

**MINUTES
of the
THIRD MEETING
of the
SCIENCE, TECHNOLOGY AND TELECOMMUNICATIONS COMMITTEE**

**July 31, 2017
Spaceport America
Space Shuttle Rd.
Truth or Consequences**

**August 1, 2017
Joseph A. Fidel Center
New Mexico Institute of Mining and Technology
Socorro**

The third meeting of the Science, Technology and Telecommunications Committee (STTC) was called to order by Representative Candie G. Sweetser, chair, on July 31, 2017 at 10:00 a.m. at the Spaceport America conference room in Truth or Consequences.

Present

Rep. Candie G. Sweetser, Chair
Sen. Michael Padilla, Vice Chair
Sen. William F. Burt
Rep. Daymon Ely
Rep. Kelly K. Fajardo
Rep. Jason C. Harper
Sen. Mark Moores
Rep. Debra M. Sariñana
Rep. James E. Smith
Sen. William P. Soules

Absent

Sen. Bill B. O'Neill
Rep. Linda M. Trujillo
Rep. Monica Youngblood

Advisory Members

Sen. Craig W. Brandt (7/31)
Rep. Stephanie Garcia Richard
Sen. Ron Griggs (7/31)
Rep. Bill McCamley (7/31)
Sen. Mary Kay Papen (7/31)
Rep. Debbie A. Rodella
Sen. Nancy Rodriguez (8/1)
Sen. Bill Tallman (8/1)

Sen. Jacob R. Candelaria
Sen. Carlos R. Cisneros
Sen. Richard C. Martinez
Sen. William H. Payne
Rep. Nick L. Salazar
Rep. Carl Trujillo
Sen. Peter Wirth

Guest Legislators

Rep. Rebecca Dow (7/31)

Rep. Tim D. Lewis

(Attendance dates are noted for members who did not attend the entire meeting.)

Staff

Mark Edwards, Legislative Council Service (LCS)

Ralph Vincent, LCS

Sara Wiedmaier, LCS

Guests

The guest list is in the meeting file.

Handouts

Handouts and other written testimony are in the meeting file.

Monday, July 31**Introductions and Welcome to Spaceport America (SA)**

Representative Sweetser welcomed the committee to the third meeting of the STTC for the 2017 interim. Members of the committee and staff were invited to introduce themselves. Christopher Lopez, vice president of site operations at SA, also welcomed the committee and thanked the members for their visit.

New Mexico E911 Directors Affiliate: Current Issues

Ken R. Martinez, director, Santa Fe Regional Emergency Communications Center, and chair, E911 Directors Affiliate, New Mexico Association of Counties (NMAC); Dave Ripley, director, San Juan County Communications Authority, and vice chair, E911 Directors Affiliate, NMAC; and Michelle Howard, 911 director, Sierra County Regional Dispatch Authority, discussed the current status and structure of New Mexico's 911 operations. In New Mexico, 911 emergency service oversight is handled by the Enhanced 911 (E-911) Program run by the Local Government Division (LGD) of the Department of Finance and Administration (DFA). The E-911 Program funding derives from a telephone service surcharge of \$.51 per month per service line (land or mobile) and is used to assist local 911 emergency call and dispatch centers, known as public safety answering points (PSAPs) to establish and maintain emergency service networks, training and equipment. The E-911 Program strives for a five-year equipment replacement cycle, but funding is rotated through the 47 PSAPs around the state based upon funding and need. Over the past fiscal year (FY), the E-911 fund allocated almost \$8 million for recurring statewide network costs and about \$5 million for equipment upgrades.

Mr. Martinez said that statewide PSAPs typically handle more than 1.2 million calls per year, and the volume of calls has a 2% to 3% annual growth. To reduce costs and increase

efficiency, consolidating PSAP districts is an ongoing focus of the E-911 Program. Mr. Ripley said that Senate Bill 46 (2017 regular session) expanded the 911 surcharge to include voice over internet protocol, or "VOIP", phone systems and pre-paid phones and cards and is expected to increase the annual funding for the program from \$11 million annually to \$13 million. However, he said that E-911 funding will continue to be inadequate. Expanding on this point, Ms. Howard said that the E-911 bureau is currently down 11 employees overall and has only one 911 program employee responsible for all of the PSAPs statewide.

