



NEW MEXICO LEGISLATURE

**SCIENCE, TECHNOLOGY
AND
TELECOMMUNICATIONS
COMMITTEE**

2015 INTERIM FINAL REPORT

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INTERIM SUMMARY

Science, Technology and Telecommunications Committee 2015 Interim Summary

The Information Technology Commission and Department of Information Technology (DoIT) project status continued to be of significant interest to the committee, which heard from the secretary of information technology at most meetings, as well as the secretary of finance and administration and individual agency information technology managers from the Secretary of State's Office, the Administrative Office of the District Attorneys and San Juan College. Broadband availability in the state remained the focus of committee members, with presentations by the Public Regulation Commission (PRC) staff, REDI Net, the Public Education Department, higher education institutions, private telecommunications service providers, Kit Carson Electric Cooperative's internet service and the DoIT.

The committee heard about cutting-edge research and development by the national laboratories and by research institutions such as the Center for High Technology Materials at the University of New Mexico, the Unmanned Aircraft Systems Flight Test Center at New Mexico State University (NMSU), the National Solar Observatory, Sunspot Solar Energy Systems at NMSU and the School of Energy at San Juan College.

Telemarketing abuse was discussed as a result of a memorial asking the committee to hear testimony from the attorney general and the PRC. The committee continued to hear from experts in technology transfer and commercialization, such as Innovate ABQ and FatPipe Albuquerque.

Finally, the committee also heard from technology-related enterprises such as Spaceport America, Uber, Unspam Technologies, Inc., and the New Mexico Air Rangers (on balancing economic benefits and public safety/privacy in the deployment of drones). No legislation was endorsed this year by the committee.

WORK PLAN AND MEETING SCHEDULE

**2015 APPROVED
WORK PLAN AND MEETING SCHEDULE
for the
SCIENCE, TECHNOLOGY AND TELECOMMUNICATIONS COMMITTEE**

Members

Rep. James E. Smith, Chair
Sen. Michael Padilla, Vice Chair
Sen. William F. Burt
Rep. Stephanie Garcia Richard
Rep. Jason C. Harper
Sen. Daniel A. Ivey-Soto
Rep. Conrad James

Rep. Bill McCamley
Sen. Bill B. O'Neill
Rep. Debbie A. Rodella
Sen. John C. Ryan
Rep. Carl Trujillo
Rep. John L. Zimmerman

Advisory Members

Rep. David E. Adkins
Sen. Jacob R. Candelaria
Sen. Carlos R. Cisneros
Rep. Kelly K. Fajardo
Sen. Ron Griggs
Rep. Antonio Maestas
Sen. Richard C. Martinez
Sen. Steven P. Neville

Sen. Mary Kay Papen
Sen. William H. Payne
Sen. Nancy Rodriguez
Rep. Nick L. Salazar
Rep. Luciano "Lucky" Varela
Sen. Peter Wirth
Rep. Monica Youngblood

Work Plan

The Science, Technology and Telecommunications Committee was created by the New Mexico Legislative Council on April 27, 2015. The committee will continue to look for solutions to challenges in emerging technologies, communication infrastructure, information technology (IT) and technology transfer. The committee will study opportunities to enhance New Mexico universities, take advantage of the strengths of the national laboratories and foster an environment for technology transfer and job creation.

During the 2015 interim, topics for meeting agendas will include:

1. Department of Information Technology program responsibilities and related IT issues;
2. broadband and telecommunications availability and deployment across the state;
3. New Mexico Telecommunications Act issues;
4. New Mexico universities' technology innovations;
5. energy technology policies;

6. science, technology, engineering and mathematics (STEM) education;
7. technology commercialization and transfer;
8. the status of Spaceport America;
9. computer coding education and work force training;
10. venture capital investments;
11. remotely piloted vehicles (drones);
12. national laboratories (Los Alamos National Laboratory and Sandia National Laboratories) overview; and
13. ride-sharing industry briefing.

**Science, Technology and Telecommunications Committee
2015 Approved Meeting Schedule**

<u>Date</u>	<u>Location</u>
June 23	Santa Fe
July 6-7	Albuquerque
August 25-26	Farmington
September 21-22	Ruidoso
October 19-20	Santa Fe
November 3-4	Santa Fe

AGENDAS AND MINUTES

**TENTATIVE AGENDA
for the
FIRST MEETING
of the
SCIENCE, TECHNOLOGY AND TELECOMMUNICATIONS COMMITTEE**

**June 23, 2015
Room 311, State Capitol
Santa Fe**

Tuesday, June 23

- 10:00 a.m. **Call to Order and Introductions**
 —Representative James E. Smith, Chair
- 10:10 a.m. (1) **[Department of Information Technology \(DOIT\) Update](#)**
 —Darryl Ackley, Secretary, DOIT
- 11:00 a.m. (2) **[Webcasting Considerations](#)**
 —Ralph Vincent, Information Technology Consultant
- 11:30 a.m. (3) **[2015 Interim Work Plan and Meeting Schedule](#)**
- 12:00 noon **Adjourn**

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

**June 23, 2015
State Capitol, Room 311
Santa Fe**

The first meeting of the Science, Technology and Telecommunications Committee for the 2015 interim was called to order by Representative James E. Smith, chair, on Tuesday, June 23, 2015, at 10:08 a.m. in Room 311 of the State Capitol.

Present

Rep. James E. Smith, Chair
Sen. Michael Padilla, Vice Chair
Rep. Stephanie Garcia Richard
Rep. Bill McCamley
Sen. Bill B. O'Neill
Rep. Debbie A. Rodella
Rep. John L. Zimmerman

Absent

Sen. William F. Burt
Rep. Jason C. Harper
Sen. Daniel A. Ivey-Soto
Rep. Conrad James
Sen. John C. Ryan
Rep. Carl Trujillo

Advisory Members

Sen. Jacob R. Candelaria
Sen. Carlos R. Cisneros
Rep. Kelly K. Fajardo
Sen. Richard C. Martinez
Sen. Nancy Rodriguez
Rep. Nick L. Salazar
Rep. Luciano "Lucky" Varela

Rep. David E. Adkins
Sen. Ron Griggs
Rep. Antonio Maestas
Sen. Steven P. Neville
Sen. Mary Kay Papen
Sen. William H. Payne
Sen. Peter Wirth
Rep. Monica Youngblood

Staff

Gordon Meeks, Legislative Council Service (LCS)
Ralph Vincent, LCS
Taylor Smith, LCS

Guests

The guest list is in the meeting file.

Handouts

Handouts and other written testimony are in the meeting file.

Tuesday, June 23

Members of the committee introduced themselves.

