

Oklahoma Innovations Radio Show

Air Date: September 6, 2009

Guests: **Ranji Vaidyanathan** and **Daniel Tilley**, Oklahoma Inventors Assistance Service

[Music]

>> From the OCAST Radio Network, this is *Oklahoma Innovations*, a weekly science and technology radio magazine brought to you as a service of OCAST, the Oklahoma Center for the Advancement of Science and Technology. OCAST is the state's only agency whose sole focus is technology, its development, transfer, and commercialization. OCAST mission is to identify and fund promising research in technologies that allow Oklahoma to compete in a global market economy from our own backyard. This program features some of the state's most gifted and talented scientists, inventors, entrepreneurs, manufacturers, and business leaders who all have one common goal, developing technology-based economic growth for all Oklahomans. Now here are your hosts, Gary Owen and Steve Paris.

>> Welcome to another edition of Oklahoma Science Radio Magazine, *Oklahoma Innovations*. Depending on what time you hear this program, some people hear it early morning on the weekends, and some people hear it on an afternoon window. And we thank all our affiliates and our listeners who listen to the affiliates for keeping *Oklahoma Innovations* popular in the state. And boy, what a wealth of stuff we try to bring you each week.

>> Yes, we do Gary, you know, we're in our 14th year.

>> It is hard to believe.

>> That's right. And we've had literally hundreds of guests from Oklahoma who, and keep in mind now, we concentrate on what's going on in Oklahoma, developments that are happening here in the area of research and development in the area, as today in the area of inventions in Oklahoma.

>> That's going to be our topic today is talking to some people from OSU.

>> Oklahoma State University talking about the Oklahoma Inventors Assistance Program. And so, it's been around for a while.

>> Yes.

>> It's got some tremendous, tremendous accomplishments. But I think its best days are yet to come and I think we're going to hear about that here in just a minute.

>> So, if you're an inventor or inventor want to be you'll want to listen to this program, find out what that program is all about. What's the word at OCAST this week?

>> Well you got a couple of things coming up this month – the month of September. The NASVF, what does that mean? That's the National Association of Seed and Venture Funds. Their having their annual meeting at Oklahoma City, I believe it's going to be on the 14th of, the 14th or the 16th of September. Now, why in the world would we be interested in that? Well, first of all when you develop technology you need someone to come in there at some point to help commercialize it. And to do that you have to have investment. And that can come from any number of forms from venture capitals, from management investors, from seed capital money

and that's what this meeting is all about, not just for Oklahoma. There'll be people from all over the country who will be here, and.

>> So, I'm going to be part of that?

>> I understand. Yes. You're going to be one of the. One of the voices.

>> That's right I'm going to be a moderator for a breakfast that we're going to be talking some interesting stuff that day.

>> That's exactly right. And so that's one you need to know about. And if you'd like to attend this event, it's the NASVF 16th Annual Conference in Oklahoma City. And you can put on your browser nasvf.org and they'll show you a place where you can sign up. Or, you can call OCAST we'll help you sign up too.

>> I bet you will.

>> Yes, we would. Got another one for you. Remember our friends at the Oklahoma Manufacturing Alliance.

>> I do.

>> Their annual meeting is September 22nd at the Doubletree Hotel Warren Place Tulsa. All of our friends listening on KRMG that, you might want to make something. This is a statewide meeting, and it's going to feature Ed Hill. Edwin Hill he's a distinguished author. The economic development expert and national chairman of the Advisory Committee for the Manufacturing Extension Partnership, which is a national program but we launched it here in Oklahoma in 1992. They are also going to have Steve Hendrickson director of Strategic Planning Communications and Government Relations for Boeing Commercial Airplanes. If you attend this event you're going to hear about management plans, exporting, manufacturing tax incentives, six sigma – these are all buzzwords in the manufacturing industry – innovation and marketing and much, much more. The Department of Commerce and the Oklahoma Manufacturing Alliance are the sponsors. And you can sign up and register on line at www.okalliance.com.

>> And by the way, those of you listening out in rural Oklahoma we know there's a lot of manufacturing business out that way in western and southern Oklahoma. And even some people up in the Woodward area who are listening to this program, if you are a manufacturer in those areas again you might want to check this out.

>> It's one you want to attend.

>> It is.

>> And it's just 95 dollars per person that includes lunch.

>> See, oh includes lunch that is cheap.

>> Yeah.

