

Oklahoma Innovations Radio Show

Air Date: December 5 & 6, 2009

Guests: **Shaundra North**, communications director, and Bret Mahoney, academic networking coordinator, from Science Museum Oklahoma

[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 this weeks addition of Oklahoma's Innovations, Gary Owen and

>>Steve Paris

>>That's right and we always bring you fun interviews from around the state when it relates to innovation, science, technology, education, commercialization, I've got to make up more words like that.

>>Well there's a bunch you left out but we will go over those today.

>>That's right

>>Okay, we're going to be talking about the Science Museum Oklahoma and if you haven't been to the Science Museum Oklahoma yet, you've missed out. There are so many things that you need to be aware of that are there and one of the things that I appreciate about Science Museum Oklahoma is the fact that they bring new things all the time, new programs. It's not just things to look at but they bring people on board and we're gonna hear about some of that a little later on in the show.

>>Sounds like fun. What's going on at OCAST?

>>Gary, you know we just announced the most recent round of funding for our applied research program. You know we have issues with state government right now, with the amount of money but we still have our money set aside for our research cause it's such an integral part of our state's economy. And we approve 10 projects worth a total, over a period of three years, of about 1.8 million dollars.

>>Wow

>>And you think okay

>>It sounds like a lot of money but it really isn't

>>Well you're absolutely right. That's over a three year period of time. That pays for a lot of research. It brings a lot of people, in some cases, researchers to the state of Oklahoma and they bring some of their staff and they apply their trade here and that money circulates in the

economy. And the most important part of that though, all of that is very important, the most important part is that once you do this research, several things often come out of it and it depends on the situation. Sometimes they find out that their suppositions were not exactly as they thought they would be. Sometimes they turn out better. But what that means is there will be companies that will be created in Oklahoma somewhere down the line that come from this research. And sometimes maybe research is 10 or 15 years in advance of starting up a commercial activity but we've been in this business for about 22 years now and there are businesses in Oklahoma that would not have existed had it not been for some of the research that this state has funded. And of course when we say we've funded, we've put up a relatively small amount of money and we try to get our researchers to match that money with either personal money, which is kind of rare cause most people don't have that kind of money but either that from private sector companies. But probably the biggest volume of dollars coming into Oklahoma for research comes from Federal programs and National Institutes for Health, the National Science Foundation, organizations like that, the Department of Defense and you know there's a lot of benefit for that research to come to Oklahoma, simply for the research to be done here, through the follow on benefit is the economic development aspect of it where companies are created and jobs are created out of the scientific endeavor. Let me just give you one or two examples,

>>Sure

>>In the Oklahoma City area, Robert Hurst of DormaTarg is the winner of, actually the \$45,000, roughly small award but he studies bladder cancer, which kills about 13,000 Americans each year. An estimated half of those deaths are preventable because they occur in people who are diagnosed in people with superficial bladder cancer which reoccurred and progressed. So he's trying to find a better way to evaluate that. I'll give you one more example, up at Ochelata, which is north of Tulsa near the Kansas line, long time investigator, principle investigator and scientist Donald Hitzman. We've worked with him before. He's getting matching funds from the LATA Group and they're gonna be looking at the functionality of an onsite reactor for nitrate production. Okay, what does that mean? The object of this project is to engineer, develop, build and operate a more practical field unit and the goal is to increase nitrate production at commercial levels. The beneficiaries of this would be offshore oil and gas operations because what it will do for them is drilling operations and he's getting about \$119,000 for a one year period of research. Those are just some examples of what we do for our applied research projects. And of course the communities involved, I mentioned Oklahoma City and Ochelata and also Tulsa, Stillwater, Norman and those are the principal cities where this research is being done.

>>Yeah and that's one, I'm glad you brought that up Steve because a lot of people think when we talk about OCAST and we talk about, we do obviously have a lot of science and technology that goes on in our metro areas, Tulsa and Oklahoma City, but there's a lot of projects going in outside of those areas.

>>Exactly

>>In smaller communities and I know that you try, the OCAST agency really tries hard to focus or allow opportunities where they warrant in those areas.

