can I ask you a question?

 **Sundell, Cynthia L** 7:44  
I stop at each slide and ask if anybody has questions.

 **Ransom, Scott** 7:47  
Yeah.  
No, that's OK.  
In the in your symbol up there you know the exception.  
In the US, you can file within 12 months proposer.  
So if a student presents at a conference their research and they haven't done it disclosure yet, they've still got some time to cover themselves in the US, but if they went to an international conference and presented, say, in Europe, would that then be?  
Would they be precluded from coming back to the US and filling it out disclosure and protecting themselves?

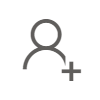
 **Sundell, Cynthia L** 8:15  
No, I don't think I.  
No, I think you could still patent it in the US, but you would not be able to patent it in Europe right?

 **Ransom, Scott** 8:20  
OK.  
Gotcha.  
OK, cool. Thanks.

 **Sundell, Cynthia L** 8:27  
Also, when we talk about disclosures, it's really disclosing enabling information, right?  
So you, you know, you could be you know.  
Discuss your something with another with someone else, but if you're not talking about specifically enabling things that would not be really considered a public disclosure.  
The other thing that's not a public disclosure is when we discuss things within an engineering Research Center, everybody has signed a confidentiality agreement.  
So when you present within your annual retreat or at the NSF site visit, if everybody in the room has signed a confidentiality agreement, that's not considered a public disclosure.

 **Ransom, Scott** 9:10  
Thanks.

 **Sundell, Cynthia L** 9:11  
Umm yeah.  
So, umm, again, what?  
What constitutes a public disclosure?  
Providing enabling information again of capitalized that in the form of publications posting information on a website presenting at a conference, I mean you can really get annual about this and say even presenting at a lab meeting to people if it's you know, then you were to you know publish that or something.  
You know that that could be considered a public disclosure talking to someone without NDA could be a public disclosure, final reports a sponsored projects could be uh public disclosure.  
Unless you have a CDA, umm, not considered public disclosures are submissions to a peer reviewed journal.  
Well.  
Umm, not yet published or conference poster that hasn't published yet?  
That's an important distinction.  
Umm.  
So anyway, that is certainly submitting a proposal to a federal sponsor is not considered a public disclosure.  
But this is something that we really have got to sort of teach our researchers and our students about.  
And it's something that, as an ILO, you you really have to be, you know, talking about this, making everybody aware of this and you know, really over and over again.  
Next slide please.  
No.  
There are different types of patents there are.  
You know, US patents and usually the first step is a provisional patent application which usually which establishes your priority date.  
It's important to understand that those provisional patents are not examined.  
It's just kind of puts a stake in the ground and it has to be converted into a full utility patent or non provisional within a year.  
A lot of times, universities or people will, umm, convert to a PCT application, which is a patent cooperative treaty application.  
This also has to be done within a year, and the advantages of having a PCT application is you get a non binding prior art search and a written opinion from the the about the patentability of your patent and it really helps you decide whether you're going to subsequently file in individual countries rather than you know it gives you a little bit more.  
It's just really a better way to spend your money and gives you more confidence that you can then go on and file an individual countries.  
Uh, and that is usually done after 30 months.  
And there's also something called the European application, which is a regional application and involves, umm, when if you do get a European application and a patent issued that consignment simultaneously cover a number of different European States and some people decide to go that route as well.  
And this is something that is, you know, decided by your university Tech Transfer Office in terms of what kind of strategy they want to use a lot of times if something has been disclosed publicly disclosed and someone didn't have a provisional patent, the university might decide to seek just United States patent because of the patent disclosure bar.

 **Don Linford** joined the meeting

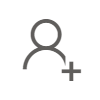
 **Sundell, Cynthia L** 12:58  
Next slide, please any any questions so far from folks?  
Umm, you know, I think it's important as I alos and to really kind of be able to understand some of the different parts of utility patent.  
This is certainly also really important for our graduate students and researchers, and you can get a lot of information by looking at competitors, patents or similar patents in the field about your own research.  
As is particularly important, if you're thinking of commercializing your technology and some of the different parts of the patent are the specifications part and this is really the really detailed enabling description of your invention and it must be able to again to teach a person with ordinary skill how to make or use your invention, it's really that's that's very important.  
It should also include all the different embodiments of your invention, so competitors cannot easily design around it.  
And then really the most important part of the patent or the claims and if you really just are interested in quickly looking at patent, you can just you know immediately jump to the claims, UMM and the claims are always a method or process or a system comprising and there's different kinds of claims independent and dependent claims.  
So usually you would go to, you know, the independent claims first, which is usually the first claim and then subsub to that would be all the independent, the dependent claims.  
And there's usually in a typical patent, the minimum would be 3 independent claims and 17 dependent claims.

 **Ransom, Scott** 14:33  
Well.

 **Sundell, Cynthia L** 14:37  
That seems to be usually the size of most the minimum size of most patents, and there's a lot of strategy really about how to to write claims you want them as broad as possible, but you don't want them, you know so broad that you get hit by the the Patent Office, but usually this is usually the way people go anyway, knowing that they might get an office action and then they'll narrow the claims later.

 **Ransom, Scott** 14:44  
OK.

 **Sundell, Cynthia L** 15:05  
But you really want to try to make them as broad as possible, and when you're thinking about the claims, they really should be fired back to the specific product that you plan to sell.