>> Yeah. And lots of great information at these conferences. We have done the radio show from there, met some very interesting people.

>> And we're going to do it again this year.

>> It's going to be fun.

>> Yeah. You bet.

>> In science news this week. Getting humans to mars will require medical research on the international space station through at least 2020. That is at least according to the program's lead scientist who is presenting the timeframe five years beyond NASA's current budget forecast extending the life of the station a 100 billion dollar project of 16 nations that is nearing completion after nearly a decade of construction. Scientists looking to develop counter measures for radiation exposure, bone loss, and other effects of long duration stays in space estimate they will need to keep the station operating until at least 2020 to insure that next step beyond the earth orbit will be safe for mankind. NASA plans to spend about 2.5 billion dollars a year for space station operations through 2015. Well, last Tuesday marked the beginning for the end of traditional energy guzzling light bulbs throughout Europe. The 100 watt and frosted bulbs the first to go. It's all part of a three year scheme to rid the whole of the European union of traditional and candescent bulbs first put on the market by Thomas Edison in the year 1879.

>> Wow.

>> Yeah.

>> You were there, right?

>> I was there, yes. Some consumers have been stockpiling the old style versions aware that the more energy efficient or long life versions or halogen lamps cost more to buy. And, while shops will be allowed to sell off the remaining stocks, as of last Tuesday there will be no new orders of nontransparent frost bulbs, the particularly inefficient or the standard clear 100 watt bulb. The less powerful clear bulbs will be progressively band until all traditional lights disappear from shops in 2012. Are you, which bulb do you like? Do you still like the incandescent or?

>> You know, I'm having trouble getting.

>> Do you like the frosted bulb?

>> I'm having trouble getting rid of these new little pigtail squiggly bulbs. What's the name for those? At any rate, I'm going to go to those because they are energy saving.

>> Yeah.

>> But.

>> It's hard to get used to the difference in light.

>> It is, there's a different level of illumination.

>> There is.

>> And once I get accustomed to it, I'm sure.

>> You'll be fine. Well, an experimental procedure that some day may enable women to avoid passing certain genetic diseases onto their children has gained an early success with the birth of, now don't freak out folks, with the birth of four healthy monkeys according to scientists. A technique still faces safety questions and perhaps ethical hurdles. The one expert called the work exciting. The experiment in which involved transferring DNA between eggs they say this technique some day may be used against diseases caused by inherited defects and the power plants of cells called mitochondria. These conditions are uncommon and unfamiliar to most people. Roughly, one person in every 4,000 or 5,000 either has one of these mitochondria disease or at risk for one. An egg contains the vast majority of its DNA in the nucleus but mitochondria

contain DNA elsewhere in the egg. So if a woman has a disease caused by defects in the mitochondria DNA the new technique might someday make it possible for her to pass on her normal DNA from the nucleus but not the flawed DNA from the mitochondria.

>> There you go.

>> Got that.

>> Yeah.

>> Okay. One more here, this is kind of a doggy story, or a doggy of stories where the scientists have gone to the dogs. From short to shaggy, the story says nearly all the differences in dog coats or the dog's coats, coat type result from variations in just three genes. This is according to new research studying how genes work together. What's important for human health is the way we found the genes involved in dog coats and figured out how they work together rather than the genes themselves. Scientists say they think this approach will help pinpoint multiple genes involved in complex human conditions such as cancer, heart disease, diabetes, and obesity. The variations in the DNA the blueprint for life in nearly 1,000 dogs from 80 breeds, and these were full blood dogs, were studied by the research. The results were then compared to descriptions of various coat types. And again, the findings apply to pure breed dogs. And now Steve has our innovations in history.

>> Thank you Gary. In 1976, the unmanned US space craft Viking II landed on Mars to take the first close up color photographs of the planet's surface. It was September one of 1897 that the first section of Boston's new subway system was opened. It was on September second 1930 that the first nonstop airplane flight from Europe to the US was completed in 37 hours by Captain Dieudonne Costes and Maurice Bellonte of France. They arrived in Valley Spring New York aboard a Breguet Biplane. The plane was known as the Question Mark because it bore the image of the punctuation sign on its side. On that same day 1932, Dr. Floyd J Lewis first used a deep freeze technique in heart surgery. And it was on September third 1912 the world's first cannery opened in England to supply food to the navy. George Eastman received a patent for his roll film camera and registered his trademark Kodak on September fourth 1888. And, on that same date in 1957, the Ford Motor Company began selling its ill faded Edsel. I bet you bought one didn't you? September seventh 1912 French Aviator Roland Garros set an altitude record of 13,200 feet. Doesn't sound too high by today's standards.