>>Our principal purpose is to fund good quality science but we also are looking at geographic diversity because taxpayers live all over Oklahoma and we want everyone to benefit to the extent possible from this research. And you know you have general areas of research. Our research

universities, OU, OSU, TU, those are all principle research universities so there's a lot of activity there. Then you have what we call the, for years we've called it the technology corridor in Oklahoma, which roughly is I44, runs from Lawton up to Miami, includes Tulsa, Oklahoma City, reaches out to Stillwater and Norman. But you also have Ada. You also have Ardmore, places where you have foundations that do a lot of research so research happens all over the state of Oklahoma. It's a little bit concentrated in other areas of the state.

>>And then when you add strategic partners who get into the commercialization aspect of technology development and education and so forth, I mean it's pretty

>>Oklahoma manufacturing, they work in almost every county in the state

>>Absolutely and there again it's very important to have economic development for a lot of these rural communities in job creation. In science and technology news this week from around the globe, speaking of cancer, Steve, you know on this program to our audience they hear us talk about nanotechnology quite a bit and here's a nanotechnology development out of France. Tiny magnetic discs just a millionth of a meter in diameter, now imagine that, a millionth of a meter in diameter, they're saying can be used to kill cancer cells, this according to a recent study. Laboratory tests found the so called nanodiscs around 60 billionths of a meter thick could be used to disrupt the membranes of cancer cells causing them to self destruct. The discs are made from an iron nickel alloy which move when subjected to a magnetic field, damaging the cancer cells. In a commentary on the report, John Dobson of Keele University in Britain, said antibodies could be used to direct the discs towards tumor cells. This provides an elegant and rapid technique for targeting tumor destruction without side effects associated with other types of treatment like chemotherapy. We kind of heard about some of this early on but now it's coming into reality it looks like.

>>And we'll be hearing more and more about it as time goes on. You know some of the premier nanotechnology in the world is happening right here in Oklahoma, specifically in the Norman area but there's also activity in Edmond and Lawton so we're going to be hearing more about that as they

>>Fascinating stuff, fascinating stuff. Well I guess everybody knows that four search engines make up of 95 percent of all search traffic, Google, Yahoo, MSN and Ask. Only Google increased its share last year, it's share of the pie, eating up 67 percent of all searches in January and 72 percent by 2009, according to online traffic monitor Hitwise. But something has changed this year. Microsoft retired MSN site and launched a new search engine called Bing, have you heard about that?

>>Yeah, used it

>>The newcomer is gobbling up only about 10 percent of the share right now but they're saying it's gaining momentum. And some interesting stuff here, Bing sells itself as a general interest search engine but its real philosophy is more nuance whereas Google more or less treats every search engine the same, current events, product reviews and quirky queries, all run through the same massive database. Bing focuses on the few 100 terms that people search for the most. It then tries to craft on the perfect results page for those selected items. In other words, if Google is a phonebook to the city where you can find everything, Bing is the tour book with more helpful information and certain attractions. Bing will still find results for anything you throw at it but Google often does a better job with those other odd kind of queries. That's kind of interesting

information there. Ever heard of the term web widgets? You know these innocuous little software applications are popularly known as widgets, may turn out to be the back door to your TV screen that internet companies have been waiting for. Widgets promise to bring the perks of the internet to TV screens using a familiar remote control instead of a computer mouse. All indications are that widgets are going to move very quickly through a great many of the TV's being sold in the next few years, if not all of them, according to Kurt Scherf vice president and principal analyst at Parts Associates, a market research firm in Dallas that specializes in merging consumer technologies. About 400,000 TV's sold in the U.S. this year will be web enabled but by 2013 about 13.8 million TV sets in the U.S. households will be web enabled. How about that? Interesting stuff there. And one other little story I wanted to pass along, the number of Americans with diabetes will nearly double over the next 25 years, rising from 23.7 million in 2009 to 44.1 million in 2034, according to a study by the University of Chicago. In the same period, medical costs associated with treating the disease will triple from \$113 billion dollars to \$336 billion, even without a rise in the incidence of obesity, according to the study. And they're also saying the study, said its projections, despite being significantly higher than other recent estimates, may be too conservative because they assume the rate of diabetes and obesity a risk factor for the disease, remain stable. Interesting stuff. Steve's got our, innovations in history.