 **Philip Chizek** joined the meeting

 **Sundell, Cynthia L** 15:19  
So there's a lot of strategy and this is where a good patent attorney can can really help you.  
Umm, next slide.  
So this is a little bit about, you know, the journey through the Patent Office and a little bit about the costs of patents.  
Umm, so it really begins.  
Your priority date is really set by when you file your provisional patent and then as I said, you know 12 months from then it gets converted to a non provisional and this can be either you can go with the PCT route, you can file a nonprovisional US patent application and after about 30 months the PCT gives us its advantage of being able to get this international search report before you go and file in different countries.  
And that's really a useful thing and can save you a lot of money.  
And when you get to the point where you have to file an individual countries, you really have to be thinking about, and this is usually in the university, will not pay for this.  
This is usually something that happens once the the technology technology has been licensed to a company, and if you are planning on commercializing something or starting a company, you really have to make sure that you budgeted for the national phase, which can be quite expensive up to almost $30,000 per country.  
And this is where you have to get a lot of your patents translated into the language of that country.

 **Ransom, Scott** 16:48  
OK.

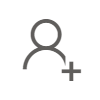
 **Sundell, Cynthia L** 16:53  
And that's really what results in some of these very expensive costs when you get to the national phase.  
Umm.  
And really the you know, in general it takes about two to five years for a patent to go through the Patent Office, go through the different office actions and actually get issued as a patent.  
And sometimes you can take even longer than that.  
Umm.  
And we actually in cmat, uh, I know we have about 20 or 30 patents, nothing has issued yet and we are in our 7th year.  
So give you some idea of the length of time it takes.  
Umm, next slide.

 **Ransom, Scott** 17:33  
9.

 **Sundell, Cynthia L** 17:37  
Are there any questions up to this point from folks?  
So when you're thinking of filing a patent, really want, you know, there are some things to some steps to take before you really start to file a patent and there's some things that you can do to give your university more confidence in your patent application because it does cost money to file a patent, particularly doesn't cost that much money to file a provisional patent.

 **Ransom, Scott** 17:58  
From.  
Just.

 **Sundell, Cynthia L** 18:13  
But once it converts that cost a bit more, and universities usually want to have a good rationale for why they should do that.  
So it really is good as a researcher to start out by doing maybe a very high level prior art search.  
If you have something that you think could be patentable and you can do that by going to the USPTO site, going to Google patents, or using patent search and analytical software such as innovation Q, we do have this at Georgia Tech.  
It's super helpful.  
Umm, it has more information than Google patents are.  
USPTO it can tell you things like umm, what?  
What other what in patents that are similar to what you are looking at?  
What companies have licensed those technologies?  
It gives you some idea of who some of your competitors could be.  
This is a lot of really useful information you can get from innovation queue.  
Umm we have it in our the Georgia Tech Library and we have some folks that are really experts in it that can help our students and faculty really get the best out of that software.  
Uh, the first step in if you are thinking of you have something that is you think is patentable, you have a potential invention is to file an invention disclosure that really starts a process going with your university.  
And when you do that, at least at Georgia Tech, they really want to, you know, understand what it is that you're protecting.  
Umm.  
What you hope to who you hope, what you think the product's gonna be?

 **Fleming, Stephen - (stephenfleming)** joined the meeting

 **Sundell, Cynthia L** 19:54  
Umm, who you think you might be able to license it to in the market?  
Why would the market care?  
Umm, these are things that you're really going to want to be able to tell your tech transfer office so that they will want to support the the the patent filing.  
Uh, and it is at this point where you have to start thinking about who are the inventors.  
And this is really an important thing in a patent.  
If you don't get this right, it actually can disqualify a patent, and inventors are not the same as authorship on a scientific publication.  
Adventure is really confined to those people who contributed to the conception of the claims, and so we often run into this issue with students and graduate students.  
If they work solely at the direction of the Pi, that does not necessarily mean that they're going to be an inventor on a patent.  
And a patent with overly inclusive inventorship can be invalidated.  
So this is really, really important point and something that you're tech transfer office or your tech licensing office can help you with.  
It's also kind of important for people to understand, and maybe this is obvious, but assignment, IP assignment and ownership.  
Uh.  
If you work for a university as part of your employment, you sign over the ownership of any INTELLECTUAL property that you create during your job or that you have created on the job using you know the University of resources.  
The university becomes the owner, and that's the same thing.  
To work for a company as the first thing that you will do when you sign your employee contract, there will be some language about assignment of IP confidentiality.

 **Ransom, Scott** 21:40  
OK.

 **Sundell, Cynthia L** 21:49  
And this is a.  
This is really important also when you have when you're thinking of starting a company.  
If you have, for instance, an undergrad that was involved in the research, that undergrad will own that IP, and this is this is important.  
And sometimes, if we have some IP that really looks like it's moving toward a startup, you can sometimes ask the undergrad to assign his rights to the university because it does make it a lot simpler.  
If you are thinking of licensing that technology, but that's something to be aware of because undergraduates are not employees of the university.  
Next slide.  
The first thing that the university will do when you report an invention, if it was supported by a government funding, is to report that invention to something called I Edison, which is this online database that's used to report according to Bob Dole, the Bob Dole Act.  
I think everybody knows what that is.  
That was a federal law.  
That was enacted in 1980 that enables universities, nonprofits, small businesses to own patent and commercialize inventions that were developed under federally funded research programs.  
And this is really the passage of the Bodol Act is really what created tech transfer offices and universities.  
And there is this.  
Like I said, this database by Edison and we use that at Georgia Tech if an invention was reported to I Edison, then that invention mentioned disclosure needs to be reported to NSF and that's what we kind of use as our, you know, a lot of times inventions will be reported I Edison but later the university will abandon it or you know it's just under consideration or it's abandoned.

 **Ransom, Scott** 23:36  
Umm.

 **Sundell, Cynthia L** 23:51  
But we still report those inventions to NSF, and we also will present those inventions to our industry partners, just in case they want or interested in it or want to support it.  
Next slide, everybody's so quiet, please feel free to ask questions.  
I feel like I'm kind of racing through this.  
Umm.  
Anyway, in terms of considerations for your C's, like I said, the first step is this invention disclosure, but it's really important.  
If everybody know that it's does not set the priority date.  
This is just internal to the university.  
This is the way you start the process and the university.  
They have a certain amount of time to look at that invention disclosure and decide where they want to support it or not.