Mr. Martinez then spoke about Next Generation 911 (NG911). NG911 is designed to use the geographic information system, or "GIS", as the primary data component for providing 911 services in New Mexico. NG911 also calls for PSAP centers to build their communications capabilities beyond simple phone services to include text messaging, still images and video clips. He said that although E-911 equipment currently being deployed is NG911 compliant, New Mexico is one of only five states in the nation that currently have no implementation plan for NG911. Further, he said that states without an NG911 implementation plan are ineligible to receive a portion of the \$115 million in federal grant money.

The presenters requested: 1) the creation of a statewide E-911 oversight board composed of 911 emergency service professionals to provide expertise on relevant legislation and to advocate for funding; and 2) development of a statewide NG911 implementation plan. The presenters also noted that some states have emergency surcharge rates as high as \$6.00 per month and that New Mexico might increase its rate to provide more funding.

The committee then entered into a general discussion. Committee members expressed concerns about finding adequate funding to create an oversight board in addition to increasing the funding needed by local PSAPs. In response, Rick Lopez, director, LGD, noted that funding has been in decline over the past few years but that consolidation of PSAPs is helping to alleviate funding problems. He also stated that collaboration among center directors will be crucial in moving forward and that a voluntary professional standards committee would need to be put in place.

In response to a question about fluctuating demand for 911 emergency services at Elephant Butte Lake, Ms. Howard used the July 4 weekend as an example. On that weekend, Sierra County grows from a population of about 10,000 to more than 140,000. She said that current emergency systems of surrounding counties are not integrated and suggested that upgrading to NG911 systems would offer a centralized infrastructure to better respond to multiple coinciding emergency calls. (See the handouts in the committee file for further information.)

Information Technology (IT) Governance: An Overview

Mr. Vincent presented the committee with an overview of IT governance in an age of rapidly advancing technology. Mr. Vincent emphasized the importance of legislative oversight of IT based on the large investment in the state. Excluding IT expenses for public schools and

higher education, New Mexico spends over \$300 million annually on IT hardware, software and services through purchase orders and spends over \$75 million in staff costs.

Mr. Vincent said three common IT governance structures are utilized across the country: centralized; decentralized; and hybrid or federated. Most states, including New Mexico, have adopted the hybrid/federated structure, meaning that the agency maintains a certain amount of internal autonomy. Mr. Vincent explained some of the important governance characteristics within the structure in New Mexico, including the Department of Information Technology (DoIT), which is the State of New Mexico's enterprise information technology service provider. The DoIT is responsible for coordinating the state's IT strategic plan, state agencies' annual IT strategic plans and the DoIT's annual IT strategic plan.

The DoIT was established as a single, unified executive branch department to administer all laws and exercise all functions formerly administered by the now-defunct Information Technology Commission and to consolidate enterprise IT services previously duplicated within state agencies. The DoIT functions as a semiautonomous branch of the governor's cabinet rather than under the DFA or the Office of the Governor, as is common in other states. Mr. Vincent noted that it is considered best practice for the state chief information officer (CIO) to function semiautonomously and not to report to one department.

Authority for the DoIT is established by the Department of Information Technology Act, creating a central IT organization and a legislative committee with oversight. Previously, the Information Technology Commission had oversight, but the enabling legislation was repealed during the 2017 legislative session. Legislative oversight now falls to the STTC for review of governance and to the Legislative Finance Committee (LFC) for performance audits. In some states, additional IT oversight is provided by an IT governance board, which may include an IT council. New Mexico does not have either. Instead, these responsibilities fall to the secretary of information technology. In New Mexico, additional oversight is provided by a council of state agency CIOs, which allows for interaction and engagement among CIOs of various agencies throughout the community.