>> No it doesn't I'm afraid.

>> And that, Gary, is your innovations in history for this week.

>> Fun stuff. Well, speaking of innovations if you're an inventor out there or perhaps you've got this great idea that you think might be possible for commercialization market you're going to want to listen to our show today because we have two guests who are going to talk to us about the new Product Development Center at Oklahoma State University. Our first guest is Dr. Ranji Vaidyanathan and he is currently the director of the New Product Development Center. And our other guest is Dr. Daniel Tilley and he's the associate director of the New Product Development Center and the Inventors Assistance Service at OSU. We got to find out about these organizations. So, we got about a minute and a half before the break so.

>> A minute and a half the gives us just about enough time, Ranji, to hear about how you came to be where you are. Give us a little bit of your background.

>> Okay, I graduated with a PHD in materials science and engineering from North Carolina State University. I did a couple of post doctoral assignments at Rutgers University and John Hopkins University. And then, for ten years after that I worked for a small high technology company in Tucson Arizona developing various products from bone scaffold materials to new types of composite materials, tooling materials. And, I got an opportunity to apply for the New Product Development Center for being its first full time director. And I said that this is something that I really liked. So, I got the opportunity and here I am.

>> Here you are.

>> Yes.

>> And you're now working and heading up the Inventors Assistance Service, you and Dan are heading up this process.

>> Yes.

>> We're going to hear a lot about that here in future segments. But, real quickly, I think we have just a few seconds left, what year was the Inventors Assistance Service begun in Oklahoma? I've lost track of that. Do you remember? Maybe we don't know. Maybe it just kind of by osmosis just came in to being, didn't it.

>> Back in 1800 and.

>> No, it hadn't been that long. But let me, I can give you a very brief history. It used to be kind of funded to the Department of Commerce. And then some years ago that was changed and were OCAST funded. And we're proud to be a part of your process. Well, I'm going to turn it back to Gary. It's time for the break.

>> Yeah, we got to take a little pause because. And when we come back, we'll talk a little more with our guests and find out about this wonderful New Product Development Center at OSU don't go away on *Oklahoma Innovations*.

[Music]

>> Wheat growers across Oklahoma know too well the impact that a poor growing season can have on crops and markets. Drought, disease and poor soil are just a few of the thing to keep farmers up at night. But what if those issues were a thing of the past? In labs funded by the Oklahoma Center for the Advancement of Science and Technology, researchers are finding new ways for producing better plants that can withstand unfavorable conditions. Creating opportunities and improving the economy, that's what OCAST is all about. OCAST is looking for small business owners serious about investigating new products, services, and processes. For more information call OCAST toll free at 866-265-2215 or visit their website at ocast.ok.gov. In a state deeply rooted in agriculture, plant science helps Oklahoma farmers grow their business.

>> You're listening to Oklahoma Science Radio Magazine, *Oklahoma Innovations* on the OCAST Radio Network.

>> I always wanted to be one of those guys who could sit in his garage for weekend after weekend working on this really intense project that some time some day would make me forever wealthy. But no, here I am behind the microphone working with Steve Paris from OCAST.

>> Yes.

>> And *Oklahoma Innovations*. This is probably one of the most entertaining things I do, of all the voice things I do of all the entertaining things I do, this is one of the most fun things for me every week.

>> Well it is for me too Gary. And I think a lot of that has to do with you and I learn a lot from our guests.

>> We do.

>> That's the important part of it. I'd like to introduce, introduce our second guest Dr. Daniel Tilley is the associate director of the New Product Development Center and the Inventors Assistance Service at OSU. And Dan, I feel like I've know you forever. I know I haven't but it feels that way. You've been around for quite a while, as I have.

>> Careful Steve careful.

>> Well, I'm not suggesting, I'm not suggesting age or anything but I, we've both been around here for quite a while. And I want to ask you, you're taking on the Product Development, New Product Development Center and your relationship with the Inventors Assistance Service, talk, well before we do that let me talk about you. How'd you get to be here?

>> Well thank you Steve. I have been around a while and one of our jokes that we have when we go out in the state is how many times are we going to run into former students just because there's so many of them running around. I met two checking out a car this morning.

>> Oh you did?

>> A current student and a former student. That happens all over.