>>Yes, I do, Gary. On November 30th, 134 years ago, a patent was granted for the oat crushing machine. That led to commercially packaged oatmeal. I knew you couldn't go through the day without knowing that. The first use of video tape on a network television program was November 30, 1956 when delayed broadcast of Douglas Edwards and the CBS news was made using the new Ampex VTR. And the first sales of the board game Monopoly started December 1, 74 years ago, when inventor Charles Darrow initially offered his game to Parker Brothers. They turned it down, said it was too complicated. [laughter] The Ford model A, a successor to the popular model T was introduced December 2, 82 years ago. It was priced at \$325. Scientists at the University of Chicago produced the first atomic chain reaction December 2, that was 67 years ago. On December 2, 1970, the U.S. Environmental Protection Agency came into being. And it was December 2 of 1982 that Barney B. Clark became the first recipient of an artificial heart. The 61 year old retired dentist from Seattle underwent a seven and a half hour operation at the University of Utah medical center in Salt Lake City. He survived the artificial heart for over three months. And let's see, the first human heart transplant was performed December 3, 1967, Dr. Christiaan Barnard gave Louis Washkansky a heart of a female traffic victim. You all of heard of the Stillson wrench, December 5, 1876, it was patented by D. C. Stillson, Somerville, Massachusetts. What is the Stillson wrench you ask? Well actually it was the first practical pipe wrench. On the same date in 1951 that is, the first push button control garage opened in Washington, D.C. a single attendant without entering a car could automatically park or return a vehicle to and from the park-O-mat, in less than a minute. And this is Gary for innovations and history for the month of December.

>>Coming up we're gonna talk to folks from Science Museum, Oklahoma, when we return on Oklahoma Innovation.

[Music]

>>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 age 50 have developed a loss of vision or blindness due to age related macular degeneration. And of the more than 200,000 Oklahomans living with diabetes, 90 percent 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 lost. OCAST is looking for Oklahoma researchers serious about investigating new treatments and products that improve the quality of life and the economy for Oklahomans. For more information 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.

>> Now in it's 14th year, this is *Oklahoma Innovations* on the OCAST radio network.

[Music]

>>This week we're gonna be talking about Science Museum Oklahoma, it is the state's premiere destination for family science fun. I didn't realize this was as big as it is. It houses over eight acres of hands on science experiences and live entertainment exhibits, all kinds of things. We're gonna find out more about Science Museum Oklahoma, some of the wonderful programs that have just launched and we're also going to talk during the hour about some of the programs that go on during the year. In fact we're gonna talk about some of the things that are going to pop up next year so you want to turn your radio up and maybe have a calendar handy so that you can make notice some events that may pop up that you and your family might be interested in. Steve, why don't you introduce our guests? One of the guests, of course, Shaundra, she's been with us before.

>>She's been with us before, Shaundra North, communications director at Science Museum of Oklahoma. And we have a new guest Bret Mahoney, Bret I'm gonna let you tell us your title real quickly cause I don't want to get it wrong, buddy.

>>Well I do appreciate that. I'm the academic networking coordinator for the Science Museum of Oklahoma

>>And we're gonna give you a chance to tell us what that's all about.

>>Well the title itself stems from my relationship with the academic community. I basically get to communicate with the educators, teachers, principles, administrators, and let them know what's going on in the world of Science Museum Oklahoma.

>>Which is a tremendous way to approach, you know, working with such a museum like this because if you don't keep everybody informed then maybe things are going on that we don't know about and everybody knows about what's going on in the Science Museum Oklahoma. We have Shaundra on the microphone here, Shaundra you've been here before. Let's approach this from the standpoint of, give us kind of a broad overview of what the Science Museum Oklahoma is all about and then let's talk about what's new, what's the most recent. >Alright, well as most folks know by now, the past two and a half, three years, we've really focused on creating new exhibits and programs, bringing in new IMAX films and shows that really engage the entire family and continue enriching people's lives by revealing the wonder and relevance of science. Science is everywhere and sometimes it takes the entire family playing together to make that connection of, oh okay going down a 24 foot spiral slide is actually a simple machine that was used by Archimedes to propel water uphill and it's making that connection that you know, the funness of the slide and then putting it in the context of how we use those simple machines to make complex machines that propel our cars or you know the boat we take to the lake very weekend.

>>What you're talking about here, you can go, like we used to have to do, sit through science class, hear the lectures and be bored all day long or now you can go have a hands on experience and see actually how some of the things that dealt with science, how they work.