Department of Information Technology (DOIT) Update

Darryl Ackley, secretary of information technology, introduced his accompanying staff, Deputy Secretary Jacqueline Miller, Mike Baca, Anna Becker and Maria Sanchez. He provided the committee with an overview of the DOIT and a status report on its current activities. The DOIT is the consolidated state information technology (IT) agency and office of the state's chief information officer. As such, it provides enterprise services and operations and maintains oversight compliance of state agencies and departments on IT systems operations and maintenance. It is enterprise-funded, i.e., 99 percent revenue-funded, and is compliant with federal Office of Management and Budget (OMB) Circular A-87 for cost recovery.

The DOIT provides email, mainframe, radio, telephone, wireless, security and hosting services, as well as a number of other services. It provides strategic IT planning guidance to executive agencies. The agency's vision states that it is "to provide the IT fabric upon which the state is enabled to execute its mission in a secure, reliable and efficient manner; empower functional elements to innovate in their unique domains, with an emphasis on customer service; leverage existing IT investments in a manner that equips the state to evolve with emerging technologies; provide valuable, coherent, and responsible investment of IT resources; and leverage systems-thinking in achieving consolidated state IT procurement and standardized execution of initiatives". Its mission is to provide core enterprise IT services in a professional manner, foster an environment of value-added oversight and provide trusted IT leadership and vision.

Secretary Ackley told the committee that the DOIT's priorities and initiatives include:

- stabilizing and upgrading the Statewide Human Resources Accounting and Management Reporting System (SHARE);
- cybersecurity;
- upgrades to monitoring/mitigation;
- security user group;
- work force development;
- smart government;
- sunshine portal;
- one-stop business portal;
- public safety communications, including participation in the Nationwide Public Safety Broadband Network; and
- statewide broadband planning.

Questions and discussion included:

- clarification of the DOIT revenue stream and "charge for services" paradigm;
- the procurement process for state agencies;
- interaction with the legislature's IT services office;
- the current status of SHARE implementation with specific regard to the state treasurer's letter to Secretary of Finance and Administration Tom Clifford;
- the status of the "cash control" system of the Department of Finance and Administration;
- the responsibility of the DOIT in IT oversight;
- the SHARE treasury module;
- a request for the presence of the DOIT at the next meeting and an invitation to the state treasurer to make a presentation to the committee on July 7;
- the effect of SHARE on the state's bond rating; and
- the Partnership for Assessment of Readiness for College and Careers (PARCC) assessment.

Members requested that the DOIT be present at each meeting and maintain the "spreadsheet" approach it provided the committee in the 2014 interim to keep the committee informed of program status, recognizing that many program operators report on a quarterly basis rather than monthly.

Web Streaming

Mr. Vincent, information technology consultant to the LCS, briefed the committee on the current process and rules regarding streaming of all legislative hearings from the State Capitol. The streams are currently available in real time, with no archiving of the streams, he said. He told the committee that the legislature could choose to offer live streams of meetings outside of the State Capitol and archive all of those streams, but those storage costs would add about \$25,000 per year to the current cost for the streaming service. He said that current costs for streaming without archiving are approximately \$50,000 per year. In order to expand current streaming capacity, the current legislative web site would need to incorporate the user interface provided by the web stream hosting vendor for viewing of the archived streams, and the legislature would need to determine for how long the web streams would need to be retained and accessible for viewing. Streaming of meetings outside of the State Capitol would need significant additions of equipment and staff. Professional quality streaming from locations outside of the State Capitol would require mobile equipment similar to the current configurations and additional staff trained to set up, operate and troubleshoot the equipment at the site of the meeting.

Each interim committee location would need an internet connection with upload speed equal to or above two megabytes per second (Mbps). Five Mbps is recommended for upload of high-quality video. He said that an internet connection could be provided with a "hot spot"

connected to the computer if a strong and reliable 4G wireless signal were available. Additional equipment would include a computer with encoder software, web camera(s) and a microphone system for sound input. Because as many as three committees can run simultaneously, the LCS would need four complete sets of this hardware and software at a cost of just under \$10,000 per set. An additional staff member at each interim committee meeting to set up, operate and troubleshoot during the meeting would also be necessary, he said.

Questions and discussion included:

- the need for streaming for users in distant and remote locations;
- usage rates for existing streaming (about 200);
- locations of users (mostly state agencies and inside the State Capitol);
- the governor's archive usage and availability;
- the trajectory of cost estimates;
- other legislatures' streaming and archiving;
- the use of web streams by courts to gauge legislative intent;
- interconnectivity;
- the inclusion of political subdivisions as well as state and real-time streaming on the sunshine portal;
- archival periods in other states; and
- the option of capturing off-site meetings for later upload.

2015 Interim Work Plan and Meeting Schedule

Representative Smith asked the committee for input on the draft 2015 work plan. Committee members asked for an additional two items in the work plan and then approved it with no schedule or itinerary changes.

Adjournment

There being no further business before the committee, the meeting adjourned on schedule.

Revised: July 1, 2015

**TENTATIVE AGENDA
for the
SECOND MEETING
of the
SCIENCE, TECHNOLOGY AND TELECOMMUNICATIONS COMMITTEE**

**July 6-7, 2015
Rotunda Room, University of New Mexico Science and Technology Park
801 University Boulevard
Albuquerque**

Monday, July 6

- 10:00 a.m. **Call to Order and Introductions**
—Representative James E. Smith, Chair
- 10:10 a.m. (1) **[Welcome to University of New Mexico \(UNM\)](#)**
—Chaouki Abdallah, Provost and Executive Vice President for Academic
Affairs, UNM
- 10:30 a.m. (2) **[Photonics](#)**
—Sanjay Krishna, Director, Center for High Technology Materials, UNM
—Earl Fuller, Strategic Support Manager, Center for High Technology
Materials, UNM
- 11:30 a.m. (3) **[Innovate ABQ Program](#)**
—Elizabeth (Lisa) J. Kuuttila, President and Chief Executive Officer,
Science and Technology Corporation, UNM
- 12:30 p.m. **Lunch**
- 1:30 p.m. (4) **[Secretary of State Information Technology Update](#)**
—Kari Fresquez, Interim Elections Director/Chief Information Officer,
Secretary of State's Office
- 2:30 p.m. (5) **[Remotely Piloted Vehicles \(Drones\) Issues](#)**
—Dennis Zaklan, Deputy Director, Unmanned Aircraft Systems Flight Test
Center, New Mexico State University
—Susan Mertes, Aviation Attorney
—Janet Jarratt, Dairy Farmer
- 4:30 p.m. **Recess**