>> That has to be a source of pride for you I'm sure.

>> Well, it is. And it's a lot of fun as we go out in the state working with manufacturers.

>> Of course.

>> On new product development projects to get reacquainted with people that I've had in class, maybe ten, 15, 20 years ago.

>> Sure.

>> But, my association with the New Product Development Center started about four years ago. And, we're, I think the realization that, that making a new product come to life is as much a business problem as it is an engineering or technology problem, that you just don't, you just don't invent something and have it come to life automatically. There's a lot of business structure that has to be considered. And inventors in particular have to decide whether they really want a company and become an entrepreneur.

>> Yeah.

>> Or license their invention to someone else.

>> Yeah.

>> Who, who then commercializes that invention. And many times inventors are better equipped to be inventors and have someone else take on the licensing of a product and the manufacturing of that product so that it becomes commercially successful.

>> I don't know why it is every time I think about inventors I have visions of back to the teacher and those films of the guy that is always trying to create something, you know. And he finally made it to some far off thing. But, you know, when you see the labs and things and you see the garages and things that guys are out there trying to create something or develop something in some of them are pretty good.

>> You know, there are those that are motivated primarily by prophet and monetary reward. But there are also inventors who are motivated just because they have the creative.

>> Right.

>> Genius and they want to be able to express that creative genius and maybe solve a problem that needs to be solved.

>> Right.

>> And whether the monetary rewards are there or not the idea of inventing something is more than just a money motive for many, for many people. And so, I think that that's important to recognize. There are just people that see a problem and want to solve it.

>> You bet. You know, Oklahoma has a tremendous history of inventors. We've been blessed with inventors from the past. Wiley Post, you know, for who unfortunately was killed in a plane crash long ago. Rogers, is known for his inventions related to space suits and going to have two space experiments. Of course, the shopping cart was invented in Oklahoma and the parking meter. I mean these were all creative people who lived here in Oklahoma. And that was way back then back in the 30s and the 20s and 30s and even up into the 40s. But today, here we are in a new century and we've got a lot of Oklahomans that are out there with great ideas. And they're, they have a lot of problems getting from where they are to where they need to be to get their product inline.

>> Yeah, it's, Steve that's an interesting statement you just made. I wasn't aware that the shopping cart was invented here. But, we've been working with an inventor. And we're not going to talk about the specifics.

>> Sure.

>> But.

>> Proprietary information, right Dave.

>> It has to do with proprietary information. But, it's an invention designed to improve the shopping cart.

>> Oh.

>> Ah.

>> So, we've been helping an individual with an invention that's designed to improve the shopping cart. And that's pretty exciting and we've done some rapid prototyping for this individual and I think he's very happy with what we've done. And it's now approaching the manufacturer of shopping carts in Oklahoma with this idea. And we're helping him bring it to life. Now, will he ever manufacture? Perhaps, but maybe not. Maybe the shopping cart manufacturer will license that invention from him.

>> You know, there's a lot of people that probably have great ideas, with just around the house, great ideas for a business what have you. They just don't know how to get a prototype done, get something engineered. And that's a process we ought to talk about. Yeah, first thing. I always, one thing to know is what's out there that's similar and solves the same problem and how much does that solution cost?

>> Yeah.

>> And so, one of the things we really work hard on is helping the inventor become better informed about the competition. And it may be people who have similar patent ideas that the inventor needs to know about. It may be products that are on the market that are not necessarily patented but are very similar to what our inventors are coming up with. So, informed decision-making is really our primary goal early on in the process. And by that I mean that we, we'll get an idea from someone and they, then we'll put it through what I'll call a vetting process where we have students and student employees that are paid for with IAS funding from OCAST. And they will get on the internet, get in the uTubes, they'll do patent searches, they'll do GOOGLE searches. And then they report back to the inventor. What key words did we search in the patent search? What key words did we search on GOOGLE? What did we look for? And what did we find? Generally, I tell the students I want two tables. One of them is relevant patents that may be similar. And the second one is products that are on the market solving the same problem and in as much detail as possible about the companies that have those products on the market.

>> Dr. Daniel Tilley associate director of the New Product Development Center and the Inventors Assistance Service at OSU and Dr. Ranji Vaidyanathan, we'll talk more with these guys when we return on *Oklahoma Innovations*.