>>That is correct and that is our mission. We work closely with the schools, just as Bret was talking about his role at Science Museum Oklahoma, and we take that experience that students have in the classroom with the textbook and the learning that takes place in that type of setting and build upon that when schools bring, you know, have field trips to the museum. They get that, ah ha moment, that actual hands on, you know that you can almost see light bulbs flipping on in the museum each day and it's great.

>>So you have kind of a working integrated curriculum between schools and the Science Museum Oklahoma, before they come to a

>>Our exhibits, yes, do correlate with some of the past standards for all grades, which really helps solidify that decision from a teacher or an administrator of a school, to spend that precious time outside of the classroom visiting us, getting that, you know that hands on experience that teachers just are not able to provide in the classroom.

>>They don't have the resources.

>>Right, that's correct

>>It's not the lack of desire, its resources

>>Absolutely

>>Another thing, the teachers are able to prepare the students before they come to Science Museum Oklahoma, which I would think would give them that motivation to enjoy the facility and the exhibits more

>>That's right

>>If they become more knowledgeable about what's going on there.

>>Yes and one way that we help teachers is through our educators previews. For two nights each semester, we have some coming up in January actually on the 22nd and 26th, that educators are invited, any educator across the state, to visit the museum and check out our exhibits before they make that decision to come to Science Museum Oklahoma.

>>Very good. Let's go back very briefly, I don't want to spend a lot of time on this because we've covered it in a previous program but let's go back to the origins of Science Museum Oklahoma, kind of what it came out of and how it became what it is today.

>>Approximately two years ago the Science Museum Oklahoma was born. We have a 50 year history here in Oklahoma City. Formerly known as Omniplex Science Museum and two years ago, after a conversation that was taking place for several years, we decided that we needed a name change and to clearly focus on science and technology education, to help guide our exhibit development. And in essence completely rebrand our museum as well as take us to the next level and become that resource, that not only teachers in the state but in the region and nationally, depend on to turn to for any kind of resource.

>>And I can say from personal experience, as good as the Omniplex was, the Science Museum Oklahoma is even better because of this new focus and you know we've progressed with time and so

>>That's a great analysis of how it came to be. We have some new things happening right now, we have a just a very short period of time in this segment but let's talk about some of the things that are happening like right now.

>>This past week we actually just opened our latest, permanent exhibit, Whodunit: The Science of Solving Crimes. This is a hands on exhibit that takes you through a criminal investigation from the beginning to the end. You actually enter into the Memory Diner where you happen upon a crime that has been committed and then you become the investigator. And then once you have collected all the evidence, then you move to the crime lab and then you solve the crime.

>>We want to hear more about that

>>Yeah we really do. By the way, you can check out more information at sciencemuseumok.org, sciencemuseumok.org. We're gonna take a little break. We'll be back with our guests from Science Museum Oklahoma, when we return to *Oklahoma Innovations*.

[Music]

>>This is *Oklahoma Innovations* on the OCAST radio network.

>>When people think about science and technology, they imagine the future. Although researchers are developing the technology and treatments of tomorrow, results can be seen today. An investment in OCAST yields immediate return to our state through increased salaries, higher productivity and a diversified economy. Oklahoma is an emerging global leader in science, technology, research and development, with a workforce that continues to improve, both in incomes and education levels. Oklahoma can achieve a dynamic economy with a culture of innovation and new opportunities that attract and retain bright, creative people. Creating opportunities, improving the economy and investing in our future, that's what OCAST is all about. For more information, call OCAST toll free at 866-265-2215 or visit our website at ocast.ok.gov. An investment in OCAST is an investment in Oklahoma, for today and tomorrow.

>>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 is creating 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.

>>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]

>>Welcome back to this addition of *Oklahoma Innovations*. Our guests this week are from Science Museum Oklahoma. This is a one of a kind in our state. It is a fascinating facility. It's the state's only physical science museum and a Smithsonian affiliate. Science Museum Oklahoma reveals the wonder and relevance of science in our everyday lives and I'll tell you, if you haven't been, haven't taken the family, I'm sure kids around your house have probably talked about it at one time or another, but it's a fascinating facility in Oklahoma City so if you're looking for something to do in the winter months this is a great place, any time of the year but particularly in winter months since it's an indoor event. Let the kids turn loose and boy talk about using their energy and their brains. This is a great facility to do that. Before the break we were talking to Shaundra North and she was telling us about a new exhibit, this just launched this past week, called Whodunit: The Science of Solving Crimes and you were just kind of getting into some of the features of this exhibit so go ahead.