Tuesday, July 7

- 9:00 a.m. (6) **High-Speed Internet Access (Broadband Deployment)**
—Duncan Sill, General Manager, REDI Net
—Hvtce Miller, Chair, Board of Directors, REDI Net
—Robert Gorrell, Director, Public School Facilities Authority
—Jacqueline Miller, Deputy Secretary, Department of Information
 Technology
- 10:30 a.m. (7) **Telecommunications Policy**
—Katherine Martinez, Local Government Affairs Director, CenturyLink
—Johnny Montoya, Regulatory Affairs Director, CenturyLink
—Leo Baca, Director, State Legislative Affairs, CenturyLink Telecom
- 12:00 noon **Adjourn**

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

**July 6-7, 2015
Rotunda Room, University of New Mexico Science and Technology Park
801 University Boulevard
Albuquerque**

The second meeting of the Science, Technology and Telecommunications Committee (STTC) was called to order by Representative James E. Smith, chair, on Monday, July 6, 2015, at 10:12 a.m. in the Rotunda Room at the University of New Mexico (UNM) Science and Technology Park in Albuquerque.

Present

Rep. James E. Smith, Chair
Sen. Michael Padilla, Vice Chair
Rep. Stephanie Garcia Richard
Sen. Daniel A. Ivey-Soto (7/6)
Rep. Conrad James
Rep. Bill McCamley (7/7)
Sen. Bill B. O'Neill
Rep. Debbie A. Rodella (7/7)
Sen. John C. Ryan (7/7)
Rep. Carl Trujillo
Rep. John L. Zimmerman

Absent

Sen. William F. Burt
Rep. Jason C. Harper

Advisory Members

Sen. Jacob R. Candelaria
Sen. Carlos R. Cisneros
Rep. Kelly K. Fajardo (7/7)
Sen. Richard C. Martinez
Sen. Nancy Rodriguez
Rep. Luciano "Lucky" Varela
Rep. Monica Youngblood (7/7)

Sen. Ron Griggs
Rep. Antonio Maestas
Sen. Steven P. Neville
Sen. Mary Kay Papen
Sen. William H. Payne
Rep. Nick L. Salazar
Sen. Peter Wirth

Guest Legislator

Rep. Tim D. Lewis (7/7)

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

Staff

Gordon Meeks, Legislative Council Service (LCS)
Taylor Smith, LCS
Alex Tapia, LCS

Guests

The guest list is in the meeting file.

Handouts

Handouts and other written testimony are in the meeting file and are located on the New Mexico Legislature web site.

Monday, July 6

Members of the committee introduced themselves.

Welcome to UNM

Chaouki Abdallah, provost and executive vice president for academic affairs, UNM, welcomed the committee to the university. Mr. Abdallah provided the committee with information regarding student demographics. UNM spans the academic spectrum with fields of study from liberal arts to law and medicine. Science and technology are growing strengths of the university, with UNM competing for research grants from the federal government and military. UNM ranks as one of the top 60 research universities in the country. Mr. Abdallah stated that while there is a need for more science, technology, engineering and mathematics (STEM) majors, there is a need for people who understand STEM. New Mexico is consistently losing graduates to other states because of the lack of opportunities in STEM fields within the state. Mr. Abdallah believes it is not enough just to graduate students from universities; there needs to be healthy environments created for them to stay in New Mexico to pursue careers.

In response to committee members' questions, the following points were discussed:

- the University of Tennessee model, in which partnerships among the state, universities and national laboratories were established to facilitate research;
- the need for long-term planning and investments for the research institutions in the state;
- graduate retention and career opportunities;
- establishment of a public policy institute;
- collaboration among the state research institutions;
- creation of a student exchange program that allows students to take courses at other state universities that are not offered at their institution; and
- high school graduate preparedness upon entering state universities and the need for remedial courses.

Photonics: A High-Technology Opportunity for New Mexico

Sanjay Krishna, director, Center for High Technology Materials (CHTM), UNM, introduced the committee to the center and the opportunities it holds for the state. The CHTM was established in 1983 with a seed investment of \$10 million over five years by the State of New Mexico. The center's mission includes: promoting research and education in photonics, microelectronics and nanoscale materials, devices and their applications; fostering interactions among UNM, federal laboratories and industry; and promoting an entrepreneurial spirit for economic development in the state. Under the guidance of research faculty and technical staff, students facilitate end-to-end integration from modeling to manufacturing. According to the Bureau of Business and Economic Research at UNM, the CHTM supports 131 jobs with an annual economic output of \$11.7 million. Since the CHTM's inception, the cumulative total impact has been more than \$372 million in economic output from the initial investment by the state. Mr. Krishna highlighted many notable successes of the CHTM and its students, including more than 400 graduates from the program and 158 U.S. patents.

Mr. Krishna explained the field of photonics to the committee. Photonics is the study of light and includes the generation, emission, transmission, modulation, signal processing, switching, amplification and detection/sensing of light. It covers all technical applications of light over the whole spectrum, from ultraviolet through the visible to near-, mid- and far-infrared. Examples of photonics in everyday life include LEDs, fiberoptics, cameras, night vision, solar panels and guidance systems.

The CHTM has recently aligned with several institutions around the country to develop the Integrated Photonics Institute for Manufacturing Innovation. The CHTM will establish a regional hub called Integrated Manufacturing of Mid-Infrared Photonic Applications Technology (IMMPACT). IMMPACT will build membership from local and national industries and develop an efficient administrative structure for public-private partnerships; work toward industry-relevant projects addressing manufacturing challenges; and partner with universities, community colleges and high schools to train the next generation of technicians, scientists and entrepreneurs. The CHTM is requesting \$10 million over the next five years to reinvest in infrastructure and capability in photonics, which will lead to industry-relevant projects and high-paying technology jobs in New Mexico. The funding would also help to attract national industries while growing local technology start-ups with a strong technical and entrepreneurial work force to create a self-sustaining ecosystem. Mr. Krishna noted support from Governor Susana Martinez and Albuquerque Mayor Richard J. Berry. The CHTM is seeking a letter of support from the STTC endorsing this project as the CHTM pursues funding in the upcoming legislative session.

The committee inquired about the following information:

- options for types of funding for the CHTM, including general obligation bonds and the Local Economic Development Act;
- the possibility of using existing facilities, such as the national laboratories, along with the limitations that option would create for the center;

- the establishment of interactive teams between the national laboratories in the state and UNM; and
- the academic component of the center in addition to the manufacturing project and internships available for students.

Senator Padilla made a motion to have LCS staff prepare a letter of support for the program and its funding. The motion was seconded by Representative Zimmerman and passed unanimously. A member requested that the Legislative Finance Committee be included on the letter.