IT governance in New Mexico can be summarized as two functions:

- (1) *strategic planning and business alignment*, which determine goals and directions; and
- (2) *operational management and support*, which involve project approval, budgeting and management.

The project management roles are supported by the Project Certification Committee and Technical Architecture Review Committee.

Every project also is required to undergo an independent verification and validation component.

Budgetary authority of state CIOs varies between states, and in New Mexico, the CIO is responsible for approving projects that meet certain criteria.

The CIO, IT staff and LFC also work concurrently to review agencies' requests for funding of larger projects. Requests for FY 2018 must be filed by September 1.

Mr. Vincent mentioned that upcoming policy issues will involve cloud-managed services, an increased need for cybersecurity, artificial intelligence, machine learning and expanded information dissemination.

Responding to questions from committee members, Mr. Vincent:

- noted that many states are beginning to migrate toward cloud technology, and New Mexico should outline a policy strategy to adapt to this newer technology; and
- suggested that the current structure of IT governance allows sufficient oversight without overwhelming the CIO.

SA Projects and Directions

Daniel Hicks, chief executive officer, SA, provided the committee with an update on operations and funding for SA. He emphasized that job creation is a priority for the spaceport. He estimated that 100 new jobs paying an average salary of \$60,000 will be created by SA tenants in FY 2018.

Mr. Hicks noted that the national commercial space industry is currently valued at \$330 billion annually and is growing every year. He said that SA has a unique advantage compared to the other nine commercial spaceports operating around the country because it is adjacent to and collaborates with the U.S. Army White Sands Missile Range (WSMR). The requirements of WSMR create 6,000 square miles of restricted air space that is almost always available to launches from SA. Other spaceports have limited windows of time without traffic in their airspace and must request launch times from the Federal Aviation Administration.

Mr. Hicks said that other attributes that make the location of the SA site competitive include:

- over 340 days of average annual sunshine;
- a launch site that is 4,600 feet above sea level;
- there is no salt air corrosion that is associated with seaside launch sites;
- increased safety due to a low population density in the surrounding area;
- increased security because of its remote location; and
- both horizontal and vertical launch capabilities.

Mr. Hicks said that SA is focused on research and astronaut preparation for suborbital flights. He pointed out that SA is positioned to provide extended suborbital flight times as a low-

cost alternative to development of microgravity technologies in the fields of biotechnology, combustion technology, material structures, communications and microchips. He said that, ultimately, SA should become a national transportation hub that will support commercial interests as well as projects conducted by the National Aeronautics and Space Administration (NASA) and the U.S. Department of Defense (DOD).

Speaking about SA's position in the nation's space market, Mr. Hicks highlighted Florida as a competitor that is investing \$30 million annually in its spaceport to pursue the commercial space industry and offset the loss of NASA's space shuttle program. However, he said, the top four national suborbital launch providers are: 1) NASA; 2) Virgin Galactic (VG); 3) Exos Aerospace; and 4) UP Aerospace. He also noted that SA recently acquired a Pipeline2Space tenant that provides suborbital launch services. He said some near- to mid-term goals for SA include launching low-earth orbit habitats; providing point-to-point transportation with space planes; and microgravity research.

Mr. Hicks also addressed efforts by SA to encourage and educate students in science, technology, engineering and mathematics (STEM) fields. In February 2017, the "What is Spaceport America?" program was launched in partnership with FieldTripZoom, Inc. This program can provide virtual tours of some SA facilities and it videoconferences with SA staff to STEM students across the world. Currently, the program is operating in 17 classrooms across New Mexico at no cost to the schools. Mr. Hicks noted partnerships with university researchers, the Spaceport America Relay Race and the Spaceport America Cup as other public outreach programs.