 **Ransom, Scott** 24:38  
E.

 **Sundell, Cynthia L** 24:42  
They don't want to support it.  
At Georgia Tech, it goes back to the inventor, and they can do whatever they want with it.  
There is this.  
I think it's three months that you that the university has to evaluate the invention disclosure and decide whether they want to support it or not.  
So if they do want to support it will then file a provisional application and that's what sets the priority date for the intellectual property, and this is what needs to be filed before you publicly disclose information.  
So we really encourage our researchers if they're going to go to present at a conference, if they're going to present a poster that they do this before they present the poster and that they not wait till last minute.  
That's really important.  
And again, yes.

 **Fleming, Stephen - (stephenfleming)** 25:29  
So they.  
Umm I I don't do a lot overseas, but you're the foreign rule there does.  
Does that or it says patent application must be filed before disclosure?  
Is that the full patent application or the provisional?  
Does the provisional value the year overseas or not?

 **Sundell, Cynthia L** 25:47  
Provisional is fine.  
Yes, that's the priority date over.

 **Fleming, Stephen - (stephenfleming)** 25:49  
OK.  
So provisional.

 **Sundell, Cynthia L** 25:51  
And you know overseas too.

 **Fleming, Stephen - (stephenfleming)** 25:53  
Thanks.

 **Sundell, Cynthia L** 25:56  
And again, the provisional applications are filed at the discretion of your university.  
There is no guarantee you might have an invention disclosure, and the university will say they don't want to support it and that's why when you, when you do, when a faculty member does have an invention, they should really put a lot of detail into why they think this could be a marketable product, who could a potential licensee B.  
Those are the things that the university really wants to hear here at Georgia Tech.  
That there's a path that there's an invention disclosure coming at a cmat that really gets some priority within our university.  
They know that we have an industry consortium.  
They know that a lot of the research that we're doing has been informed by industry, so they are more willing to really support almost all the inventions disclosures that they've received from from cmat.  
Umm, so next next slide.  
So now I've just like to go into some of the responsibilities of the different stakeholders and this is something that we really make clear about, you know, two or three times a year because we always have new researchers coming on board, people leaving, people coming, new students.  
So we really like to make sure that we communicate what everybody's responsibilities are in relation to the IP.  
Umm, so it really is the responsibility of our NSF funded researchers to indicate that the invention was funded by the ERC as well as any other funding, and the percentages on the invention disclosure.  
So it can be properly rooted by the the tech transfer office.  
Umm, we also ask that when they submit the ID to the tech Transfer Office, they also notify umm, the ERC director and myself as the the OR Scott as the ILO.  
It's also a responsibility of the researchers to execute CDA or NDA's when discussing enabling information with potential collaborators that are outside of the consortium and also to execute material transfer agreements when they're going to be exchanging any patent protected materials.  
Uh, next slide.

 **Tim Tripp ATP-Bio** 28:21  
So do you have your?  
Do you have the tech transfer offices actually report it to your director, or do you have to do that, Cindy?

 **Sundell, Cynthia L** 28:30  
Say that again, I can't hear you very well.

 **Tim Tripp ATP-Bio** 28:31  
Say that again?  
Yeah, you very well.

 **Sundell, Cynthia L** 28:33  
Let me put my say it again, but.

 **Tim Tripp ATP-Bio** 28:33  
Ohh sorry, let me say that again.  
So do you have on the previous slide, I guess not go back?

 **Sundell, Cynthia L** 28:39  
Uh-huh.

 **Ransom, Scott** 28:43  
And what he's asking is any is do you report it to the directors?

 **Tim Tripp ATP-Bio** 28:43  
He said what he's asking the city is do you report to the director?

 **Ransom, Scott** 28:46  
I think is what his question was.

 **Tim Tripp ATP-Bio** 28:48  
Yeah.

 **Sundell, Cynthia L** 28:48  
We usually well.

 **Tim Tripp ATP-Bio** 28:49  
Do you report it or does your tech transfer office report it?

 **Ransom, Scott** 28:52  
Yeah.

 **Sundell, Cynthia L** 28:52  
So yeah, so we ask that when uh D and the researcher is going to submit the invention disclosure that they tell the ERC director and also the ILO that they're about to do it.

 **Ransom, Scott** 28:52  
Who does the reporting?

 **Tim Tripp ATP-Bio** 28:52  
So does the recording.  
Yeah.  
So we ask that when?  
The researcher is going to submit the invention disclosure that they tell the ERC director and also.

 **Sundell, Cynthia L** 29:09  
It's also the responsibility of the tech transfer offices in all the partner universities to very quickly identify those invention disclosures that have come to them and notify the lead university.  
In this case, it's Georgia Tech and it's the lead university that then disseminates that information to the industry partners.  
According to the bylaws, so it is the responsibility and it's in the the.  
Uh, the academic?  
You know, the university collaboration agreement that they have a certain amount of time there supposed to do it quickly as possible and to notify the lead university when there's a new invention disclosure and then that is the lead university to responsibility to then distribute and disseminate the information to the industry members according to the center bylaws.

 **Hartnett, John** 30:09  
Yeah, I I don't have as much faith as you do.

 **Tim Tripp ATP-Bio** 30:10  
I don't have as much faith as you do, I guess.  
I do is every quarter.

 **Hartnett, John** 30:16  
Then I sent an email to the UM tech transfer offices from our partner institutions and just say, you know, here's the the number of the NSF funding.

 **Tim Tripp ATP-Bio** 30:18  
7 email uh.  
Like transcripts from our partners, institutions and just say, you know, here's the thing.  
The number of the NSF funding?