>>Yes, it is a hands on exhibit that completely follows a criminal investigation from the time that the crime has been committed until you actually synthesize the lab results and figure out whodunit. That's primarily the meat of the exhibit but then we have a third part of the exhibit that is actually the hall of heroes and villains. It is very fun. It's a great approach to introducing families to those individuals with the Oklahoma State Bureau of Investigation and the Chief Medical Examiners office, that you know spend every day of their lives fighting crime and those are true heroes in the forensic sciences. It also touches on the heroes counterparts which would be the villains, those notorious Oklahoma criminals or crimes that have taken place in Oklahoma and talks about those and then OSBI and the Chief Medical Examiners in bringing those culprits to justice.

>>Yeah, I'll tell you what I like about this particular exhibit, first of all with CSI shows and all of that, I know that a lot of kids are fascinated, particularly the older youth are fascinated with CSI type investigations but one of the things that I wanted to tell you was that what I like about this is that the stimulation and motivation of getting young people interested in forensic sciences as a career, I think that's fascinating. Bret we want to talk to you because you've got a lot more to add about this. Talk about that if you will.

>>Well I think you hit the nail on the head right there as far as encouraging kids toward some very, very awesome opportunities for careers. That's something that a lot of kids don't think about when they watch shows like CSI. They see these cool police officers running around, and they are, they're very cool individuals but these are scientists who also get to carry guns, I mean as a child that's a pretty cool idea. And so when kids come into this exhibit and they get to, you know, participate, they get to help solve a crime and then they walk in to our hall of heroes and villains and they see number one, the rich cultural heritage that the state of Oklahoma has and then also see some of the super heroes in action, it's a pretty cool experience.

>>However one of the things we want to clarify here too that a lot of what you see on television is not what goes on in the real world of crime investigation. Hollywood does tend to flower up the technology a little bit but it is still a very fascinating career.

>>Right it is. And that's what's great, one of the more enjoyable things about working on the exhibit was the relationship we were able to form with the Chief Medical's Office, with the OSBI because we were able to get, from real forensic scientists, real science so that we can make this very accurate and very awesome. It's very appealing.

>>Yeah you know OSBI is a tremendous organization, state agency, that's done some of the things you've been talking about but typically working with a museum like yours, that's not something I would normally consider them doing. How'd you make that happen?

>>Well actually the wheels started turning before I came on board at the museum. As we acquired the exhibit it was a traveling exhibit that had been touring the United States and we were able to purchase that exhibit. Then we decided we wanted to strip it down. Number one we wanted to make it, you know more updated, a little bit shinier and then we also wanted to make it Oklahoma specific. And so a relationship began to form between OSBI, the Medical Examiners Office and the museum and then as we began the copywriting process and all of that we got to visit at the Forensics Science center, the new Forensics Science Center up at Edmond

>>Up at Edmond, right

>>Then we got to go visit with Dr. Collie Trant, who's the new chief medical examiner for the state of Oklahoma and just had an opportunity to sit down and talk with them and see what it is that they put into their everyday and capture that and bring that into the exhibit.

>>Now most of what they've done in the past, not that it was intended to be but by virtue of the fact that it deals with legal issues and things, they have to be somewhat careful with how they let some of that information out. Getting out in a science museum, especially Science Museum Oklahoma, I mean that's kind of a new leaf for them and I bet they're having a good time with it, are they not?

>>I have never had a negative experience with anybody at either department. They've always been very, very excited. They've excited for a couple of reasons, number one because it is getting the science out there in the community and number two because they are the super heroes of our community and we've, I think, done a very good job of recognizing that.

>>And on a related story you've got something coming up next week, Dr. Clyde Snow, a world renowned Forensic Anthropologist who's going to do a lecture, talk about that.