Responding to questions from committee members, Mr. Hicks:

- noted that \$14 million has been set aside to improve and expand southern access to the spaceport. The Department of Transportation has already agreed to adopt the future road as a state highway;
- stated that SA expects to have its first commercial launch in 2018 and said that VG is preparing infrastructure to be ready by December 2017; and
- talked about the potential to create internships for students in the engineering departments of universities in New Mexico.

Mr. Hicks said that anticipated major funding requests would be for an on-site welcome center and for a shuttle service from nearby towns. He compared these new public developments with the ongoing development of VG's space flight vehicles. He said that VG has already invested close to \$1 billion at the SA site and in its flight vehicles. Further, he noted that VG currently has 30 full-time employees on site, with plans to increase employment to 100 once the program is operational. In response to a question about selling SA, he stated that it would likely not be more effective and reminded the committee that commercial spaceports are an appreciating asset.

Tour of SA

Don Calcote, property and contracts manager, VG, and Greg Powell, facilities manager, VG, conducted a tour of SA and answered questions from the committee throughout the tour. Pictures were not allowed during the tour to preserve the exclusivity of the experience for future passengers. The committee was allowed inside the main hangar, currently housing the SpaceShip Two model, and to see the 2.2-mile runway and the visitors center/waiting area designed for the families of passengers.

Mr. Powell pointed out many of the energy-conserving features of the building. The U.S. Green Building Council's LEED NCv2.2 program was used as the framework for the sustainable development of SA. Mr. Calcote stated that VG is committed to its partnership with SA. The company has invested \$9.3 million in local vendors and pays \$7 million annually in rent. To date, VG has sold about 700 tickets to passengers from 56 different countries. Tickets started at \$200,000 but have since been increased to \$250,000. Mr. Powell stated that VG will require three training days for passengers, during which time the passengers will undergo flight simulations and other physical preparations. It is envisioned that these training days will be structured as vacation packages, both for the passengers and their families, benefiting tourism in the surrounding cities.

Mr. Calcote noted that VG currently has five maintenance employees and 26 operational employees. Operational staff is eventually expected to increase to 159.

Recess

The committee recessed at 6:00 p.m. after the tour.

Tuesday, August 1 — New Mexico Institute of Mining and Technology (NMIMT)

Reconvene

Representative Sweetser reconvened the committee at 9:10 a.m.

Introductions and Welcome to Socorro

Representative Sweetser again welcomed the committee to the third meeting of the STTC for the 2017 interim and asked committee members and staff to introduce themselves. Dr. Stephen G. Wells, president, NMIMT, then welcomed the committee to the university and thanked the members for their visit.

NMIMT's Future: A Voyage of Inquiry, Inspiration and Innovation

Dr. Wells provided the committee with an overview of the university, describing it as New Mexico's "starship institution". Dr. Wells began by highlighting some statistics and features of the university. NMIMT currently has 1,525 undergraduate and 610 graduate students. NMIMT actively cultivates transdisciplinary education and research opportunities. It offers 19 academic programs and was recently approved to add two new doctoral degree programs in biotechnology and mechanical engineering. He said NMIMT provides a strong employee base

for companies in the state, noting that 55% of 2017 graduating students were employed within New Mexico by Sandia National Laboratories, Los Alamos National Laboratory and companies such as Intel and Google.

Dr. Wells touted the success of NMIMT's students, faculty and alumni, citing as examples Ed Fries, co-founder of Xbox and vice president of game publishing at Microsoft, and RiskSense, a cybersecurity firm that developed from research conducted at NMIMT. Further, he noted that NMIMT received 45 awards as well as notable national rankings in 2017, including being ranked as the number one public university, and fifteenth overall, in its doctoral programs. He said that NMIMT is ranked eleventh in the nation for state universities by salary potential; students earn an average starting salary of \$50,500. Dr. Wells also highlighted the appearance of NMIMT students on the TV show *MythBusters* and how their testimonials almost unanimously emphasized small class size and close student-teacher relationships as their reasons for attending NMIMT.