[Music]

There's more to learn on *Oklahoma Innovations* with Gary Owen and Steve Paris on the OCAST Radio Network

>> The stress of finding a job after college is compounded for recent graduates entering a tough job market. But thanks to the Oklahoma Center for the Advancement of Science and Technology, more students connect with the state's most advanced technology companies, while earning income and valuable on the job training. Through the OCAST R&D intern partnerships program, students gain experience in the industry, work with mentors, and operate specialized instruments. Intern training leads to starting salaries 12 percent higher than Oklahoma's average per capita income. OCAST is investing in Oklahoma's best and brightest. Creating jobs, investing in our future, that's what OCAST is all about. OCAST is seeking intern partnership opportunities that will allow Oklahoma's students to gain hands on experience in science and technology careers. For more information call OCAST toll free at 866-265-2215 or visit their website at OCAST.ok.gov. The future of Oklahoma looks bright.

>> Imagine not being able to see your daughter on her wedding day or experiencing your grandchild's first smile. An estimated one and three-quarter million Americans over the age 50 have developed a loss of vision or blindness due to age related macular degeneration. And of the 200,000 Oklahomans living with diabetes, 90% will develop eye disease. With the support of the Oklahoma Center for the Advancement of Science and Technology, an Oklahoma company is developing innovative treatments for blinding eye diseases. The research will improve the lives of people across the nation, create new treatments that are more comfortable for patients and

prevent vision loss. OCAST is looking for Oklahoma researchers. If you're serious about investigating new treatments and products that improve the quality of life and the economy for Oklahomans, call OCAST toll free at 866-265-2215 or visit their website at ocast.ok.gov. Investing in science and technology, it's good for your health.

>> Research and development, technology transfer, and commercialization, creating high paying jobs in Oklahoma is what OCAST is all about. This is *Oklahoma Innovations* on the OCAST Radio Network.

[Music]

>> Thank you for joining us this week on *Oklahoma Innovations*. Gary Owen and Steve Paris bring you interesting guests each week that are related to science and technology, business in science and technology, education. And then, we have services like the New Product Development Center, and of course, the Inventors Assistance Service. It's all at OSU. Our guest this week Dr. Ranji Vaidyanathan. He is the director of the New Product Development Center and the Inventors Assistance Service and then Dr. Daniel Tilley who's associate director. And by the way, I want to give you a website so that you can do some research. Dr. Vaidyanathan do you want to give us, you got a website or do you got a phone number if people are interested in finding out more about these services?

>> Yes, the website is npdc.okstate.edu. And, the telephone number is 405-744-5134.

>> Okay, and we'll be giving you this information, of course, before the end of the program, so get, if you didn't get that jot that down, get you a piece of paper and a pencil and if you're interested you might want to contact these people, alright, Steve.

>> That's exactly right Gary and makes sure you do. Here's one of the things that we've realized over the years. There are a lot of Oklahomans out there who are creative and who have a desire to invent something. They've come up with it however, however they do that whatever the creative process is. And they may be excellent at producing a new invention. But, they may not know how to get the funding for it. They may not know how to protect their intellectual property. They may not know how to even convert it into a business. And that's one of the things one of the several things that you all do for them if you can't do it for them directly you can show them the pathway. And, you know, we were talking during the break Ranji about the beginnings of the, of the Inventors Assistance Service. It actually it was before this, but in 1998, there was legislation. Tell us about that what it accomplished and why it was, why it happened.

>> Yes, one primary goal of the 1998 legislation that mandated the Inventors Assistance was reducing fraud that inventors often face when navigating the patent and marketing process of an innovation. And what we do is to help them with the patent library at Oklahoma State University.

>> Yeah.

>> And we help them to look at what other patents are there what other innovations are out there that are similar. Or, if it is not there, it tells them hey, this is a very unique innovation then we can move forward and try to help you with that innovation.

>> Excellent point. You mentioned the patent library at Oklahoma State University. Oklahoma is very unique in having that library. Not just every place has one of those, right.

>> That's right, yes.

>> And one of the biggest problems I understand for inventors is, you know, there's so many people out there with so many ideas it's not unlikely that if you come up with an invention or an idea, somebody else may have worked on something similar in the past. Is that true?

>> Yes.

>> Yeah, I bet that pops up often doesn't it?

>> Often.

>> And you save a lot of time by letting that inventor know that hey we did some checking and found out. Dan, go ahead.

