ALASKA STATE LEGISLATURE
SENATE EDUCATION STANDING COMMITTEE
February 21, 2019
8:59 a.m.

MEMBERS PRESENT

Senator Gary Stevens, Chair
Senator Shelley Hughes, Vice Chair
Senator Chris Birch
Senator Mia Costello
Senator Tom Begich

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

SENATE BILL NO. 53
"An Act relating to the duties of the Board of Regents of the University of Alaska."

- HEARD & HELD

PRESENTATION: THE POWER OF UNIVERSITY RESEARCH

- HEARD

PREVIOUS COMMITTEE ACTION

BILL: SB 53
SHORT TITLE: UNIV. REPORTING REQS FOR ACCREDITATION
SPONSOR(s): SENATOR(s) STEVENS

02/11/19	(S)	READ THE FIRST TIME - REFERRALS
02/11/19	(S)	EDC, FIN
02/21/19	(S)	EDC AT 9:00 AM BUTROVICH 205

WITNESS REGISTER

TIM LAMKIN, Staff
Senator Gary Stevens
Alaska State Legislature
Juneau, Alaska

POSITION STATEMENT: Introduced SB 53 for the bill sponsor.

MILES BAKER
Associate Vice President of Government Relations
University of Alaska
Juneau, Alaska
POSITION STATEMENT: Testified on University of Alaska's accreditation reporting requirements.

LARRY HINZMAN, Ph.D., Vice Chancellor of Research
University of Alaska Fairbanks (UAF)
Fairbanks, Alaska
POSITION STATEMENT: Presented the Power of University Research.

MARK BILLINGSLEY, Director
Intellectual Property and Contracts
University of Alaska Fairbanks (UAF)
Fairbanks, Alaska
POSITION STATEMENT: Presented the Power of University Research.

ACTION NARRATIVE

8:59:48 AM
CHAIR GARY STEVENS called the Senate Education Standing Committee meeting to order at 8:59 a.m. Present at the call to order were Senators Costello, Birch, and Chair Stevens. Senators Begich and Hughes joined shortly thereafter.

SB 53-UNIV. REPORTING REQS FOR ACCREDITATION

9:00:04 AM
CHAIR STEVENS announced the consideration of SB 53. He stated his intention to introduce the bill, hear public testimony, and hold the bill.

9:00:48 AM
TIM LAMKIN, Staff, Senator Gary Stevens, Alaska State Legislature, Juneau, Alaska, said SB 53 is a result of the loss of accreditation by the University of Alaska Anchorage School of Education. There are currently other reporting requirements in place. The most recent, AS 14.41.190, requires the Board of Regents to submit a report to the legislature by the 30th legislative day biannually on their efforts "to attract, train, and retain qualified public school teachers." He noted that the report was due Friday, but the Senate Secretary's office had not

received that yet, to his knowledge. He said he did not prepare a sectional for the bill because it would simply say that the bill would require a biannual report on the various accreditations across the UA system. He pointed out that the committee packets have a summary of current accreditations. There is zero fiscal note.

9:02:51 AM
MILES BAKER, Associate Vice President of Government Relations, University of Alaska, Juneau, Alaska, said AS 14.41.190 has two reporting requirements for the University of Alaska. The first is a long report submitted every year as part of its budget submission to the legislature regarding things such as the condition of university property, receipts and expenditures, and unobligated university receipts. The second is commonly referred to as the SB 241 report, Alaska's University for Alaska's [Schools] Report. He said he believed Chairman Stevens was part of passing that law in 2008. That report is completed biennially. This report updates the legislature on teacher preparation, retention, and recruitment programs. He said it was submitted this year. He offered to provide a copy for the committee.

CHAIR STEVENS said the education committees would probably meet jointly to discuss that report.