Dr. Wells also made special mention of five NMIMT programs, including:

- the Bureau of Geology and Mineral Resources, a research and service division of NMIMT serving as the geological survey for the state and providing data on water and mineral composition;
- the Petroleum Recovery Research Center (PRRC), established in 1977, which serves as the research arm of the oil and natural gas industry in New Mexico and is among the nation's leading petroleum research organizations;
- the Institute for Complex Additive Systems Analysis (ICASA), a cybersecurity research division of NMIMT that has been designated by the National Security Agency and the U.S. Department of Homeland Security (DHS) as a center of academic excellence in information assurance education and as a center of excellence in information assurance research;
- the Magdalena Ridge Observatory, which consists of a fast-tracking telescope and an optical/infrared interferometer and works with the Air Force Research Laboratory at Kirtland Air Force Base to aid in national defense; and
- the Energetic Materials Research and Testing Center, which specializes in the research, development, testing and analysis of energetic materials for both corporate and government clients and which has brought \$500 million in research and testing to New Mexico over the past 10 years.

The Cutting Edge of Cybersecurity Education

A. Student Programs Accelerating Cybersecurity

Dr. Lorie M. Liebrock, professor of computer sciences and dean of graduate studies, NMIMT, elaborated on some of the points made by Dr. Wells regarding cybersecurity programs at the university. She explained that students pursuing the field of cybersecurity have two degree options:

(1) computer science, which is a systems-oriented program that ensures students are prepared to design, develop and maintain secure software; or

(2) IT, an applied program that integrates the foundations of computer science with fundamental project management.

Dr. Liebrock said that students get specific training in cybersecurity and receive a cybersecurity certification with either degree.

Dr. Liebrock highlighted efforts by NMIMT to address the large disparity between men and women in the computer science field. This developing program at NMIMT is designed to engage students and teachers in middle school and high school, offer summer courses to cater to first-time programmers and provide female-focused peer mentoring, enhanced internships, funded research and conferences such as "Women in Cybersecurity".

Dr. Liebrock also talked about the Scholarship for Service program (SFS), sponsored by the National Science Foundation and the DHS since 2003. The SFS funds student education in cybersecurity or information assurance. The program provides students yearly stipends ranging from \$22,000 for undergraduates to \$34,000 for graduates. It also pays their tuition and provides additional funding for books, health insurance and professional development in exchange for each year that the students are employed in civil service in federal, state, local or tribal government or in a federally funded research center. She pointed out that many SFS graduates want to stay in the state to improve the infrastructure and economy and have found internships through the Indian Health Service, U.S. Army Corps of Engineers, Los Alamos National Laboratory, Sandia National Laboratories and the DoIT, among others.

Responding to additional questions from the committee, Dr. Liebrock said that there is a shortage of roughly 80,000 federal and industry jobs in cybersecurity and that this shortage is expected to increase. Talking about the need for recruitment of students into STEM fields, she said that most young women will not pursue a STEM field if not introduced at a young age. She also said that it will be important to train high school teachers and to emphasize the study of computer science as much as math and science.

B. Stovepipes, Big Data and Analytics: How the ICASA Builds Capacity in the Science of Protecting Infrastructure

Michael J. Smith, director, ICASA, NMIMT, described the ICASA program to the committee as a partnership between government, academia and industry that was created by state legislation in 2001. Since its creation, 150 students have participated in the research and development of IT infrastructure protection to support the national intelligence community and address national security concerns. Mr. Smith noted that these students have had relative ease in finding jobs, including with the DOD. He noted some of the ICASA's strengths, such as:

- abstract analysis of network dynamics, which makes the software readily re-applicable to multiple domains;
- modeling abstraction, which allows engineers to access deep information from limited observation; and
- the academic partnership with the intelligence community.