Innovate ABQ Program

Elizabeth (Lisa) J. Kuuttila, president and chief executive officer, Science and Technology Corporation, UNM, provided background on the Innovate ABQ program. In 2012, UNM hosted an economic development summit, which drew leaders from the public and private sectors around the state. Innovate ABQ began taking shape as a way to grow the economy by capitalizing on New Mexico's outstanding scientific research, strong entrepreneurial assets and thriving creative community. What was lacking was a place, or a network of places, for innovations to thrive. In 2013, UNM led visits to national models, including sites at the University of Florida and Arizona State University. After a feasibility study, the Central/Broadway region in Albuquerque was identified as the ideal headquarters for Innovate ABQ. The project quickly gained support and monetary pledges from government entities and other donors. The formation of Innovate ABQ, Inc., was approved by the UNM regents in July 2014. Currently, the Innovate ABQ, Inc., board of directors is composed of 11 members from different sectors of business and government.

Innovate ABQ will serve as a hub for research and innovation that is highly connected with downtown Albuquerque. The site will include office, research, retail, living and restaurant spaces. As part of this program, UNM will be admitting students for the Innovation Academy beginning in the fall of 2015. Special courses are designed to ensure that UNM students have the skills necessary to succeed in a knowledge economy. The curriculum will be geared toward developing soft skills that help graduates become better employees and be more attractive to employers. Ms. Kuuttila noted that UNM will be hosting a follow-up economic development summit on October 26, 2015.

In response to questions from the committee, Ms. Kuuttila covered the following:

- the program received a grant for \$2 million in 2013 from the City of Albuquerque to purchase property; in addition, the New Mexico Educators Federal Credit Union, now called Nusenda Credit Union, pledged \$3 million to the project;
- the Innovate ABQ corridor loosely refers to the area around the site, which does not consist of hard borders;
- concern from potential out-of-state companies about taxes and the education system in New Mexico hindering interest;

- interdisciplinary opportunities for students to design degree programs not limited to a specific college of study, but campus-wide;
- selection of the university as the primary owner of the project to help maintain stability in the face of potential economic and political changes; and
- a framework for the development of the program moving forward.

Secretary of State Information Technology Update

Kari Fresquez, interim elections director/chief information officer, Secretary of State's Office (SOS), provided the STTC with an update regarding improvements to the state's elections and business filing systems. Ms. Fresquez provided an overview of the two initiatives that the SOS is currently working on, along with the current status.

(1) New Mexico Business Filing System:

- consolidated system for all SOS business services;
- SOS business portal — features online transactions and searches;
- \$1.215 million authorized in fiscal year (FY) 2013; and
- estimated to be completed by December 2015.

(2) Integrated Reporting and Integrity System (IRIS):

- will replace the current statewide voter registration system and a number of other disparate election-related software components used by 33 county clerks with one comprehensive system;
- based on a system used in South Dakota; and
- \$1.4 million authorized for FY 2016-17 to complete the project.

Ms. Fresquez detailed for the committee the various problems with the previous systems, the process of addressing those issues and the solutions that the two new systems are providing. While the SOS is already benefiting from IRIS, full implementation will not take place until after the 2016 presidential election. It will include voter registration management, election management, public access, data exchange, National Voter Registration Act of 1933 compliance and enhanced user roles and permissions.

In response to questions from committee members, Ms. Fresquez addressed the following:

- quality assurance during the transition from the old system to IRIS;
- safeguards for voters during "data cleanups";
- addressing the needs of the county clerks for the upcoming national election;
- changes under Senate Bill (SB) 643 (2015) — "Voter Registration Requirements";
- IRIS software protection against disaster recovery and systems testing;

- the current status for candidate filing and statutory limitations for multicounty districts;
- methods for authenticating users who register online; and
- legislative needs to address issues prior to the upcoming presidential elections.

Approval of Minutes

The minutes from the June meeting were approved by the committee.

Remotely Piloted Vehicles (Drones) Issues

Dennis Zaklan, deputy director, Unmanned Aircraft Systems Flight Test Center, New Mexico State University (NMSU), provided the committee with an overview of the program at NMSU. Mr. Zaklan discussed the differences between unmanned aerial vehicles and unmanned aircraft systems (UAS), along with their uses and capabilities. Mr. Zaklan explained current Federal Aviation Administration (FAA) standards and regulations and the potential for economic development that this industry has for New Mexico. NMSU is planning an educational demonstration on small drones.

Susan Mertes, aviation attorney, discussed the economic and commercial uses for UAS in package delivery. According to Ms. Mertes, there is an \$11.3 billion global market for UAS and a potential \$27 million loss in economic impact for each day that the U.S. delays their usage. Many states are establishing a framework for UAS; about 45 states have some type of laws or regulations. Ms. Mertes cited new ways to regulate drones, including encryption services that would limit what drones can do when flying in particular airspaces. These airspaces would limit functionality of the UAS, such as their camera capabilities. Ms. Mertes believes this is a potential opportunity for states to participate in this new frontier, and they could benefit by creating partnerships with the federal government and corporations that are using drones.

Janet Jarratt, dairy farmer, testified before the committee about her concerns regarding lack of regulation for drones. Ms. Jarratt believes there is little doubt that drones, or UAS, have the potential for great utility. In particular, Ms. Jarratt is interested in the protection of livestock and water supplies for towns. Ms. Jarratt referred to SB 303 (2015), which passed unanimously in the senate. While SB 303 was not comprehensive, she said, it was a good start at providing guidelines for the use of drones to law enforcement, and it provided penalties for the abusive use of drones while allowing provisions for people to legally remove offending drones from their property. The bill deliberately did not address the use of commercial drones. Ms. Jarratt concluded by adding that the legislature has it in its power to assure the protection of its constituents while allowing legal uses of drones, with property owners' permission.

Dorey Richards, former attorney for the U.S. Department of the Interior, added that as technology changes, so must legislation. Some issues are reserved for the states to regulate and protect. The FAA regulates airspace above 400 feet, but the states have the ability to legislate the airspace below that. Ms. Richards noted that the National Park Service has banned the use of drones within parks.

Following the panel presentation, members of the committee and panelists discussed the following topics:

- difficulty in crafting legislation that protects the privacy of citizens and protects livestock;
- the potential in adding drones to existing stalking and harassment laws;
- the differences between UAS and hobbyist toys;
- height restrictions set by the FAA and other federal guidelines regarding information gathering; and
- legislation proposed during the last legislative session dealing with the use of drones and the protection of wildlife.

Recess

The meeting recessed at 4:23 p.m.