MR. BAKER said this legislation would require a third reporting requirement. As part of its biannual report, the university would update the legislature on the status of regional, national, and programmatic accreditations at the university no later than the 30th day of the legislative session. The existing board policy requires each of the major campuses to regularly assess all institutional programs to evaluate quality and effectiveness. These program reviews are designed to meet the standards of applicable accrediting bodies. Annually, each university must provide a report to the Regents' Academic and Student Affairs Committee on the status of program reviews, including an extensive discussion of academic accreditation. UA already has an internal process to compile, track, and report this information annually to the board, so that information can be provided to the legislature in a biannual report. He pointed out that the packets have information on the status of ongoing accreditation at all the universities

MR. BAKER said this committee has its regularly scheduled meeting today. One agenda item is a discussion of program accreditation and a review of the status document. The regents

want to be aware of any accreditations that are challenged or having difficulty. There will be an interest in clarifying current regent policy regarding accreditation. The situation with UAA regarding initial licensure was that while reports were being provided to the board subcommittee in the fall, they were not detailed enough for the Board of Regents to have the full story of the potential situation with the accreditation. The board will want to update that policy.

9:08:33 AM
CHAIR STEVENS said the impetus for this bill was the loss of accreditation at the Anchorage campus. "And that's a very big thing, as we all know. Universities don't usually lose accreditation. This is the only one I've seen in my experience," he said.

CHAIR STEVENS continued, "It's a very, very important thing and it's particularly important because of the students. Because we're putting them in jeopardy, asking them to pay tuition and go through all the work of getting their classes done, yet when they leave the University of Alaska, they are going to have trouble, particularly if they transfer out of state."

CHAIR STEVENS said, "The only reason for this bill is because of that loss of accreditation. Something went terribly wrong in this process." He said he chaired an accreditation committee before he retired from the university so he knows it is a long, involved process, but all the questions and concerns should be answered at the end of the process.

CHAIR STEVENS said, "Again, something went terribly wrong. The president of the university, who I have the greatest respect for--I'm so glad he's there during these tough financial times--yet he did not know of the jeopardy the university faced because of that accreditation study. The Board of Regents did not know. Mr. Baker, it is a terrible situation. We're not going to run the university. We don't want to do that, but we want to know what's going on. We want to know why the university, the Board of Regents, the president, the entire administration, were not monitoring that process or not responding to it. If they had known about it, I assume there would have been some intervention."

CHAIR STEVENS continued,

> I'm a little annoyed as a citizen, as a senator, that that this occurred. And it can't happen again. All

we're asking in this bill is for the university to monitor the situation, to let us know, and you should already be doing that. And I keep hearing people say, 'Hey, we're doing that. Why would you have this bill because we're doing it.' But you're not doing it. It fell apart. Somebody was asleep at the switch. It's a terrible black eye on the university and we simply cannot have this happen in future. I mean, are there other areas that are in jeopardy in the university for loss of accreditations. I'm sorry. I'm just not happy with this at all. I think it's a terrible situation to be in. I'm ashamed. I know you are. I know the university president is ashamed that this happened. All we're saying, for heaven's sake, is monitor this and let us know what is going on.

9:12:10 AM
SENATOR HUGHES said she shared his frustration. The fiscal note states that the internal processes already exist and the reports are happening annually to the board, but Mr. Baker said the Board of Regents will be revisiting that policy. She assumed the board would be considering whether to increase the frequency of checking in on that type of thing. She would hope that any red flags would be reported to the Board of Regents immediately. The legislature would not hear as soon as the board, but that information would be included in the report to them. The idea of the bill is that having some oversight establishes accountability. She asked whether the legislature would receive the report every two years.

CHAIR STEVENS answered twice a year.

SENATOR HUGHES said that would help.

9:13:52 AM
SENATOR BEGICH said when the committee first talked about accreditation, he put a conflict of interest on the record, but after checking with ethics, he found he does not have a conflict of interest with this bill.

CHAIR STEVENS said that is an issue these days with changes in law. He has no conflict. He last worked for the university 20 years ago and retired as a tenured professor and has not received any renumeration from the university for 20 years.

MR. BAKER said as currently drafted the bill would require the report at the start of each legislature, so every two years. He

clarified that the university does not review every academic program every year. Most of the institutions are doing five-year reviews, but the status of those program reviews and how they relate to accreditation are reported to the Board of Regents every fall. UA has an internal process for compiling and reporting that information to the Board of Regents, but regents would share Senator Stevens' concern that the reports have not been adequate to keep the regents informed. UA will be working on that internally.