Mr. Smith then listed some of the goals of the program, including to study large-scale systems as complex networks; create innovative techniques for information assurance; convert scientific concepts into reusable, user-friendly analytic tools; develop predictive modeling and analysis platforms; and act as a national security pipeline to train military personnel. Specific problems that the ICASA seeks to address include defense of large computer networks through their platform or software; characterizing the dynamics of a network to drive situational awareness through event detection, classification and localization; border security; and monitoring of the nation's power grid. Additionally, Mr. Smith touched on one ICASA product, the Data Analysis and Visualization Environment, or "DAVE", which is a user-friendly software program that allows multiple data sets to be analyzed together.

C. RiskSense: A Success Story of NMIMT's Innovation Ecosystem

Mark J. Fidel, co-founder and head of corporate development, RiskSense, provided an overview of operations. He described the cybersecurity firm as a spin-off of the ICASA that now has a goal of serving the commercial sector. NMIMT still owns one-third of the company and has begun to see residuals from the company's success. RiskSense specializes in network security assessments, incident response and mitigation and digital forensics. The company employs a 100-member team, of which roughly one-third are software engineers, many of whom are post-graduates from NMIMT. The average age of employees is under 32, and the average pay for employees is over \$80,000 a year. RiskSense is recognized as one of the most successful outcomes of the state's Job Training Incentive Program (JTIP).

Mr. Fidel said that RiskSense currently serves close to 200 clients from more than 15 states. RiskSense provides clients a platform to analyze massive amounts of vulnerability data to reduce threats to critical business systems. The firm has earned more than 27 industry awards, including Albuquerque Business First's "Fastest Growing Companies" award in 2015. RiskSense has developed strategic partnerships with companies such as CenturyLink and Imperva, Inc. Earlier this year, RiskSense released the first public scanner to detect if a machine is missing protection to block cyber attacks. Mr. Fidel cited the WannaCry ransomware as an example of cyber-attack software. WannaCry infected more than 230,000 computers in 150 countries.

In response to questions from committee members, Mr. Fidel noted that 25% of RiskSense's employee base is hired within the state. He also requested that changes be made to the JTIP to avoid penalizing companies that are hiring from out of state because those hires still encourage IT spending within the state.

D. Technology Commercialization and Student Education Experiences at NMIMT

Dr. Peter Anselmo, executive director, Center for Leadership in Technology Commercialization, and associate professor, Department of Management, NMIMT, discussed initiatives to develop entrepreneurship as part of student training. Dr. Anselmo stated that the main objectives are to involve students in the process of developing and monetizing intellectual property. He said that NMIMT strives to connect industrial contacts with the invention and research teams and to encourage input from inventors in all business aspects of their projects, allowing for more autonomy. Some aspects of this training include patent searches, market research, meetings and presentations with potential investors and participation in interdisciplinary teams. He said this initiative is continuously growing, with close to 40 students having already participated in teams in drug discovery, analytics, materials engineering, medical robotics and drug delivery, among other areas.

Education Collaborations

A. NMIMT's Collaborations with the Pueblo of Picuris: Building Commercial and Educational Opportunities

Carlos R. Romero, associate vice president for research and economic development, NMIMT, discussed NMIMT's collaboration with the Pueblo of Picuris, noting that this effort will serve as a model for future efforts in rural New Mexico. He said that NMIMT Research Park Corporation and the Pueblo of Picuris' Three Eagles Development Corporation have been combined into a joint venture corporation, creating an academia-industry pipeline. The two partners intend to foster educational opportunities for Native American students, expand capacity in both organizations in pursuing federal contracts and develop rural economies, new businesses and industry partnerships.

Responding to questions from the committee, Mr. Romero noted two characteristics that provide the Pueblo of Picuris a market niche opportunity: 1) it has access to more potential broadband capacity than most rural areas because it has existing dark fiber lines in place; and 2) as a sequestered community, it can provide a secure data pooling site for other areas. Mr. Romero also emphasized the need for enhanced math education for students at the Pueblo of Picuris schools.