>>Dr. Clyde Snow is a Forensic Anthropologist. He's done everything from working to identify the remains of Dr. Joseph Mengele, Dr. Death. He testified against Saddam Hussein at Saddam Hussein's trial. He was actually cross examined by Saddam Hussein himself and it's an incredible opportunity for us at Science Museum Oklahoma and for the academic community and for everybody that can make it on Thursday night, that's Thursday the 10th. We're going to be starting that at 7 p.m. It's a free lecture at the museum. And he's gonna come and he's gonna speak on some of his experiences. And I know from the short conversation that I got to have with him on the phone, that that's pretty much the coolest conversation I've ever had in my life.

>>Sure

>>He's a very special individual. The first time I ever heard of Dr. Clyde Snow was on a national television interview and it mentioned he was from Norman, Oklahoma and I thought, wow, I didn't know he existed. That's been many years ago. We've heard of him many times since and he was involved, I think, in the Murrah building bombing from the standpoint of doing research there to try and identify the remains. And you know on and on and on, earthquakes all around the world. The man truly is world travelled and he's just a fascinating individual. I think he's probably the premiere, I don't want to give him an accolade here that he doesn't deserve but I bet he does, the premier forensic anthropologist in the world.

>>I know! What I want to know is why we haven't had him on our show.

>>Well you know, we're gonna have to talk to our producer. [laughter]

>>Well probably because he's not attainable cause he's traveling all the time.

>>Well Bret found him. [laughter]

>>And if I can find him, anybody can find him.

>>Maybe Bret can call him for us

>>Yeah, we're gonna have to do that.

>>So this sounds like you might have a nice turnout for this.

>>We are excited. In the short period that it has been open we've seen it full almost every day. Obviously we have some slow days in the museum that we'd like to see more full but I have never been in the exhibit where there haven't been three or four families in there working actively to solve the crime and that's very exciting.

>>We need to emphasis the time, December 10, 7 p.m., Science Museum Oklahoma. If you'd like to attend anybody who's within the sound of our voice

>>Is this a reservation kind of that or can they just show up?

>>It's not. Please just show up. If you want to call ahead we'd love to hear from you but there is no reservation necessary.

>>And that's located at 2100 Northeast 52nd Street in Oklahoma City. I'll say that one more time, 2100 Northeast 52nd Street, Oklahoma City and there's no charge for that?

>>No charge

>>Wow, what an opportunity.

>>And again you can go to their website, I'm sure, for more information there's a note on the website, sciencemuseumok.org, that's sciencemuseumok.org. Now since Science Museum Oklahoma has re-evolved, if you will, you've had a lot of new things added which you've kind of, Shaundra, you've kind of talked a little bit about but I've seen, we've seen some publicity with some public service announcements and some media attention that you're getting about some really cool interactive things that people can do, adults as well. This is not a kid's museum. This is a family interactive facility, talk more about that.

>>That's right. Over, you know just as I said before, over the last two and a half years we've really worked hard to make this a family experience. With each exhibit we want to keep in mind that the child is engaged in constantly learning new fascinating science principles in a fun way but also make it engaging for the parents so their not sitting on the bench waiting for little Sally to finish playing. We really want the entire family to blow something up in Science Live, our live theatre presentation of the science of explosions. Or enjoy an IMAX film. We have a couple new films coming up within the next year or you know just spend that time as a family cause sometimes parents aren't sure of the science behind an exhibit and it's okay for a parent to say, you know what, I don't know that but let's go research that together and just creating that entire family interaction and having fun and being goofy and silly at the same time.

>>By the way we've got Christmas coming up, can people get like gift certificates for admission?

>>Yes

>>That would be a great stocking stuffer

>>Oh sure

>>There's a couple of different options, we have gift memberships where you know if you know a family that would come more than once, that's the better option or you can just buy single day gift certificates.

>>Great

>>I know something I bet you don't know. Did you know people from Texas and Arkansas and Kansas and surrounding states come here specifically to go to the Science Museum Oklahoma? Did you know that?

>>I did

>>I did not realize. I thought this would be kind of a local draw. [background music] We'll talk about that when we come back.

>>Shaundra North and Bret Mahoney are our guests from Science Museum Oklahoma, more to come on *Oklahoma Innovations*.

[Music]

>>This is *Oklahoma Innovations*, 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 states 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 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.