9:15:51 AM
CHAIR STEVENS opened public testimony and after ascertaining there was none, closed public testimony.

SENATOR HUGHES asked if the intention is to change the report to twice a year.

SENATOR STEVENS said he thought twice a year would be best.

SENATOR HUGHES agreed.

SENATOR BEGICH asked if his intent was to change the reporting from biennial to biannual and to get an update on a regular basis. He agreed that twice a year would be better.

9:16:57 AM
CHAIR STEVENS answered that that is the intention. He held SB 53 in committee.

9:17:12 AM
At ease

Presentation: The Power of University Research

9:17:18 AM
Chair Stevens announced the Power of University Research presentation

9:19:42 AM
LARRY HINZMAN, Ph.D., Vice Chancellor for Research, University of Alaska Fairbanks (UAF), Fairbanks, and Mark Billingsley, Director, Intellectual Property and Contracts, University of Alaska Fairbanks (UAF), Fairbanks, Alaska, introduced themselves.

DR. HINZMAN said that the University of Alaska (UA) has an unexcelled reputation for Arctic research. They do more Arctic

publications, more research, than any other institution in the world. In the last eight years UA has generated over $1 billion in research benefits to the state of Alaska. They take on a lot of pragmatic research that pays off in economic diversity for the state.

DR. HINZMAN displayed a slide showing return on investment. Last year, for every dollar received from the state, UA generated $6.3 from external resources. People think that removing one dollar from the state, will leave $5 to do other research work, but that is not the way it works. University personnel cannot write proposals using federal money. It is necessary to have the one dollar to generate the $6. If the university loses that one dollar, they lose the $6. The money does not come to the university; they must go after the funds. The one dollar in state support is critical to maintain this strong research program the university has built over the years.

DR. HINZMAN reviewed the benefits of research:

- In 2018, UA brought in $141 million in external research expenditures
- $23 million in state research funding multiplied by 6
- $90 million direct wages and salaries; 1250 direct jobs
- Another $27 million indirect income, 350 jobs from multiplier effects of direct employment
- $70 million in purchases, contracted services, travel, student aid and equipment

DR. HINZMAN said most of the $70 million in the last bullet point is spent in Alaska.

DR. HINZMAN said apart from the economics, there are also the pragmatic effects and value to the state:

- Research opportunities attract outstanding faculty
- Research integral to curriculum that reflects up-to-date knowledge
- Undergraduate and graduate student involved in research
- Quality of UA research institutions attracts out-of-state students and retains Alaskan students
- Builds a pipeline of outstanding students who become employees of Alaska businesses

DR. HINZMAN said students are also drawn to the university because of research. Eighty percent of those students stay in the state. It is an important attraction for some wonderful people. Most graduate students and 40 percent of undergraduate students are involved in research.

DR. HINZMAN said instruction, mentoring, research, and outreach are all wrapped together. It benefits the state, the nation, and students, all of which has lasting value to the state.

DR. HINZMAN reviewed BLaST: Biomedical Learning and Student Training, a $23 million project funded by the National Institutes of Health (NIH). The purpose is to bring rural and Alaska Native students into health professions. It received one of the highest rankings from the NIH and was just renewed for another five years. NIH is using it as a model for other programs.

DR. HINZMAN said UA research makes communities healthier. They have done a lot of work with respect to wildlife populations. They have also done a lot of work regarding mental health, suicide prevention, and opioid addiction. Alaska is unique in solutions that must be applied. A lot of techniques developed in the lower 48 for suicide prevention are counterproductive. UA solutions are numerically effective. UA will continue researching suicide prevention and opioid addiction.

9:26:09 AM
DR. HINZMAN said UA has been working on the One Health initiative for five years. The concept is that the health of the people depends on the health of the environment, which is dependent on the health of the animals. Urban and rural society are tied to nature. The health of the environment does affect the health of the people. Things such as a rabies, zoonotic diseases, brucellosis and other environmental factors such as mercury toxicity have an impact on Alaska's population. It is all wrapped together. The university has taken a national and international lead on this.