>> And that can be a very expensive answer to get for an inventor if you, what we hope to do is teach our inventors how to do some searches on their own in the patent library at OSU. And we'll sit down with an inventor and go through the patent search process and show them how to do that. Also, simply using the, perhaps even Google patents search and preliminary work that's in its beta version. But that helps you get a start on where to look and maybe what key words to be searching. And then with the internet today the key again is making an informed decision about whether to continue the invention process because it does start to get expensive when you get legal advice involved. And we do encourage people to do that and absolutely want them to document.

>> Right.

>> Their intellectual property. It's called business administration has some websites that are useful. The U.S. Patent and Trademark Office has a class on intellectual property that we frequently recommend to inventors. I suggest to them that they go through that class. It's a class on how to protect your ideas before they begin interacting with us, because they need to know how to protect their ideas.

>> Yeah, you know, I don't know how prevalent it is, but I understand that thievery, and I'm not suggesting that it's happening here anywhere, but I'm saying it's something that you have to be mindful of if you've created, if you have an invention because somebody might be looking over your shoulder and they might steal it from you. And at that point, if you don't have it protected you're really pretty bear out there.

>> Well, and see it's even, there's two reasons for patents, and it's taken me a long time to discover the second one. The first one, is of course to protect the rights of the inventor.

>> Right.

>> But the second one is the cause the inventor to reveal the science behind their invention to the public.

>> It's to benefit society?

>> To society. It creates a public record that other inventors can look at and improve upon. So part of the reason you get this protection is for the advancement of science.

>> Exactly.

>> So patenting is not always the right solution, because it causes you to reveal something. It may be better if it's something you can keep as a trade secret, to keep it as a trade secret.

>> Now I wonder how many times somebody's come up with an invention only to find out somebody else has already done it, and not aware that it's been created.

>> That happens every week in our office.

>> I'll bet.

>> And on a related note, the patent attorneys that we have talked to tell us that an informed inventor who knows what is out there that is similar or not similar is a much better client than an uninformed inventor.

>> Interesting.

>> Yep. Better prepared.

>> The attorneys really have been very supportive of us. The ones we've talked to said you know, we really, the off the street inventor we really want to refer them to you.

>> You save them a lot of time.

>> The attorneys, I mean, you save them a lot.

>> And have the inventor come through a vetting process that helps them use their time.

>> Kind of grooms them

>> Exactly Gary, that's exactly what they're doing. And that's been very nice to learn that even the law firm's do intellectual property law want to prefer an inventor who's gone through either some kind of personal vetting process and search process or been through the IAS program before they contact the attorney.

>> Well, I would think from a legal standpoint that would help the communication process between the inventor and the attorney.

>> That's right.

>> It kind of speeds up the process a little bit.

>> You know, with all this service that you're providing we have not listed all of the things that you do for the inventor. Gosh, that's got to cost a fortune. What do you charge these folks?

>> 25 dollars.

>> 25 bucks?

>> Where do I sign up?

[Laughter]

>> I'm going to invent a new pair of headphones.

>> Yeah, it's really low and maybe we need to be talking about changing that. But it is a very inexpensive way of getting the vetting process, getting through some type of research process and causing the inventor to learn more about their invention. And again, I can't help but recommend that the U.S. patent and trademark class on intellectual property. It's so useful to them. And so typically when we get an inquiry, I send them back an email saying please, here's our application for assistance and here's the website address for the U.S. Patent and Trademark

Office. Please go through their course to protect yourself on IP and learn what you can about IP and then fill out the application.

>> Dan, you know, I knew the answer to the question when I asked it about the fees. I knew you didn't charge very many fees. But actually, you charge no fees for your services.

>> That's right. It's an application fee.

>> You bet.

>> And we do, however, charge for workshop fees, and there's a submittal fee for selected inventions program. And Ranji, if we have just a minute, I'd like to talk about the Selected Inventions Program very quickly, and if we have to talk about it some more, we'll talk about it when we come out of the break.

>> Okay.

>> Selected Inventions Program, what is that?

>> Once we do the initial vetting of the invention, we make sure that this is an invention that can be manufactured here in Oklahoma, because since we are an Oklahoma state funded program.

>> Exactly.

>> We would like to ensure that whatever we invent here can be manufactured here in this state, because we need to help our small manufacturers also. So we would like to give them the opportunity to manufacture that here rather than take it out of the state.

>> Absolutely.

>> Are you guys going to be at the alliance conference?

>> Yeah.

>> Yes.