Tuesday, July 7

High-Speed Internet Access (Broadband Deployment)

A panel addressed the committee about broadband initiatives in New Mexico. Duncan Sill, general manager, REDI Net, discussed the joint powers agreement that encompasses nine cities and communities in northern New Mexico, including Espanola, Ohkay Owingeh and Santa Fe County. In 2007, a regional economic development plan was developed for northern New Mexico that identified high-speed broadband as a priority. By August 2010, a federal grant of \$10.6 million was awarded to construct REDI Net — a broadband network for the northern portion of the state. The coverage area includes over 140 miles of fiber with point-of-presence facilities. REDI Net is currently developing asset management, network expansion and sector alignments to benefit public safety, education, health care and economic development in the region. In addition to its current public and private partnerships, REDI Net is fostering partnerships with other entities, including UNM and the U.S. Bureau of Reclamation, to promote long-term sustainability. The work plan for FY 2016 includes:

- assisting tribal and local jurisdictions in assessment and development of resources/strategies;
- collaboration with the Public School Facilities Authority (PSFA);
- enhancing coordination with higher education partners and local and tribal entities to leverage potential investments and network development;
- further coordination with telehealth and telemedicine;
- continuing to work with New Mexico stakeholders to address ongoing gaps and investment, including participation with the Jobs Council;
- assisting local and regional communities in broadband service offerings, including active participation with internet service providers; and
- increasing outreach activities.

Laura Gonzales, REDI Net, noted that the cost of broadband in these communities has dropped significantly; the more users on the network, the lower the cost of the broadband. A large effort has been focused on coordinating with all of the local school districts and universities. Ms. Gonzales added that the current setup allows for the adjustment of the speed of the bandwidth during specific times. In particular, schools do not always need high-speed internet, but when students are doing testing that requires large groups to be online at once, the bandwidth can be turned up to fit the demand.

Robert Gorrell, director, PSFA, provided information to the committee regarding the Broadband Deficiencies Correction Program (BDCP). SB 159 (2014) was signed into law to address the critical need, particularly in rural areas, for adequate broadband within public schools across the state. Mr. Gorrell pointed out that reliable broadband is essential for a modern education system with an increased reliance on distance learning, online testing, resources for instruction and homework, cloud hosting and teacher professional development. The BDCP has ongoing collaborations with other state agencies and groups with similar initiatives, including the Department of Information Technology (DoIT), Public Regulation Commission (PRC), Public Education Department and several universities and community colleges. The BDCP has two phases of implementation. Phase 1 includes program development and data collection for approximately 900 public schools statewide, including data centers. The goal of this phase is to determine the most cost-effective solution to deliver scalable, reliable and sustainable broadband service to schools. According to Mr. Gorrell, Phase 1 is currently on schedule and has successfully completed the development of methodology for school surveys and a related web interface. The pilot project has been expanded to 35 schools, including the Albuquerque Public Schools data center. Phase 2 will be the corrections phase and is scheduled to begin in early 2016. Mr. Gorrell concluded that the BDCP is on track and has strong momentum; most importantly, the program has a clear direction from leadership that all participants collaborate and eliminate potential duplication, which remains essential to efficient solutions.

Jacqueline Miller, deputy secretary, DoIT, presented the department's latest broadband initiatives to the STTC. Ms. Miller underscored the importance of broadband as an essential utility in promoting economic development. Different technology types, such as copper wirelines and fiber, can be used to deliver broadband. In some instances, it is necessary to use existing infrastructure to set up broadband; each area of service is different.

Ms. Miller outlined the DoIT's initiatives and the current options for the state moving forward:

- the Statewide Interoperable Radio Communications Internet Transport System, including the conversion of state telecom sites to digital microwave;
- the Public Safety Broadband Network, addressing the needs of first responders;
- network operation services, centralizing network monitoring services;
- E-Rate — federal support for schools, libraries and health facilities; and
- the New Mexico Broadband Program, a central broadband planning entity.

After the panel presentation, members of the committee asked several questions regarding the broadband initiatives in New Mexico. The following points were discussed by the presenters and the STTC:

- issues regarding specific communities in northern New Mexico that lack connectivity to the REDI Net network;
- statewide mapping of broadband infrastructure and the need for continual funding to continue the mapping process;
- collaboration efforts by service providers;
- eligibility status for E-Rate funding for REDI Net;
- the need to have broadband available for students not only at school, but also at home; and
- the importance of fostering public-private partnerships in establishing broadband networks.

Telecommunications Policy

Katherine Martinez, local government affairs director, CenturyLink, Johnny Montoya, regulatory affairs director, CenturyLink, and Leo Baca, director, state legislative affairs, CenturyLink, told the committee that investment in broadband is imperative to create a regionally competitive environment for economic investors. They pointed out that New Mexico ranks in the bottom quarter of states with minimally adequate broadband and that there is a significant lack of broadband in rural areas, where 25% of the state's population and 39% of the state's businesses reside. They reported on the progress of their company in the deployment of broadband, including:

- fiber extended by CenturyLink to 295 outstate/rural locations;
- \$4 million year-to-date in overall fiber expansion statewide;
- \$1.3 million year-to-date in fiber to the tower for cellular towers;
- increased broadband accessibility beyond the Albuquerque metro area;
- replacement of an old copper network with a fiber network for increased broadband accessibility on the Pueblo of Acoma;
- internet access from CenturyLink in 94% of households in Dona Ana County and qualification for seven megabytes per second (Mbps) or higher internet speeds for 78% of Dona Ana County customers;
- internet access from CenturyLink in 93% of households in McKinley County and qualification for seven Mbps or higher internet speeds for 53% of McKinley County customers; and
- internet access from CenturyLink in 92.3% of households in Socorro and qualification for 12 Mbps or higher internet speeds for 41.4% of Socorro customers.

The CenturyLink presenters said that the most costly issue facing broadband expansion is right-of-way access and that one of the reasons for the costliness is that state law prohibits counties from collecting franchise fees, which poses difficulties when counties seek to recover

costs for right-of-way use. Counties are unable to determine actual costs for individual utilities when multiple parties are within the right of way. It becomes even more costly when crossing tribal lands, where negotiations for right-of-way use can take years, they testified. Public-private partnerships are good ways to work through some of these obstacles and are better alternatives to government-owned networks, which, they said, have a high failure rate and ultimately cost taxpayers millions of dollars.

In March 2014, CenturyLink filed a motion with the PRC requesting to be regulated as a mid-size carrier, and, on April 8, 2015, the PRC ruled that CenturyLink is a mid-size carrier. The PRC then issued a notice of developing revised mid-size carrier rules. However, the PRC recently suspended that rulemaking effort.