DR. HINZMAN reviewed the work of the Pollock Conservation Cooperative Research Center. The seafood industry is investing in UA research to improve the quality of their product, make the work they do safer, and get a higher return on investment. He noted that the foregoing three programs bring in about $300,000 a year for research.

DR. HINZMAN said the Wilson Alaska Technical Center (WATC) at the University of Alaska Fairbanks (UAF) just became a Department of Defense (DoD) University Affiliated Research Center. Seventeen of these centers are under the Navy, Army, or the Air Force, but the Wilson Center is the only one strictly under DoD, so they can take on any project under DoD. Since 2008 the center has focused on monitoring above-ground nuclear detonations. Being a University Affiliated Research Center (UARC) opens doors for a lot of other DoD research. Everyone working in the Wilson Center has national security clearance. He noted that some of their students have gotten jobs with high-level national security defense agencies. This facility is having a real impact on the state and nation.

DR. HINZMAN noted that State Seismologist Michael West gave a presentation on the Alaska Earthquake Center a few weeks ago. He said the Center is trying to expand the network of monitoring stations in the central and northern part of the state primarily for an early warning system. Even a warning of a few seconds can be used to shut down the pipeline, trains, and natural gas facilities. They can achieve this. It is the system in Japan, and it ought to be in Alaska to make the state safer. They are pushing to get more funding for the USArray. The Earthquake Center is working with United States Geological Survey and the National Science Foundation to continue funding those stations for the next five years.

DR. HINZMAN said that UA has been doing research for the military with the U.S. Navy ICEX ice camp. For the past 20 years, the Navy has been using the University of Washington to provide information about the safety and security of their ice camps. Last year a disaster occurred when the ice broke up. A lot of equipment was lost and people had to be evacuated during the emergency. Now the Navy has come back to UA, which has the world's expertise in ice forecasting. He said he hopes this continues for a long time. UA is doing a lot not only with ice forecasting but ice concentrations for navigation and other processes, such as weather predictions.

SENATOR BIRCH said this is great news and great work. He noted that Alaska's senior U.S. senator mentioned that construction of an ice breaker might be in the works. He asked if UA is engaged in those efforts.

DR. HINZMAN replied absolutely. UA has advocated for a new icebreaker for at least 30 years and participated in many workshops to design the characteristics of a new icebreaker. A

new icebreaker would be a Coast Guard asset, but they want scientific capabilities to be part of it also. It is critically important for so many aspects of Alaska. He mentioned the need to use a Russian icebreaker when Nome had a fuel crisis a few years ago. There is increasing activity in the Arctic with very few rescue capabilities.

SENATOR HUGHES said UA's research on unmanned aircraft was part of the effort to bring fuel to Nome; a drone guided the icebreaker to port.

DR. HINZMAN said that ACUASI, Alaska Center for Unmanned Aircraft Systems Integration, has over 200 drones. They can do remarkable work with wildlife population surveys and mapping out ice leads. Most unmanned aerial vehicles cannot fly out of the line of sight of the operator. ACUASI is one of the few places with permission from the Federal Aviation Administration to do this. He called that a tremendous coup for the center.

9:35:26 AM
SENATOR HUGHES said ACUASI was also the first in the nation with permission to fly in the approach area of an airport, in this case the Deadhorse Airport.

DR. HINZMAN said ACUASI is a leader for the nation.

DR. HINZMAN reviewed the Arctic Domain Awareness Center, housed at the University of Alaska Anchorage. The only customer for the center is the Coast Guard. It is funded by the Department of Homeland Security to make Coast Guard operations safer and more effective and efficient. Every project must be something the Coast Guard values, needs, and wants to be part of its operations. It is renewed annually. He showed an image from the work of using underwater drones to map oil spill plumes.