>> Okay. Good. All right. Well, we're learning more about the new product development center and the Inventors Assistance Service at Oklahoma State University. We have one more segment to go. Stick around on *Oklahoma Innovations*.

[Music]

>> This is Oklahoma Science Radio Magazine, *Oklahoma Innovations* with Gary Owen and Steve Paris, on the OCAST Radio Network.

>> As you drive across Oklahoma, you can see thousands of gas wells sprinkled throughout the countryside. Many of these wells don't produce enough natural gas to justify pipelines. But without this access, thousands of well sites are abandoned. With the support of the Oklahoma Center for the Advancement of Science and Technology, one company has created a portable device transported on a flatbed truck to process natural gas at well sites. This technology optimizes the amount of gas that can be captured and releases no byproducts into the atmosphere. This idea provides new opportunities for small oil and gas producers while bringing us one-step closer to energy independence. Supporting innovation, that's what OCAST is all about. OCAST is looking for small business owners serious about investigating new products, services and processes. For more information, call OCAST toll free at 866-265-2215 or visit their website at

ocast.ok.gov. Investing in research and development, it pumps new life into Oklahoma's economy.

[Music]

>> This is the program that brings you science and technology, every weekend, same time, same place and we're delighted you're here. We hope you have a good time listening to this program and learn something new about the great state of Oklahoma when it comes to science and technology. Our guests this week, Dr. Ranji Vaidyanathan, he is the director of the new product development center and inventors assistance service and also along with him is Dr. Daniel Tilley, he's associate director. And also, we should mention, I didn't really mention this in the early part of the program, Dr. Tilley is also professor of the Department of Agriculture Economics.

>> I saw that.

>> Yes.

>> Teaches Ag Econ, works at Ag. We'll have to ask him about that here in just a minute.

>> Yeah.

>> Before we do, I want to go to Ranji for just a minute. For some years, the Inventors Assistance Service has been headquartered and still is there and has had a statewide mission, you just don't operate in Stillwater, you operate in all 77 counties where the need arises. Something's changed. You have added Tulsa, you have an office over there and so now, you have two offices, which I think is going to better help you serve the citizens of Oklahoma. Talk to us about that.

>> Yes. Recently the Oklahoma State University in Tulsa has a brand new building that is.

>> The Helmerick Center.

>> The Helmerick Advanced Technology Center.

>> Right.

>> The people of Tulsa taxed themselves through the bond issue to create the spanking new facility.

>> It's a beautiful facility. I've been through it several times. It's beautiful.

>> Yes. And what it does is the university assists to create new technologies and we want to create a two way street. One is to assist inventors and small manufacturers who come to us for assistance. But we also want to take new technologies out to the marketplace.

>> I see.

>> And that is what the Helmerick Center is supposed to do. And we have an office there, we have a presence there for both the New Product Development Center and the Inventors Assistance Service.

>> Wow. So, you're in two locations now, you're going to be better positioned to serve Oklahoma inventors?

>> That's right.

>> And of course, that new Helmerick Center there is going to be a great asset to a lot of different folks who do R&D, but also to inventors, especially in the Tulsa area, but anywhere, anywhere in the state.

>> Yes. Yes.

>> You know, there's a couple of things I'd like to clear up here, maybe clear up in my own mind. Maybe everybody else understands this. You've got patents, you've got copyrights, and you have trademarks. And you know, I don't know that I know the difference between all of them. Can you explain that to me?

>> Yes. A trademark is a unique name for your product that will help you to differentiate yourself from other similar products in the market. A patent is something that protects your invention. And a copyright is anything that will protect your written work. So a person can write say a software code or a book and those can be protected by what is called copyright.

>> Which means if anybody uses them without making a deal with the owner, they're technically breaking the law.

>> That's right.

>> And the trademark information, I may be wrong on this, but I'm going to guess something like Xerox is a good trademark. Is that right?

>> Yes.

>> Okay. And there's lots of them. You know, we have those throughout our society. That's just an example that came to mind first. You know there's so many areas where inventors need help and we've touched on some of those. I don't know if we've missed any or not. But, Dan?

>> We might talk about you asked earlier about the Selective Inventors Program. And I think the key for some of the inventors, they have a good idea and they may have it draw on paper, but they really don't have an engineering drawing, so if it passes muster and we think it merits attention, we'll help them get some engineering drawings. And once we have engineering drawings that are accurately reflecting the inventor's idea we even can go to a rapid prototyping of the product, and essentially, that's three-dimensional printing where you can print it in plastic and layer it up in three-dimensions.