 **Hartnett, John** 30:27  
Here's the PI's from your institution that are involved and have there been any disclosures and you know it's it's a little bit of work, but I that way at least they two things.

 **Tim Tripp ATP-Bio** 30:28  
Here's the Pi from the institution that we're involved.  
Looking to work, they have two things.

 **Hartnett, John** 30:38  
One is I'm getting the information for sure and two they are aware that I'm aware of what's going on so that they're a little more diligent and transcribed that down.

 **Tim Tripp ATP-Bio** 30:39  
One is 4.

 **Sundell, Cynthia L** 30:48  
Yeah.  
Well, that I think that's good, best practice, John.  
Umm, I we've been doing this for a number of years.  
It was kind of a little difficult at the beginning to see, you know, not only universities were really on board and the tech transfer offices didn't even know what the bylaws were.  
Right, E you know, so it really did take some education.

 **Hartnett, John** 31:05  
Yeah, exactly.

 **Sundell, Cynthia L** 31:10  
It did take on my part, really communicating with the tech transfer offices at the university is also really what I tried to do was to get a single person at the different tech transfer offices that were responsible for CMAT, right?

 **Hartnett, John** 31:25  
Yep.

 **Sundell, Cynthia L** 31:26  
So everything was being, you know, went through them.  
And that has really helped.  
Now, had there been some things that have gone through the cracks, probably it is it.  
This is a hard thing, so I think your idea of communicating with them on a regular basis like that is, you know, probably a good one, Yep.

 **Dmytro Pokhylko** 31:48  
How do you how do you enjoy?  
And courage researchers to do disclosures.  
How do they know that that's the process and how do you stablish that mechanism if needed?

 **Sundell, Cynthia L** 31:59  
Yeah.  
Yeah, that's a great question.  
We we have weekly meetings at Cmat weekly research meetings that are, you know, we have must have 50 or 60 people from our industry partners and all of our researchers and our students that go to these weekly meetings.  
And we often about once a month, have what we call wild card Wednesdays.  
When we do different topics, kind of educational topics and we bring this up and we tell them that IP basics IP101 about twice a year.  
This is also at Georgia Tech and I don't know about some of her other universities, but I assume it's pretty similar.  
This is something that is really driven in.  
It's part of the DNA of our faculty to really understand this, and we really encourage it.  
And we're constantly talking about it.  
We have, for instance, in my institute.  
We hope IP office hours where we have someone from tech transfer and myself because I wear other hats at Georgia Tech, we sit out in the lobby next to the cafe and we're just always talking to people.  
There's just a lot of awareness about the importance of intellectual property, particularly in the life sciences, which is the institute that I'm in.  
And so it really, like I said, it just becomes part of the DNA of the way we think and do things.

 **Dmytro Pokhylko** 33:24  
Yeah.  
Yeah, that's interesting, because we feel like at Columbia where like our licensing officers, a pretty good at managing their portfolio Pi and just like staying in touch with them.

 **Weiner, Steven S** 33:25  
I would.

 **Dmytro Pokhylko** 33:35  
But it's almost like regardless of the ERC activity.  
Umm, but you're saying that you have ERC specific touchpoints, like every couple of months?

 **Sundell, Cynthia L** 33:48  
Yep.

 **Dmytro Pokhylko** 33:49  
Where you communicate the IP aspect to the people.  
But the problem for us partly is that because it's multiple schools and it's so distributed and it's hard to get people to attend, that's oftentimes it.  
You know you don't have the benefit of a captive audience to, like, really make it explicit to that about the IP and closures.  
So it's it's really interesting how you go.  
Thank you.

 **Sundell, Cynthia L** 34:14  
Yeah.  
Yeah.  
No, I can.  
Yeah, it would.  
It is even with what we do, it's still kind of difficult, but it's like I said, it's just something that we really drive home.  
Umm and yeah.

 **Weiner, Steven S** 34:28  
Sending me I add one month thought to that.

 **Sundell, Cynthia L** 34:32  
Steven.

 **Weiner, Steven S** 34:32  
Umm this is me.

 **Sundell, Cynthia L** 34:35  
Please feel free to correct anything I'm saying.  
I'm a little embarrassed to talk about.

 **Weiner, Steven S** 34:37  
Now, speaking speaking not not at all is a lawyer or or IP expert here just speaking in terms of the experience, like you in the in the, in the trench of you know more more disclosures.

 **Sundell, Cynthia L** 34:48  
No.

 **Weiner, Steven S** 34:50  
So I I just wanted to note that I think the NSF and it's review process were you know, we've been through a couple of them.  
Now if you I think they do a good job of communicating to us each year.  
This is one of the metrics.  
They look at disclosures and patent application.  
They want to hear about IP and they want to hear IP stories, so the site leaders and the faculty, you are very involved at all four of our universities.  
They care a lot about that.  
They care more about that than you know.  
Speech from their tech transfer office?  
I think so.  
I I have enlisted them, you know.  
Besides the tech transfer folks, I have conversations with the site leader is about this and about, you know, drilling down into their teams and encouraging because we want to do.  
Of course we wanna do the best job we can.  
Uh, for our for our reviews and we want the center to actually succeed, so.  
That I think that's been very motivating and there have been, you know, some pushes that have yielded good disclosure reporting as a result.

 **Sundell, Cynthia L** 35:55  
No.  
Yeah.  
Thanks for that Steven.  
I I think that's a that's a really good point.  
It is a major output right of the ERC's.  
We have to keep track of it.  
We need to report it and it's something, of course, that we focus on during our site visits, as you know, important accomplishments and you know, they're really looking at also the patent trajectory, what happens to these patents, you know how many full patent applications are filed, how many licenses?  
No, that's the biggie is licensing.