DR. HINZMAN said the Alaska Satellite Facility (ASF) is an asset for the nation. Most days of the year, the facility receives at least 60 percent of NASA's data. ASF is trying to put up more satellite dishes at Oliktok Point on the North Slope, which would increase the polar orbiting satellites they could observe. The facility has done a wide range of research projects. ASF wants to put up an army of CubeSats to detect ships going through the Arctic Ocean that are not broadcasting transmitting signals. Then they could detect those ships and track and monitor all vessel traffic throughout the world. It could be used for tracking drug smugglers or other nefarious vessels.

CHAIR STEVENS said the CubeSats, the small satellites, are a major technological innovation. He understands that the Kodiak rocket launch facility can launch up to 50 at a time.

DR. HINZMAN responded that UA has the only university-owned rocket launch facility in the world. It is becoming more important to DoD and other agencies because they have a large area where the launch vehicle can land and be recovered. The White Sands facility can only recover launch vehicles over 100 miles. ASF can recover them over 600 miles, so DoD is utilizing the facility more.

DR. HINZMAN said UA is doing work across the state with economic geology. They are helping to enhance recovery of gold, zinc, coal, silver, and more. They are trying to increase the resources used for geothermal and looking at rare earth minerals. They are trying to enhance the resource capabilities of the state. The mining industry values the work they do, and the university is being responsive to their needs.

DR. HINZMAN said UA is using dense polymer in a flooding experiment to enhance the recovery of heavy oil. The work is funded by the National Energy Technology Laboratory in partnership with Hilcorp and BP.

DR. HINZMAN introduced Mark Billingsley, who is a mechanical engineer and the only licensed, practicing patent attorney in the state.

9:41:30 AM
MR. BILLINGSLEY, Director, Intellectual Property and Contracts, University of Alaska Fairbanks (UAF), Fairbanks, Alaska said the core work of the office is identifying intellectual property that is a result of university research, protecting it, getting it licensed, and getting it out into the public for the public's benefit. He said turning research into reality benefits Alaska in a number of ways. The plan is to bring in problems from the community, solve them, and give the solution to the community.

MR. BILLINGSLEY noted a Senate resolution last year declared 2019 the year of innovation. He reviewed some examples of research in the process of being commercialized. One is a project to use mushrooms for microremediation of diesel spills. If there is a diesel spill in a village in Alaska, techniques used down south are not feasible. The Kodiak Marine Science Fisheries Center has been working with the Pollock Conservation Research Center to find uses for fish waste from pollock

processing. One potential use is making dog food. Another project is to find a remote, noninvasive wireless way of measuring blood oxygenation in lab mice. This is essential in research regarding strokes and heart attacks.

MR. BILLINGSLEY reviewed a graphic showing Alaska's innovation pipeline. The university cannot do basic and applied research in a vacuum. They are working with people across the state to build an ecosystem. It must grow if they want to be competitive with the lower 48. Their core work is protecting intellectual property and licensing it, but they are trying to work with partners across the state. They have a number of complementary programs. The federal government has shown interest in building economic and energy resiliency in Alaska.

MR. BILLINGSLEY reviewed how UA feeds Alaska's innovation pipeline.

1. Direct licenses to existing companies for UA-developed IP (Intellectual Property)
2. Forming spin-off companies to commercialize UA-developed IP
3. Working with industry to develop new ideas and products
4. Supporting student innovation to build an entrepreneurial workforce for tomorrow

CHAIR STEVENS said that in order to continue innovation, he assumes there must be some sharing of the rewards.

MR. BILLINGSLEY answered yes, that is set up by Board of Regents policy. The first $10,000 and 50 percent thereafter that come to the university is returned to the inventors. All universities have their own policies, but it is usually in that range. A lot of academics just want to see their work get out into the real world. Hopefully some will make money, and others will want to pursue commercialization of their research.

MR. BILLINGSLEY said V-ADAPT, Inc., was the university's first big startup in 2013. Eighteen researchers developed 32 technologies. V-ADAPT is a suite of technologies to track volcano ash clouds. The market applicability is commercial air traffic, among other things. It was a product of many years of research with funding from the Air Force. This summer the university will offer its first class of Hacking for Defense. It started at Stanford, and a dozen schools around the country are offering this course. The military procures problems and gives

them to schools so that students can work on real-world problems. The university wants to procure problems from within the state because of the large military presence in Alaska and to take advantage of Arctic research.