>> Ah, ok.

>> And depending on the product, that can be very useful to the inventor so that they understand how the parts fit together and they may want to revise it at that point.

>> Now is that service, is there a fee for that?

>> We haven't been charging so far.

>> But you're getting some very, what could be a very expensive service there.

>> It could be. And what we're doing is helping them understand their concept and frequently they can't fully understand it until they can see it in three-dimensions.

>> Right.

>> And it may get some revision in that drawing and feedback process with the inventor. And most of these inventors that we're working with do not have the capacity to pay for the services

in the private sector, in fact, I'd say all of them. So initially, our goal will be either to help them become an entrepreneur or find a manufacturer here in Oklahoma that can produce the product as part of their product line.

>> I wanted to, we haven't done this, we have a list here of items.

>> Yeah, that you and I will talk about.

>> Oklahoma inventors here. There's some really cool things. You'd have to, when you just look at them you go, what is that? For example, you've got the Stick Wagon, the PC Peekers, the Hug-Stems, the Trooper Trap. I mean, some funny names here.

>> Yeah, and we've had some of these on our show before.

>> Yes, we have.

>> Talking about the Trooper Trap, correct me if I'm wrong here, but I think that's where a trooper has someone arrested and they're inside of his vehicle and then he exits to go take care of some more business and this keeps that individual from getting loose and commandeering the patrol car and escaping and things like that. A lot of little things that have happened in real life that have inspired inventors. I think a highway patrolman came up with that idea. And of course, PC Peekers, we featured them a few years ago. We had Garage Butler on.

>> Yes, I remember.

>> That's out of Owasso, Oklahoma, if I remember. By the way, if you could go to the website for the Oklahoma Inventors Assistance Service, you can find these examples and you could look up their website and find out more information about some of these. Now that brings up a question, and Dan you probably may be better equipped to address this. Many are called, but few are chosen. You get a lot of people who come up with what seems like a great idea, but inventing something and getting it to the point where it's a commercial product, that's a real big challenge, isn't it?

>> Absolutely. And of course, again, the first question is has someone else done something very similar to it?

>> Of course.

>> And that's probably what, you know, I'm not sure. I know people in science and technology who don't want to know what's out there already because they feel like it's going to cramp their creative style, if you will.

>> That's a disaster waiting to happen, isn't it?

>> But at the same time, our goal is to get them informed.

>> Of course.

>> And make sure that if they do go seeking a patent, it may cost them in the tens of thousands of dollars to secure that patent.

>> Right.

>> That there's some probability of success, or at least they're making that decision with information, what we can find for them. And of course, their attorney may find additional patents that are relevant.

>> And that's a point to make. By contacting the inventors assistance, you don't guarantee your financial success, but you sure improve your chances.

>> Well, and hopefully saving some money.

>> Exactly.

>> And the other point we want to make is we will select only those inventions that have a good potential of being manufactured here in the state of Oklahoma.

>> There you go. Yeah.

>> One of the things that we've been focusing on more is leveraging our resources by helping some companies and or inventors get grant support for their idea. We work closely with OCAST, Small Business Innovation Research program and.

>> SBIR and STTR – Small Business Technology Transfer.

>> Absolutely. And so we're very interested in products that we can see a potential for getting some grant support.

>> Sure.

>> So that the inventor, and or company can have maybe in the hundreds of thousands of dollars to pursue further product development so the technology can really be in a commercializable state.

>> I want to give your website here one more time while we have just a minute here left. Once again, it is the New Product Development Center and the Inventors Assistance Service and this is at OSU. Their website is npdc.okstate.edu. Correctly. Is that right?

>> Yes.

>> Okay and the phone number is 405-794-5134.

>> I'm sorry. 405

>> 744-5134. 744-5134. Okay.

>> Very good. We're getting close to the end here. Ranji, I want to ask you just another quick question. You mentioned the Wes Watkins Inventors Fair.

>> Yes.

>> In Norman, Oklahoma. I believe it's December 6th. What can people expect by attending that fair?

>> Okay. They have an opportunity to get some additional funding and their invention gets vetted by a group of judges and if they are good, they will win some prizes.

>> Outstanding.

>> We're out of time guys. Thank you so much for joining us this week, and Steve, we'll see you next week.

>> See you, Gary.

>> *Oklahoma Innovations*, have a good week.

[Music]

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