 **Weiner, Steven S** 36:24  
Hmm hmm.

 **Sundell, Cynthia L** 36:25  
It's patent right, of course we all want that.  
And also you know the spinout companies that have come out of out of the university out of the ERC.  
So this is something that we track very closely and of course we talk a lot about it, our site visit.

 **Fleming, Stephen - (stephenfleming)** 36:42  
Cindi. I'll.  
I'll just note that we've had we have 11 universities to keep track of, which is too many.

 **Sundell, Cynthia L** 36:47  
Ah.

 **Fleming, Stephen - (stephenfleming)** 36:48  
Uh, we've we've had a real issue with PI's not putting the ERC grant number into their invention disclosure, which makes it difficult to flag.

 **Tim Tripp ATP-Bio** 36:51  
The eyes not putting the ERC?  
Yep, this closure which makes it difficult to flag an I Edison.

 **Sundell, Cynthia L** 36:56  
Yeah.

 **Fleming, Stephen - (stephenfleming)** 36:58  
And I, Addison.  
So we don't necessarily find it umm.

 **Tim Tripp ATP-Bio** 36:59  
So we don't necessarily find and we had one who had been putting the wrong 704.

 **Fleming, Stephen - (stephenfleming)** 37:01  
And we had one who had been putting the wrong 7 digit grant number in for several disclosures over a couple of year period.  
And it wasn't until just by coincidence that somebody said that number didn't look right, that we realized that we had not been reporting those so.

 **Sundell, Cynthia L** 37:08  
Yep.  
I I now and we also at these Wednesday meetings you've got these slot rolling slide deck that comes up before everybody starts talking and these are some of the points that we drive home every week.

 **Fleming, Stephen - (stephenfleming)** 37:17  
Yeah.  
Yep.

 **Sundell, Cynthia L** 37:28  
So yeah.

 **Fleming, Stephen - (stephenfleming)** 37:28  
So really, really important to get that number in there accurately.

 **Sundell, Cynthia L** 37:31  
Yeah.  
Absolutely.  
Umm, next slide please.  
Scott, there's also, you know, talk about the responsibility of industry partners.  
Umm, so we have a IP sort of waterfall access.  
Umm.  
Process that we go through.  
We have 4 tiers or tier one and I can show you that in a moment, but our tier ones that pay the most money they get to see the invention disclosures first.  
They get to decide whether they want to support it and get a Nerf a non exclusive royalty free, non commercial or if they want to get a exercise an option for an exclusive license.  
But the first thing that we do and in cmat is we we give them a non enabling inventure disclosure first and we asked them to opt in to view the full invention disclosure with the enabling information.  
The reason to do this is so that they don't contaminate their own IP, so I think this is a really good best practice and I don't know if this is something that you guys are doing, but this is.

 **Fleming, Stephen - (stephenfleming)** 38:45  
Who?  
Who writes the not enabling version of the disclosure?

 **Sundell, Cynthia L** 38:49  
We are?  
I asked the the tech transfer lead at the different universities to write that and they send that to tech who manages, you know, the dispersal of the intellectual property to our partners.  
Umm.  
And then, you know, industry partners agree to keep all the invention disclosures confidential.  
Obviously they have a confidentiality agreement with with the ERC and we also ask our industry partners to let the ILO or the Director know if they intend to support a patent application.

 **Jafar Razmi** left the meeting

 **Sundell, Cynthia L** 39:24  
Umm, I will say that we so far we have not had any industry members.  
Uh, they a lot of people have wanted to opt in to see the full invention disclosures, but we haven't had anybody really opt for an exclusive license.  
Umm for any of our for any of our intellectual property, we have licensed 2 patents to a spinout company.  
And so far, and I anticipate that we will have more in the the next year or so licensed to spin out companies.  
Umm, why is that?  
A lot of what we're doing in ERC and particularly in cmat is really, you know, TRL level one through three and still perhaps a little early for our industry partners to want to license that license.  
The technology. Umm.

 **Ransom, Scott** 40:25  
I'd be willing to bet Sunday that that's the case.  
I'm curious for those veteran ilos in the call, if that's case with your son, as seen in TV, it was the same with the the majority of licenses we had were to the spinouts that had kind of developed that technology in the 1st place.  
Umm.  
And for the same reasons, our technology was just a little bit early for industry.  
There was one patent that we almost licensed that to an industry member that was further along and they ended up not for different reasons, but I I would be surprised if that's not typical across ERC S.  
Would the rest of you guys think?

 **Weiner, Steven S** 41:02  
The patent application so far for us, you know which are early stage, what they've done is they've helped us attract attention of.

 **Sundell, Cynthia L** 41:03  
The people.

 **Weiner, Steven S** 41:11  
I wouldn't say end end licensees, you know, not companies who are gonna.

 **Sundell, Cynthia L** 41:14  
And.

 **Weiner, Steven S** 41:16  
This is a text space that we're working on.  
You know, sensors.  
They're not gonna tech companies.  
Not gonna pay royalties for a an early pending patent application, but we do.  
We have attracted some of our Members are sort of commercialization and it is you know kind of like intermediaries that that help uh broker and kind of put together facilitate starting up new companies and and facilitate value creation through IP and new tech ideas.  
So certain clusters of patent patent IP seem to matter a lot to them, and that that's encouraged them to kind of put sweat into prospecting for us and giving us advice and nurturing it along.

 **Sundell, Cynthia L** 42:03  
I've also heard that in some ERC's, some folks take some of the membership fees and put that towards an IP.  
Umm.  
Fund to help support intellectual property coming out of the ERC.  
Now we don't do that at cmat.  
I'm curious if anybody else does that.

 **Dmytro Pokhylko** 42:24  
And what do you mean by support?  
Like financially for filing and then for also for enforcing it?