9:53:03 AM
SENATOR BIRCH said he was intrigued by V-ADAPT, as everyone in Alaska who flies should be as well. He asked how it works.

DR. HINZMAN said it is based on both seismic models of the volcano and weather models to simulate the plume movements. The chemical characteristics of the plume are just as important as its position. Various components went together to make this happen. It is a complex, physical problem.

9:54:32 AM
SENATOR COSTELLO asked if there is any way to involve middle and high school students in the model of solving real-world problems that the military is starting to do. She opined that age is not a barrier to ideas and innovation.

MR. BILLINGSLEY said innovation education absolutely starts early. It's a mindset. The Hacking for Defense ("Hacking") is a well-established program that is openminded. Since the program is in the early stages of being spread across the country, Hacking is welcoming new things because it needs to permeate and be successful. Some of that involves getting the support of state legislatures. He said he would take the idea to the faculty member leading this effort.

SENATOR COSTELLO mentioned that a small country that has afterschool, intergenerational clubs is the best in the world as far as innovation and new ideas. She said she is interested in ways to bring generations together in Alaska. She described young people as natural innovators, pointing to the ideas generated by elementary school Lego Leagues. She asked how involved and costly the process is to patent an idea.

MR. BILLINGSLEY said he cannot give legal advice except to a client, but he does talk to people who come in from the community. Patent search firms shouldn't charge more than $1,750 to get 80-85 percent of the answer with a high level of confidence. The last 15 percent is dealing with the patent examiner on the grey areas in the law and the reasons they may reject the claims.

SENATOR COSTELLO mentioned that she is the government cochair of the Pacific NorthWest Economic Region (PNWER) Foundation, which has an innovation working group. One of the goals is to have a national lab of the Arctic named in Alaska. She said it's a natural fit because the university already has these relationships. She asked if the university would be interested in pursuing that.

10:00:37 AM
DR. HINZMAN answered that UA has been working on many fronts in that regard. They hosted a National Lab Day last May and has been collaborating closely with national labs across the nation. For a while the university tried hard to establish a national lab in Alaska, but other national labs were resistant to that. But a lot can be accomplished through collaboration with the other national labs. The university is also doing things such as trying to create Arctic Centers of Excellence. The Arctic Domain Awareness Center, which is funded by the Department of Homeland Security, is one of those centers of excellence. Work is underway to expand that to an Arctic Maritime Center of Excellence. UA is also working with the DoD to create a Center of Excellence for Arctic Research.

SENATOR COSTELLO said another goal this group has is to declassify DoD information when it's appropriate and make it available to the general public for entrepreneurs and innovators. She asked if he had heard of that.

DR. HINZMAN answered that UA has had great success getting access to classified imagery of sea ice with incredibly high resolution. It doesn't necessarily have a military application, but it us useful to do the dynamics of lead propagation. They have been more successful on the marine side than the terrestrial side, but they are still pushing for that.

SENATOR HUGHES said Dr. Helena Wisniewski, who is with the University of Alaska Anchorage, established the Alaska chapter of the National Academy of Inventors. She asked if he had thought of starting a chapter in Fairbanks to inspire faculty and students. Since 2019 is the year of innovation, they should get the word out about the exciting things happening at the universities. She also asked if he was doing anything about public awareness.

MR. BILLINGSLEY replied that UAF has limited staff but is doing what it can. They look at this as a grassroots effort and urge legislators to encourage their constituents. UAF has a good

relationship with Dr. Helena Wizinksi and Dr. Kamberov, who is leading that effort now.

DR. HINZMAN said he agrees with everything Senator Costello said about intergenerational engagement. Students can capture this, but they must be exposed.

10:10:35 AM
MR. BILLINGSLEY presented information on the grid bridging system, which addresses issues using multiple sources of power. Alaska Village Electric Cooperative (AVEC) has been working with the Alaska Center on Energy and Power to create a hardware/software set that can be used as off-the-shelf technology. AVEC came to the university about this consistent problem. A field demonstration is being launched this fall in St. Mary's. It is an example of procuring challenges in Alaska by going to communities and companies and asking what their problems are and how the university can help.