[Music]

>>You know that theme from CSI? I want to ask you this, you know you, at the Science Museum Oklahoma, could do a version

>>Whodunit [singing]

>>No never mind. [laughter] There is an exhibit called Whodunit: The Science of Solving Crimes, just unveiled this past week. A brand new exhibit that offers an immersive experience that takes visitors to all aspects of criminal investigations. From the crime scene to the crime lab, this exhibit encourages visitors to collect evidence, synthesize lab results and utilize the deductive reasoning to determine who done it. It's kind of like playing CSI, I mean, hey go have fun with that. And also if you missed out and just joined us, great lecture coming up this next

week, Dr. Clyde Snow, we talked about in this last segment, is a world renowned forensic anthropologist and he's going to speak on his life's work during a free forensic science lecture. This will be held December 10th at 7 p.m. at Science Museum Oklahoma. It is free of charge and to get more information on that you can go to the sciencemuseumok.org, that's the website, sciencemuseumok.org.

>>Very good, Gary, thank you. One of the things that we've not talked much about, we need to do that, is Bright Night of CSI, Museum Style. I'm gonna let you both kind of fight over who gets to talk about this. Who would be the best person to talk about this at this point?

>>Well I'll chat about it

>>We'll let everybody talk

>>then Shaundra can correct my inaccuracies but the Bright Night program is something that we began there at the museum. It gives guests an opportunity, both here and in the metro area, throughout the state, from other states, of course we have folks come down from Kansas, folks come from some of the other states and they get to spend the night in the museum.

>>That's cool

>>They get to participate in all of the different exhibits. Of course we do our Science Live chemistry explosion show for them.

>>I've seen that

>>Have you seen Science Live?

>>Yes, I have. I've set through that. That's fascinating

>>It is. We blow stuff up twice a day and that is a fun thing to be able to say

>>And they still have their roof you notice.

>>[laughter] That's cause it's really high. But what we do during these Bright Nights is we give guests an opportunity to do all of these things and we like to throw a theme in with a lot of these. We have our Bright Night of CSI, which is really good because we have the opening of the Whodunit exhibit. We have the Dr. Clyde Snow lecture and then we have an opportunity for kids to come in, learn how finger prints are taken, how all of their fingerprints are unique, some very, very cool methods that forensic scientists use to solve crimes. And so we're very excited about that. That's going to be happening the 11th, which is a Friday night.

>>Yeah, coming up real fast

>>Coming up on us fast

>>And do you have to reserve your attendance to that, make reservations?

>>We do appreciate if you call and register with us. You can of course if it's Friday morning and you wake up and you say, hey we want to go spend the night at Science Museum Oklahoma, we would never say no to that.

>>Unless you're just totally booked up

>>Right but we're a big facility, somewhere around 350,000 square feet so I think we could probably handle quite a bit.

>>Yeah I notice there is a charge for it

>>There is

>>But when you look at what's on the venue and you look at, it's really not very expensive at all when you look at what you get to do. It's a \$45 charge for every child who participates and \$20 for non participators so if you want to sit around and watch you can do it for \$20 bucks all night long.

>>That's right and the participation really involves a lot of the hands on table activities involving the CSI. If you're a parent who wants to see the explosion show, wants to enjoy everything but doesn't necessarily need to do the fingerprint exercises or forensics exercises, that's where that \$20 fee comes in, doesn't cover some of the materials that we would use. And what is great to look at, especially if you're coming from a long distance and you were to come to Oklahoma City and wanted to see some of the other great things that we have here in the city, you want to see a Thunder game or you want to go to the zoo or whatever, we are much cheaper than a hotel usually for a lot of people. Bring people in, spend the night with us and then get up in the morning and go run amuck and do the other things in the city.

>>You forgot to mention breakfast

>>Oh that's right

>>The rise and shine breakfast

>>That's right. We do have a rise and shine breakfast which is pretty much the main reason why I enjoy the CSI the most

>>[laughter] Is that right?

>>Cause our cafe's fantastic and we make really good food. But we do, with those bright nights, we do offer some discounts as well. If you're a state employee, if you are in the military, we want to make sure that you guys receive a \$10 discount off of each participant. If you reserve a group of six or more, meaning if you have extended family that you want to bring or if you're an educator in the state and you decide you want to take some of your kids down to spend the night in the museum, we'll give you a \$10 discount on each of those participants as well.