 **Sundell, Cynthia L** 42:27  
Yeah.  
We're not enforcing that's down the road.  
No filing.  
Yep.

 **Dmytro Pokhylko** 42:34  
OK.

 **Sundell, Cynthia L** 42:34  
So let's say you're a university doesn't want to file it.  
You know, there's a backup in that the, you know, the the ERC can support it through some funds.  
I have heard of that, but I don't right now know of anybody doing that.

 **Dmytro Pokhylko** 42:48  
Interesting and and the and the disconnect is not.

 **Weiner, Steven S** 42:49  
We we raised it as a trial balloon and it didn't.

 **Dmytro Pokhylko** 42:53  
You guys are still aligned in, you know, ERC and the tech transfer Office, the line that it's worth filing for the disconnect is there's just no funding and this is where you're able to support it.  
But there's no disagreement on whether it's worth filing right.

 **Sundell, Cynthia L** 43:11  
Umm.  
Well, I'm just saying in the situation where there is a disagreement, maybe you know the ERC or or, you know, the university doesn't want to put any more money behind the, you know, maybe the the conversion, the, the ERC has this fund and they can pay for it.  
I've heard of that.  
I have not at Georgia Tech, really run into a problem.  
Where are our at Georgia Tech?  
Are tech transfer office really wants to support CMAT invention disclosures and patent applications?

 **Dmytro Pokhylko** 43:41  
Mm-hmm.

 **Sundell, Cynthia L** 43:41  
We really have not run into a situation where they have, they've been abandoned or, you know, occasionally the probably.

 **Dmytro Pokhylko** 43:48  
Yeah.  
Yeah, you would think.

 **Sundell, Cynthia L** 43:50  
Sometimes it just absolutely too early, you know, and they don't even go to Edison.  
But other than that, we really haven't had issues.  
I would say that some of our partners are a little stricter about what they're going to support and so we'll see a lot of inventions disclosed, but then abandoned, right?  
They're just not ready, right?  
They're not really an invention yet.  
They're just, they haven't really reduced anything to practice and it's a little too early.  
I see that a little bit more in some of our partner universities and not so much at tech.

 **Fleming, Stephen - (stephenfleming)** 44:23  
My concern would be if I'm the tech transfer office, especially maybe not at Georgia Tech, but one of the secondary universities.  
And if I know this pot of money is there, I'll just abandon everything and tell you you get to pay for it.  
I mean, that's not nice, but I'd probably do it.

 **Sundell, Cynthia L** 44:39  
Yeah.  
Yeah, but I, like I said, I mean, I've heard of this.  
I read about it in some on the NSF website, but I don't know anybody doing that.  
Having that you know, fund.  
Anyway, I just throw it out there next next slide.  
You know, as I allows, we really, like I said, have this responsibility.  
I think to communicate to our university tech transfer offices on some regular basis to make sure that they're reporting their IP, funded, their ERC funded IP.  
So so John, I really agree with you there.  
We really, I think it's our job also do communicate regularly with our researchers and our graduate students about the importance of submitting invention disclosures and the process by which to do it.  
Umm, we at sea mat really make sure that we are constantly reiterating some of the basic IP principles to our faculty and students at least twice a year.  
And it's our job as allows to really travel all the IP products but really be on top of that so that we can report annually to NSF, delete all those, you know, ERC 360 tables accurately and.  
And really be able to back up our numbers there because you will get asked this site visit and it doesn't look good if you know you've got some confusing numbers you're reporting out.  
So they're really do track those numbers.  
Umm, next slide please.  
This is just an example of our IP waterfall structure amongst our different tiers.  
You all have your own ways of doing this.  
This is the way we do it.  
Tier one members have 30 days to express an interest in supporting patent filing, umm.  
And uh, if they they can secure a noncommercial or a royalty royalty free nerf at a minimum, or they can also opt for this six month period to negotiate an exclusive license.  
Uh, after 30 days, if they're not interested and they haven't expressed any interest, it goes to our Tier 2 members.  
They had 30 days and then three and then four, and then, you know, the IP is released back to the university to do whatever you know to license, you know, whomever.

 **Ransom, Scott** 46:59  
I don't know what.

 **Sundell, Cynthia L** 47:07  
And that really holds up the IP for about six months.  
And if a company, you know, if you have a startup company that wants to license the IP, they'd have to wait that period of time.  
It's never been a problem for us, but that that this is the way we do it.  
And again IP, I would say I don't know, Scott, you could you can opine but it is one of the most uh, the biggest benefits I think to to membership in any ERC is that early access to the intellectual property that seems to be the thing that you know tier one members are most interested in at you know when they pay the the the fees to be members.

 **Dmytro Pokhylko** 47:49  
Yeah.

 **Sundell, Cynthia L** 47:53  
So I know Scott.

 **Dmytro Pokhylko** 47:54  
And that's explicitly written in your membership agreement.  
These benefits on the different tiers.

 **Sundell, Cynthia L** 48:00  
Yes.

 **Dmytro Pokhylko** 48:02  
And and just like ballpark, like how much of is tier one in terms of dollar and sent?

 **Sundell, Cynthia L** 48:08  
Umm.  
Scott, do you want to comment on that?

 **Ransom, Scott** 48:12  
But yeah, it's it's in the, it's in.  
Our bylaws are around there, which you know there's some, I think Gen four.  
I think all you guys have your agreements and bylaws approve now, but if you don't have them approved yet, it's worth thinking about what you put in the bylaws versus the agreement because the bylaws sometimes you can change without getting a full vote of the board, whereas sitting in the membership agreement is you have to move heaven and earth to get that changed.