SENATOR BEGICH said his office has been working with small communities to develop long-term battery storage. The big nut to crack has been how to take a small utility and retrofit it to take in different levels and types of energy. He asked for information about the system be provided to his office.

SENATOR COSTELLO asked if he could share the list of community problems with the committee.

MR. BILLINGSLEY replied that he would and that the Alaska Community Challenge could also be found online.

MR. BILLINGSLEY said the innovation pipeline needs to be supported from early stage research to commercialization. They have partnered with Wells Fargo and the 49th State Angel Fund in Anchorage to deploy prototype funding. It just rolled out yesterday and applications are due April 14.

MR. BILLINGSLEY said NemaMetrix is an example of licensing technology in the lower 48. C. elegans is a common model organism used to test drugs. There is a whole industry on c. elegans nematodes. University of Alaska Fairbanks researchers, a graduate student and an undergraduate, came up with a cheap way to sort c. elegans. They were able to license it to a company in Oregon.

SENATOR BIRCH asked how it works.

MR. BILLINGSLEY answered that it is a process that uses a type of filter that catches or does not catch the organism based on size.

10:15:42 AM
MR. BILLINGSLEY recounted the story of Coupi. A researcher worked for DoD in Fairbanks and then worked for the university. He needed a tool to model how items interact at the granular level. He modeled tire traction on the Mars Rover before it went to Mars. He built a piece of software simulating interaction at the granular level by working on multiple research projects. He retired and licensed the technology from the university. It returns some revenue to the university and created a high-tech company in Alaska. It is located at the UAF Center for Innovation, Commercialization and Entrepreneurship.

CHAIR STEVENS asked where the money generated from research goes.

MR. BILLINGSLEY answered that Board of Regents policy determines what percentage goes to the inventor. An internal memo addresses distribution after the first $10,000 and 50 percent thereafter. A large percentage goes to the researcher's department in order to encourage the department to continue thinking innovatively and entrepreneurially. Some of the money goes to the office of the Vice Chancellor for Research.

10:18:03 AM
SENATOR BEGICH said earlier in the presentation he mentioned that suicide techniques from the lower 48 are not very effective in Alaska. He is on the Suicide Prevention Council and would like to see that research. He also noted that the peak of the economic crisis in 2014 led to substantial cuts. He wondered how their capacity for innovation has been affected.

DR. HINZMAN responded that the suicide research is very recent work. Stacy Rasmus, Director of the Center for Alaska Native Health Research, found that approaching a community asking why the suicide rate is high is counterproductive. The approach now is to tell the community it is a strong and ask how it can be made stronger. This has been surprisingly effective. The project, called the American Indian-Alaska Native Clinical and Translational Health Research, is in partnership with Montana State University. He offered to put Senator Begich in contact with Ms. Rasmus.

DR. HINZMAN said the cuts have had an effect. In the last five years, the university has lost 1,200 people. He showed a slide on UA research return on investment. He noted it is hard to track research activity from the funds coming in because grants are for various periods of time. It is easier to report how much is spent each year on research activity. The amount spent in one year depends on the success of previous years. He noted that losing 1,200 people has an impact.

SENATOR BEGICH said the graph shows peaks in Fiscal Years 17 and 18. He asked if that number would go down in the next few years, if there is the capacity to keep those numbers up, or if it is the legislature's responsibility to make sure he has the capacity to keep those numbers up.

DR. HINZMAN said the university has been scrambling to keep those numbers up. The research institutes have cars in the parking lots at three in the morning because people are working. Losing a lot of faculty and staff is tough. They have invested a lot of their resources in training people how to write good proposals so they will be successful. They have put a lot of effort into external reviews. That training pays off over the years. Their success rates have gone up. In the short term there are payoffs for that training, but there are long-term repercussions from working people at this intense rate.

CHAIR STEVENS expressed appreciation and admiration for what the presenters are doing.

10:23:58 AM
There being no further business to come before the committee, Chair Stevens adjourned the Senate Education Standing Committee at 10:23 a.m.