Taking up the broadband issue again, the presenters told the committee about Public Regulation Commissioner Sandy Jones issuing a notice of inquiry and establishing a task force to look into expanding broadband coverage in New Mexico. The task force was to recommend an action plan on July 8, after the committee meeting, that will address minimum upload and download speeds; a statewide mapping tool to identify unserved and underserved areas in New Mexico; regulatory and legal barriers that may exist; and recommendations for funding opportunities.

The presenters concluded their remarks by summarizing the Federal Communications Commission (FCC) action on its Connect America Fund. They testified that this fund had strong support from the New Mexico congressional delegation and that on April 29, 2015, the FCC announced state-level offers to companies. CenturyLink was offered approximately \$10.9 million in annual Connect America Fund support in its New Mexico service area, but fund requirements include internet speeds of 10 Mbps download and one Mbps upload to over 25,000 homes and businesses in high-cost areas over a six-year period. CenturyLink is currently evaluating the offer and has until August 27, 2015 to accept or decline the funding. If the company declines funding, there will be a future reverse auction to allocate the money.

Discussion following the presentation included:

- nuisance telemarketing calls to businesses and how to stop or prohibit robo-dialing solicitations;
- simultaneous dialing;
- federal funding for the "last mile" of broadband deployment;
- a broadband task force report to the committee at a future meeting;
- hacker emails that appear to be from CenturyLink;
- "unspam";
- CenturyLink service information by county;
- the location of the PRC hearing on the broadband task force; and
- public-private partnerships for broadband deployment.

Adjournment

There being no further business before the committee, the second meeting of the STTC adjourned at 12:15 p.m.

Revised: August 13, 2015

**TENTATIVE AGENDA
for the
THIRD MEETING
of the
SCIENCE, TECHNOLOGY AND TELECOMMUNICATIONS COMMITTEE**

**August 25-26, 2015
School of Energy
5301 College Blvd.
San Juan College
Farmington**

Tuesday, August 25

- 10:00 a.m. **Introductions and Welcome**
—Toni Pendergrass, President, San Juan College (SJC)
- 10:10 a.m. (1) **Energy Economics**
—Randy Pacheco, Dean, School of Energy, SJC
—Daniel Fine, Associate Director, New Mexico Center for Energy Policy,
New Mexico Institute of Mining and Technology
—Wally Drangmeister, Director of Communications, New Mexico Oil and
Gas Association
—Sanders Moore, Director, Environment New Mexico
- 12:00 noon **Lunch (hosted off-site)**
- 2:30 p.m. (2) **Tour and Presentations, San Juan College School of Energy Work
Force Training**
—Randy Pacheco, Dean, School of Energy, SJC
- 3:30 p.m. (3) **San Juan College Information Technology Systems**
—Shelley Amator, Chief Information Officer, SJC (invited)
- 5:00 p.m. **Recess**

Wednesday, August 26

- 9:00 a.m. (4) **Information Technology Commission Statutory Authority Review**
—Darryl Ackley, Chief Information Officer
- 11:00 a.m. (5) **Department of Information Technology Portfolio Status Report**
—Darryl Ackley, Secretary, Department of Information Technology
- 12:00 noon **Adjourn**

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

**August 25-26, 2015
School of Energy
5301 College Blvd.
San Juan College
Farmington**

The third meeting of the Science, Technology and Telecommunications Committee (STTC) was called to order by Representative James E. Smith, chair, on Tuesday, August 25, 2015, at 10:14 a.m. at the School of Energy at San Juan College (SJC) in Farmington. Due to a lack of a quorum, the committee met as a subcommittee.

Present

Rep. James E. Smith, Chair
Sen. Michael Padilla, Vice Chair
Rep. Stephanie Garcia Richard
Rep. Bill McCamley
Rep. Debbie A. Rodella (8/26)
Rep. Carl Trujillo

Absent

Sen. William F. Burt
Rep. Jason C. Harper
Sen. Daniel A. Ivey-Soto
Rep. Conrad James
Sen. Bill B. O'Neill
Sen. John C. Ryan
Rep. John L. Zimmerman

Advisory Members

Sen. Carlos R. Cisneros
Rep. Kelly K. Fajardo
Sen. Richard C. Martinez
Sen. Steven P. Neville (8/25)
Sen. Nancy Rodriguez

Sen. Jacob R. Candelaria
Sen. Ron Griggs
Rep. Antonio Maestas
Sen. Mary Kay Papen
Sen. William H. Payne
Rep. Nick L. Salazar
Rep. Luciano "Lucky" Varela
Sen. Peter Wirth
Rep. Monica Youngblood

(Attendances dates are noted for members who were not present for both meeting days.)

Staff

Gordon Meeks, Legislative Council Service (LCS)
Ralph Vincent, LCS
Alex Tapia, LCS

Guests

The guest list is in the meeting file.

Handouts

Handouts and other written testimony are in the meeting file and are located on the New Mexico Legislature web site.

Tuesday, August 25

Members of the committee introduced themselves.

Welcome to SJC

Dr. Toni Pendergrass, president, SJC, welcomed the committee to the college and introduced present members of the faculty. Dr. Pendergrass provided the committee with an overview of the college. SJC was founded in 1956 with 25 students; today, there are almost 17,500 students enrolled at the college's five campuses. The college currently offers more than 100 degrees and certificates, with 32 years old being the average age of students. SJC has instituted several programs to encourage student enrollment, success, retention and completion.

Dr. Pendergrass shared a video highlighting the "15 to Finish" campaign — an initiative to bolster on-time graduation that is now being shown at all student orientations. In addition to working to increase current students' productivity and success, SJC has partnered with local high schools to combat deficiencies in mathematics, particularly algebra. Dr. Pendergrass also provided the committee with information on the newly built School of Energy. Responding to inquiries from the committee, Dr. Pendergrass briefly discussed SJC's dual credit program for area high schools.

Panel on Energy Economics

As part of a panel, Randy Pacheco, dean, School of Energy, addressed the committee about the school's work to reach industry needs. The facility consists of more than 65,000 square feet, including classrooms, laboratories and training facilities. Formerly known as the Regional Energy Training Center, the School of Energy's mission is to design and execute relevant technical training courses in close collaboration with energy experts, such that energy industry stakeholders regard graduates from the program as the most competent at delivering efficient and safe energy services. Industry leaders, including BP America, Merrion Oil & Gas, ConocoPhillips and DJ Simmons, invested in the \$15.6 million facility. These partners look for new employees who have the necessary training and certifications to become professionals in the field and in their companies. The School of Energy continues to partner with energy employers to address their training and labor needs; design and offer training to enhance job skills and ensure safe work practices; and provide learning opportunities for individuals needing new skills to gain employment or advance in their jobs.