 **Dmytro Pokhylko** 48:34  
Umm.

 **Ransom, Scott** 48:39  
So it's worth thinking about that, but yeah, and at CNT, the IP really wasn't a the driving factor.  
And I think when you look across here C's I see my my might be different, but in general the IP is less of a draw for the Tier 1 memberships.  
Umm, usually the the.  
From my experience that one memberships are hey, you know we actually want to see you guys thrive as a center.  
So we're gonna sign up at the higher level to give you guys extra money, but really what we want access to is your students.  
Or really what we want access to is your faculty so we can develop a sponsored project.  
Or really, what we want to do is stay on the cutting edge of what research is happening in this field.  
We want to be made aware of things, so that's been my experience, but yeah, for CMAT, there's a pretty big jump.  
There's a 50K jump from Tier 2 to tier one, and so and the only real difference in terms of benefits is Tier 1 gets the first dibs at IP and the Tier 2 gets second dibs.  
So and yeah, but yeah, it's sometimes a harder sell for other centers if that's the only differentiating factor.

 **Dmytro Pokhylko** 49:49  
Yep.  
Yeah.  
Thank you.

 **Sundell, Cynthia L** 49:52  
Next slide.  
And umm, this is just, I don't know, this is and you know we have to report the intellectual property every year.  
This can be a pretty onerous task, but we do, you know, there are these ERC 360 tables you're all aware of.  
So we have to keep tap of our IP products, all the provisional nonprovisionals and invention disclosures, maybe title inventors, brief description.  
Umm.  
And then Tech Tran, there's a table for tech transfer.  
Those are all the licenses and a list of the licensees.  
There's also a table for startups.  
Umm.  
And when you start out, you really don't have to worry about the tech transfer and startup tables that much.  
If they come become more important as the NSF gets more mature and accept your city is more mature.  
Umm.  
And then in the annual report itself, there's also tables that have to be filled out that can also become pretty lengthy.  
There's IP table.  
There's something called the TRL chart.  
I don't know if people have struggled with that or not.  
Every ERC does it differently.  
This is where you have a chart of the technology right in this levels of they don't really.  
They don't make this.  
They don't explain this very well.  
When we do it and cmat is, we tracked every invention and it's TRL level.  
Other ERC's look more at the core projects and where they sit on the TRL levels, and they're, I don't think there's any agreed upon way to do this, and I don't know if you all have come across this yet or struggled with it.  
And you know, and there are, you know, tech transfer table and startup table that are all part of the annual report and the Innovation Ecosystem section that has to be filled out and that's the ILO's responsibility to do that.  
Umm any questions here?  
Scott, do you wanna go to the next slide?

 **Ransom, Scott** 52:05  
Yeah, you bet.

 **Sundell, Cynthia L** 52:07  
I wanted to talk a little bit about collaborations and intellectual property.  
So there could be different kinds of collaborations.  
It could be between universities, between university.  
That's within the ERC and someone who's external to the ERC could be between the university and company.  
And it's really important, especially if you are collaborating with someone who's outside of your ERC, to protect the dissemination of your IP.  
And this is largely done in two ways, with nondisclosure agreement that can be a one way or two way and is also very, very important if you're going to share any intellectual property, physical intellectual property, to have a material transfer agreement.  
At Georgia Tech, we have an office of exchange agreements that they manage this, umm, and it's really, you know, the responsibility of the of the researchers to make sure that these agreements are filled out properly.  
And it's this is the this is very important.  
Uh. Next slide?  
Umm yeah, there were question.

 **Ransom, Scott** 53:15  
Uh.

 **Sundell, Cynthia L** 53:20  
OK.  
Again when when?  
Uh, NDA becomes important when you start considering pursuing a relationship with another company or entity and need to understand maybe something about what they're doing.  
They need to understand what you're doing and that would be it would.  
And that case of a A2 way NDA.  
But a best practice is a lot of times you can start your initial conversations with the collaborator by not discussing enabling information.  
Just keeping things kind of general to get the conversation going and you can really do a lot that way rather than waiting for your university and the collaborators legal team to execute an NDA that can actually sometimes take months.  
And I think it's the best practice to kind of start those initial conversations with just talking in generalities without an NDA.  
Umm.  
And also say if you're talking to BC's, they will not sign NDA's for initial meetings.  
That's so that's something to keep in mind.  
Uh.  
And then of course, material transfer agreements really important and they really spell out the publication rights, the liabilities for both the sender and the receiver who own the intellectual property.  
If there's further developments and any limits on the use of the material, very important.  
Umm, next slide.  
Umm.  
Sponsored research.  
Very important output.  
Also, something NSF.  
Really, really wants ERC's to do, especially more mature ERC's.  
Umm and sponsored research.  
If you do that with an industry partner can result in IP and that IP will be outside of the the consortium or the industry partner agreement.  
Umm.

 **Doyle, Owen** left the meeting

 **Sundell, Cynthia L** 55:21  
And if you're going to be doing any kind of work with an issue partner, you usually have to have a sponsored research agreement which would be executed by that researchers university.  
And those SRA's some of the things that the terms and conditions that will be negotiated or around the confidentiality, umm, it's usually three years uh publication A for most universities a industry collaborator cannot restrict the publication or cannot deny the publication of any data.

 **Weiner, Steven S** left the meeting

 **Sundell, Cynthia L** 56:00  
But they do have the ability to review those publications.  
It's usually about three months.  
Are these there will be agreements on IP ownership and assignment and also uh terms and conditions around IP licensing that will be negotiated and a lot of times these sponsored research agreements can take quite a long time to negotiate.  
But I think these days most most companies understand that universities cannot.  
You know, there's only certain things that are university will agree with and but I have seen a lot of sponsored research agreements go sideways over especially over IP.