B. Statewide Higher Education IT Collaboration Strategies

CIOs from several state universities discussed IT collaboration strategies. Joe Franklin of NMIMT, Jason Collet of Western New Mexico University (WNMU), Joe Gieri of New Mexico Highlands University, Norma Grijalva of New Mexico State University (NMSU) and Duane Arruti of University of New Mexico (UNM) are CIOs representing IT leaders within the Center for Higher Education Chief Information Officer Studies or "CHECS". The panel provided the committee with an overview of statewide collaborations and IT funding. The panelists said that the fast pace of technological advancements creates a short window for IT firms to get a return on their investment. These new technologies are more expensive. In addition, the newer technologies are proving more complex to manage, and they speed the change in the

cybersecurity environment. To meet these challenges, the panel suggested that a statewide IT funding program would improve each institution's ability to train staff, increase innovation, establish a network and fund common infrastructure and other projects. They said that the goals for year one of the proposed program would include establishing an administrative and technical review committee, establishing guidelines for required information, creating a rubric for prioritization to make recommendations to the legislature, holding an initial training seminar in the spring and having a summer hearing on submitted projects.

As examples of collaborative IT efforts, the panel cited:

- the Rio Grande Optical Network Project, in which NMSU, NMIMT and the DoIT are partners;
- LIBROS, a consortium of 17 academic libraries; and
- a research partnership of UNM, NMIMT and NMSU.

The panelists outlined a future road map for a shared services model to include enterprise software agreements, large-volume purchasing agreements, joint infrastructure, network services support and other collaborative efforts. They argued that a joint effort would lead to lower costs and require less bandwidth.

Responding to questions from the committee, the panelists said that collaboration among distant institutions is possible through dark fiber lines, such as those between NMSU and NMIMT. They also commented that the statewide broadband push envisioned by House Bill 113 (2017 regular session) makes progress integrating with DoIT responsibilities, but the responsibilities of the universities remain unclear, and collaboration between the universities and the DoIT has not started.

FY 2017 Fourth Quarter IT Analysis

Brenda Fresquez, staff, LFC, provided the committee with an overview of the "Information Technology Preliminary Status Report, Fiscal Year 2017 Q4". The report summarizes progress of ongoing IT projects for various state agencies. The report also provides a description, estimated cost and status update for each project. In addition, the report provides a quick assessment of a project's budget, schedule and functionality using a color scale of red for bad, yellow for making progress and green for meeting all criteria. Ms. Fresquez highlighted the Oil and Natural Gas Administration and Revenue Database (ONGARD) replacement project due to its red rating for budget, schedule and functionality. This project is meant to upgrade the current ONGARD system to the American Petroleum Institute standards. The report raises concerns about the ONGARD replacement project due to the State Land Office's (SLO's) lack of progress in planning, an unknown total cost and the Taxation and Revenue Department's availability of project resources. (The finalized version of the report is available online).

In response to questions from the committee, Ms. Fresquez stated that \$6 million in funding for system stabilization was allocated in 2013 and that an additional \$10 million in

funding was allocated for modernization in 2015. She said that it is likely that the SLO will request more funding for the project, but as of now, only \$7 million of the \$16 million in state-appropriated funds has been spent.

Tour

A. Dr. David Grow's Mechanical Engineering Lab (Building a Synthetic Hand for an NMIMT Staff Member); and

B. Daniel H. Lopez Chemistry Building (Transdisciplinary Programs)

Following the presentations, the committee toured parts of the NMIMT campus. In Dr. David Grow's Mechanical Engineering Lab, committee members were shown some of the projects and equipment in the lab, such as a few prototypes of a mechanical hand being developed using 3D printing processes to help amputees. They were also able to hear first-hand testimony from students working in the lab. The committee was taken through the new Daniel H. Lopez Chemistry Building and the introductory level chemistry labs.

Adjournment

There being no further business before the committee, the third meeting of the STTC for the 2017 interim adjourned at 11:50 a.m.