Mr. Pacheco highlighted the various programs offered to students that directly translate to field work. The School of Energy is currently facing challenges in recruitment and referrals of trainees, public information and staying responsive to the ever-changing interests, needs and demands of the energy industry. Looking toward the future, the School of Energy is looking to continue with advanced training, as well as expanding existing programs and adding new programs, including low-carbon-emission technology. Mr. Pacheco emphasized the school's goal to be the premier model for energy training in the country.

Daniel Fine, associate director, New Mexico Center for Energy Policy, New Mexico Institute of Mining and Technology, provided the committee with background on oil production and discussed the history of the oil market and the changes over time. According to Dr. Fine, the southwestern region and North Dakota are currently the target of an oil price war between the Organization of the Petroleum Exporting Countries (OPEC) and non-OPEC oil suppliers, namely Saudi Arabia. This price war began when OPEC refused to cut production in late 2014, when the Brent Crude and WTI Crude oil prices sharply declined. This represented a historic change, as OPEC would no longer cut its supply of world oil to sustain its price. New oil production is reaching a record and could close at over 140 million barrels in 2015 as a result of industry operational resilience and technology. This includes renegotiated contracts with service companies and infrastructure owners. Dr. Fine explained that New Mexico is seeing this reflected in the price of oil, with more supply driving down the prices. With the possibility of this price war continuing for the next three years, Dr. Fine postulated that New Mexico could lose up to \$2 million in revenue.

Wally Drangmeister, vice president and director of communications, New Mexico Oil and Gas Association, discussed the importance of oil and natural gas production to state revenues. In fiscal year (FY) 2014, the state general fund received 35 percent of its revenue from oil and gas. Mr. Drangmeister referenced the oil and gas industry contributions to state and local revenues and the 2015 state budget update from the Department of Finance and Administration (DFA). New Mexico production levels are at a record high, with 72 million barrels produced in the first six months of 2015. The industry is currently facing several challenges, including: a low price environment; costly federal regulations; a problematic cost/benefit ratio of recent and expected proposals; and local oil and gas ordinances. Federal regulations are having a huge impact on the state, with the U.S. Environmental Protection Agency methane rule and additional venting and flaring regulations. Mr. Drangmeister commented that with the lower price environment, companies have dramatically reduced the time to drill wells in the state. The presentation noted some of the improvements in technologies and operating processes.

Sanders Moore, director, Environment New Mexico, discussed the economics of renewable energy in New Mexico. New Mexico is the second sunniest state but is currently producing less than three percent of its electricity from the sun. Based on a state ranking of the amount of solar electric capacity installed in 2014, New Mexico ranked number 10. However, the state is not reaching its potential for cumulative solar capacity installed. The cost of solar panels has decreased and is projected to continue to fall. Ms. Moore touted solar energy as a job

creator, noting the existence of more than 60 solar businesses and a 45 percent increase in solar jobs in the state over the last two years. In addition to its solar energy generation, New Mexico was also ranked as the twelfth windiest state, underscoring its potential for wind energy. New Mexico is currently ranked eighteenth in the nation in wind production, with room to expand the industry.

In 2003, the New Mexico Wind Energy Center was built. This facility is projected to bring more than \$40 million into rural De Baca and Quay counties over the next 25 years. Ms. Moore concluded by adding that New Mexico could generate more than 1,500 times the energy it uses and become the national leader in renewable energy.

In response to committee members' questions, the following points were discussed by the panel:

- completion times for programs offered by the School of Energy;
- industry age limitations for early college students in high school pursuing degrees in energy-related fields;
- resilience of U.S. oil production, particularly in New Mexico;
- the reduction in revenues to the general fund from oil and gas due to price decreases and its effect on the state budget;
- the need for a long-term strategic plan for the oil and gas industry;
- tax credits and deductions available for the different energy industries (oil, natural gas, wind, solar and nuclear);
- the environmental impact caused by hydraulic fracturing, specifically water contamination and seismic activity;
- the difference between crude oil prices and the price consumers are paying at the gas pump;
- geopolitics and economic pressures contributing to gas pump prices;
- cultural and historical sites affected by the federal Bureau of Land Management regional drilling plan;
- the status of the environmental lawsuit seeking an injunction to stop all oil and gas development in the San Juan Basin;
- the need for renewable-energy storage; and
- the impending release of a New Mexico energy plan from the Office of the Governor.

SJC Information Technology (IT) Systems

Shelley Amator, chief information officer, SJC, provided an overview of the online programs offered through the college. Over the last several semesters, SJC has been steadily growing the number of student credit hours available online. In the fall of 2013, SJC selected Instructure's Canvas as its learning management system and began converting courses from the old system. Ms. Amator highlighted the advantages of the Canvas system and its ease of use for faculty members. One benefit of Canvas is the built-in "Learning Tools Interoperability" function that allows users to integrate multiple publishers and other tools that extend the

functionality of Canvas. Canvas is currently being used by 15 institutions around the state, which adds to program familiarity if a student transfers to another school or college.

Committee members inquired about the following information:

- the need for academic infrastructure with the growing use of virtual classrooms;
- growth in enrollment from nontraditional students;
- proctoring of tests with the online format; and
- the cost of online classes, as opposed to traditional classes, for universities.

Tour of the School of Energy Work Force Training Facility

Members of the committee toured the School of Energy's work force training facility.

Recess

The meeting recessed at 5:15 p.m.

Wednesday, August 26

Information Technology Commission (ITC) Statutory Authority Review

Darryl Ackley, secretary of information technology and chief information officer (CIO), Department of Information Technology (DoIT), addressed the committee on the subject of IT governance in the state. Secretary Ackley provided an overview of the structure of governance, giving examples of how agencies receive project approval in accordance with the state strategic plan. The presentation covered the process of project oversight and compliance from the initiation phase to closeout.

Secretary Ackley also reviewed the ITC, established as part of the DoIT Act. The ITC is composed of 15 voting members and five nonvoting members, including the CIO. Registered lobbyists are not permitted to be part of the commission. The powers and duties of the ITC include reviewing and approving the development and implementation of the state IT strategic plan, critical IT initiatives for the state, identification of IT needs of state agencies and the state information architecture and the IT strategic plan for updates and compliance by executive agencies.

In response to questions from committee members, Secretary Ackley addressed the following:

- clarification of the committee structure;
- the dual role of the secretary serving as both the CIO and the department secretary;
- the need for cleanup in state statute to increase efficiency and redundancy;
- security vulnerabilities and breaches in the state's IT systems;
- prohibiting state resources for personal activity in the wake of the recent Ashley Madison hack;

- the usage of software like Office 365 on personal computers;
- continuing education for staff at the DoIT and other agency IT departments; and
- defining IT classifications and roles within state agencies.