 **Ransom, Scott** 56:29  
Up.

 **Sundell, Cynthia L** 56:40  
And who would?  
Who owns the IP?  
Uh, next slide.  
And of course, intellectual property and protecting it is very important for commercialization.  
Patent, of course, is an important business asset.  
Umm.  
Again, the claim should really reflect the product that you want to sell, and it's important that you work with your tech transfer office at Tech.  
We do have outside counsel that help with claims development on our patent applications.  
Umm.  
And this is something that is obvious, but if you're going to have a spinout company based on ERC IP, you need to license the IP from the university.  
I mean, that's very obvious, but sometimes people don't understand that at Georgia Tech, we have a startup license.  
It's kind of a abbreviated license with no upfront cost to the university takes equity.  
Uh, and it is a no negotiation license.

 **Ransom, Scott** 57:42  
Other.

 **Sundell, Cynthia L** 57:45  
Umm, it's quick, it does not.  
It's not a one size fits all though, and still some of the terms I've listed here are things that, umm, a startup company when they license from university, you're going to want to negotiate or really think.  
Very think long and hard about it because it can make a big difference to a company's future.  
Next slide.  
We can skip this slide.  
I think that could be about, uh, yeah.  
So also when you know if you're thinking of commercializing or starting a company, it's really super important to budget for patent costs.  
Cause after 30 months it gets very very expensive and I have seen situations where startups I have not raised enough money to cover their patent costs and a lot of times commercialization grants particularly they're from the state will not cover patent costs and they can be up to $30,000 per country.  
And then it's also important to consider the maintenance fees.  
If you don't pay them, they got kind of come in a little bit later and the company's life.  
But failure to pay will result in the patent expiring.  
Umm, but it can be revived.  
Umm. Next.  
Yeah, it's overall, it's really if you're thinking of commercializing your IP, it's important to have an overall strategy from the start.  
Umm.  
IP as an asset.  
Obviously, we're looking for funding and a critical factor in obtaining funding from from industry sponsors or from investors.  
Umm.  
And it's really important for protecting your research and blocking competition, and patents really stimulate innovation, economic growth obviously and it's super important to budget for patent costs.

 **Ransom, Scott** 59:36  
OK.

 **Sundell, Cynthia L** 59:45  
If you're thinking of starting the company or commercializing your technology, and once it gets to the, you know, obviously it gets to the national phase, the university, we're going to pay that.  
So so I think that's those are really most of the topics that I wanted to cover is this just kind of summarizing what I already said, happy to open it up for questions.  
But it looks like we are at 4:00 o'clock.  
Are there any questions or?

 **Fleming, Stephen - (stephenfleming)** 1:00:11  
That I I'm actually.  
I'm actually 5 minutes late for another call, so I'm gonna hang hang up early.  
This is Cindy.  
Thanks for doing this is a great.  
I appreciate it.

 **Sundell, Cynthia L** 1:00:19  
You're welcome even.

 **Philip Chizek** 1:00:20  
Umm.

 **Ransom, Scott** 1:00:20  
And then sent.

 **Fleming, Stephen - (stephenfleming)** 1:00:20  
And we're gonna have the recording someplace.  
It'll be useful.  
Thanks.

 **Sundell, Cynthia L** 1:00:23  
OK.

 **Fleming, Stephen - (stephenfleming)** 1:00:23  
Take care. Bye.

 **Sundell, Cynthia L** 1:00:24  
All right.

 **Dmytro Pokhylko** 1:00:26  
Same here.

 **Fleming, Stephen - (stephenfleming)** left the meeting

 **Dmytro Pokhylko** 1:00:27  
Thank.  
Thank you very much, Cynthia.

 **Tim Tripp ATP-Bio** 1:00:27  
I thank you very much.

 **Sundell, Cynthia L** 1:00:28  
Alrighty.

 **Tim Tripp ATP-Bio** 1:00:29  
Alrighty.

 **Ransom, Scott** 1:00:29  
Cindy, thank you so much for for doing this Sunday.

 **Dmytro Pokhylko** 1:00:30  
Have a good weekend.

 **Tim Tripp ATP-Bio** 1:00:30  
Thank you so much for.

 **Ransom, Scott** 1:00:32  
I really.  
Appreciate it.  
And we'll have the the recording and the transcript and the slides all up on the ILO resources website shortly.

 **Tim Tripp ATP-Bio** 1:00:34  
We'll have that.

 **Sundell, Cynthia L** 1:00:40  
Right, right.

 **Dmytro Pokhylko** left the meeting

 **Tim Tripp ATP-Bio** 1:00:41  
Alright, like I have. Great.

 **Sundell, Cynthia L** 1:00:41  
The error and everybody.

 **Ransom, Scott** 1:00:42  
Awesome.

 **Hartnett, John** 1:00:42  
That was great.  
That's really good.

 **Sundell, Cynthia L** 1:00:44  
Alrighty. Alrighty.

 **Philip Chizek** 1:00:45  
Awesome.

 **Hartnett, John** 1:00:45  
Thank you.

 **Ransom, Scott** 1:00:45  
Yeah.

 **Philip Chizek** 1:00:45  
Thanks everybody.

 **Tim Tripp ATP-Bio** 1:00:45  
Take care.  
Have a good weekend.

 **Ransom, Scott** 1:00:46  
Thanks again.

 **Sundell, Cynthia L** 1:00:46  
You Yep. Aye.

 **Ransom, Scott** 1:00:46  
Cindy, have a great weekend, you guys. I.

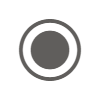
 **Tim Tripp ATP-Bio** 1:00:47  
I agree we can, you guys.

 **Tim Tripp ATP-Bio** left the meeting

 **Sundell, Cynthia L** left the meeting

 **Philip Chizek** left the meeting

 **Ibrahim Mohedas** left the meeting

 **Ransom, Scott** stopped transcription