>>Let me read this, all super sleuths will spend the night in selected museum exhibit halls, this is very important, monitored by museum staff members, so there will be security for their on sake and sleeping bags, pillows, blankets and air mattresses are all welcome.

>>That's right and not only is it security but it's also facilitation of the exhibit so a child doesn't have to walk up and say well I don't know how this works. Somebody will be standing there who will show them how it works.

>>Are you guys doing anything for New Years Eve? I know years ago they used to do something out there for the kids. Are you all doing anything like that? Are you open New Years Eve?

>>We're open New Years Eve day but not on the actual night for any type of activity. There's a lot of competition out there

>>There is

>>With the downtown area and you know we'll take our CSI Bright Night and our other Bright Night's throughout the year and we'll let downtown have that New Years crowd.

>>There you go, in the spirit of cooperation, right?

>>That's right

>>Shaundra talk to us about, you're gonna be down there I'm sure that evening, are you not?

>>Absolutely. The Bright Nights are just fun. To have the same environment that I see everyday 9 to 5 but at 10 at night, 10, 11 at night, it's just amazing. And to have, you know, families really spending that quality time together is fun. This Bright Night program actually began several years ago. We've had Cub Scout, Girl Scout, Boy Scout groups, travel distances to spend the night in the museum but we got to thinking you know there are a lot of families out there that aren't a part of a scout group so how do we accommodate them? So a little over a year ago we began with these public Bright Nights, giving individual families of two, three, four members the same opportunity and in essence form their own larger Bright Night, if they're not a member of a scout group or a youth group. Now we do still have schools travel every year from Wichita Falls, Texas or Wichita, Kansas, in April, May and they use us as their hotel, their end of school field trip and we're their hotel. They come to the museum and then they go on to another attraction, which is, it benefits the Oklahoma City area.

>>And I hope our friends are listening in Wichita Falls where we broadcast and hope they hear that and know that they can come not too many miles to Oklahoma City and have this experience. By the way the other thing to about a night event at the museum, it's a different attitude, a different nuance, I guess, because during the day it's a lot of hustle and bustle, a lot of traffic in and out, buzz, buzz, buzz and at night it's a whole different atmosphere. It's like an intimate visit. It really is. It's a different experience.

>>And let's go over what you get now, your Science Museum Oklahoma exhibits, they're all open and you can visit those. The nights stay in selected museum galleries. An IMAX film. What is an IMAX film? Big format, right?

>>We are lucky to have a 70 foot diameter giant domed screen that we show IMAX films on. This film experience is unlucky any other. You sit in that seat and your entire field of vision is the film. Right now we have fighter pilot, operation red flag, which follows Captain John Stratton through red flag, which is the best of the best training facility for the United States armed forces and also the allied countries and takes you really into the cockpit and takes you on those missions, those training missions of, you know, modern warfare, every aspect. And you are there.

>>Take your Meclizine [laughter] if you have motion sickness.

>>I've gotta go see that

>>Okay in addition to that you get a Science Live show and of course the rise and shine breakfast. Well that is a fantastic venue. It's one of those things that I know there's a lot of thought that goes into this. And we've got a minute. You know, one of the things we've not talked about is for the folks who have a lot of nostalgia for the old exhibits and the old Omniplex, a lot of them are still there, are they not?

>>That is correct. We do have a lot of the oldies but goodies. We still have the echo tube, the shadow stopper. I think we would upset a lot of folks if those went away. And then you know it's

important to remember that we also still have our space and aviation artifacts. Because we are a Smithsonian affiliate and we have a great relationship with NASA, we have a great resource in those two organizations to draw from and have those on display. We have our space artifacts now in Destination Space combined with a hands on learning experience and then we also have still our Aviation Gallery which shows the aircraft from you know spanning many decades.

>>Right, way back when

>>Great stuff

>>Interesting stuff

>>I mean for those who'd like to see what used to be and what's new

>>And again, all of the things that we have talked about on the program today you can check out online. The museums website is www.sciencemuseumok.org. Phone number, you can call them at 405-602-3760. Guys we are out of time. Steve, we've got to get out of here. It's been a great show and we hope to talk to you next week.

>>Okay Gary

>>See you next week on *Oklahoma Innovations*. Have a good week.

[Music]

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