After discussion from the committee, Secretary Ackley was requested to compile recommendations on simplifying the governance structure and the evaluating role of the ITC to be presented during the September meeting of the STTC. A member of the committee suggested that STTC members read the resignation letter of former Representative Jim W. Hall as chair of the ITC. The letter contained various suggestions and recommendations for the ITC.

DoIT Portfolio

Following the previous presentation, Secretary Ackley provided the committee with the Information Technology Portfolio Status Report. Secretary Ackley reviewed the various IT projects currently being conducted throughout state agencies and their status. There are currently 94 projects under way with an estimated cost of over \$387 million. Secretary Ackley noted that approximately three-fourths of the current projects are in the closeout phase. During the presentation, Secretary Ackley spoke specifically about the following DoIT projects and their progression.

1. Statewide Interoperable Radio Communications Internet Transport System (SIRCITS). This project aims to convert analog to digital microwave to provide middle mile broadband service.
2. Motor Vehicle Department System Modernization Tapestry. This project will migrate the current system off of multiple conflicting subsystems into a single-platform, customer-centric model using current technology.
3. Human Services Department (HSD) State-Based Marketplace (SBM). This project will enhance the Automated System Program and Eligibility Network (ASPEN) integrated public assistance eligibility determination system to accommodate the transition from the federally facilitated marketplace to an SBM that will be implemented by the New Mexico Health Insurance Exchange.
4. Children, Youth and Families Department Enterprise Provider Information and Constituent Services (EPICS). This is a multi-phase/multi-year project to consolidate the agency's legacy system and more than 25 other stand-alone systems into one enterprise-wide web application.
5. State Land Office's Land Information Management System (LIMS). This system will replace the existing surface and minerals land management, leasing and associated financial functionality of the Oil and Natural Gas Administration and Revenue Database (ONGARD).
6. HSD Medicaid Management Information System Replacement (MMISR). This is a project to design, develop and implement a New Mexico MMISR, replacing the existing service and supporting applications.
7. HSD Child Support Enforcement System Replacement (CSESR). This will enhance or replace New Mexico's existing child support enforcement system.

8. Taxation and Revenue Department's ONGARD Modernization.
9. DoIT Statewide Infrastructure Replacement and Enhancement (SWIRE). The objective of SWIRE is to plan, design, acquire, purchase and implement infrastructure for public safety communications statewide for improved communication equipment affecting all emergency responders.

In response to Secretary Ackley's presentation, members of the STTC inquired about the following issues:

- funding and procurement, including what percentage of contracts are with New Mexico companies;
- the accuracy of planning and projection of project costs and scheduled completion estimates;
- recommendations on the Statewide Human Resources Accounting and Management Reporting (SHARE) program; and
- constituent issues with the Workforce Solutions Department.

Adjournment

There being no further business before the committee, the third meeting of the STTC adjourned at 11:38 a.m.

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

**September 21-22, 2015
Ruidoso Convention Center
111 Sierra Blanca Drive
Ruidoso**

The fourth meeting of the Science, Technology and Telecommunications Committee (STTC) was called to order by Representative James E. Smith, chair, on Monday, September 21, 2015, at 10:10 a.m. at the Ruidoso Convention Center in Ruidoso.

Present

Rep. James E. Smith, Chair
Sen. Michael Padilla, Vice Chair
Sen. William F. Burt (9/22)
Rep. Stephanie Garcia Richard
Rep. Jason C. Harper
Rep. Conrad James
Rep. Bill McCamley
Rep. Debbie A. Rodella (9/22)
Rep. Carl Trujillo
Rep. John L. Zimmerman

Absent

Sen. Daniel A. Ivey-Soto
Sen. Bill B. O'Neill
Sen. John C. Ryan

Advisory Members

Sen. Carlos R. Cisneros
Rep. Kelly K. Fajardo
Sen. Ron Griggs
Sen. Richard C. Martinez
Rep. Monica Youngblood

Sen. Jacob R. Candelaria
Rep. Antonio Maestas
Sen. Steven P. Neville
Sen. Mary Kay Papen
Sen. William H. Payne
Sen. Nancy Rodriguez
Rep. Nick L. Salazar
Rep. Luciano "Lucky" Varela
Sen. Peter Wirth

(Attendances dates are noted for members who were not present for both meeting days.)

Staff

Gordon Meeks, Legislative Council Service (LCS)
Tessa Ryan, LCS
Alexandria Tapia, LCS

Guests

The guest list is in the meeting file.

Handouts

Handouts and other written testimony are in the meeting file and are located on the New Mexico Legislature web site.

Monday, September 21

Members of the committee introduced themselves.

SHARE Status

Darryl Ackley, secretary of information technology and chief information officer, Department of Information Technology (DoIT), addressed the committee regarding the current status of the SHARE system. SHARE is the enterprise resource planning system that the state uses to automate back-office business functions, including employee timesheets, benefit calculations and vendor payments, Secretary Ackley said. SHARE is based on the world-class PeopleSoft platform that is used by more than 20 states and by numerous Fortune 500 companies. Within the system there are three programs: financial management, human capital management and enterprise learning management (ELM). The first two programs are currently in operation, and the ELM is in the process of being implemented. Secretary Ackley emphasized that the SHARE system is working, and he highlighted several examples of its success over the previous 18 months. In addition, SHARE is continuously evolving by increasing its performance, improving its ability to troubleshoot and improving user-facing capabilities. Internal staff is now being used to run updates on the SHARE system.

Tom Clifford, secretary, Department of Finance and Administration (DFA), echoed the success of the SHARE system's complete overhaul of the user access model by explaining that the updates require a balancing act with each individual agency. User system accessibility is determined by each agency, and these functions are now limited to an employee's job duties, rather than over-granting wide access.

Secretary Ackley outlined the modernization of the SHARE system with the implementation of the third component, ELM. With ELM, an employee's transcript follows the employee throughout the employee's career, which helps agencies determine if the employee has the training necessary for specific system accessibility. The DoIT is a pilot agency for ELM, and the DoIT is currently using this module for training.

The DoIT is working to achieve a "new normal" for the system. SHARE requires regular, skilled maintenance, and it is essential to adapt the state's business processes to the PeopleSoft platform, rather than customizing SHARE to fit the current processes — adaption has been the case in the past and that limits the state from taking advantage of SHARE's full capabilities.

Secretary Clifford stressed the importance of distinguishing business process shortcomings from issues driven by the software.

Secretary Clifford provided an historic overview of the cash reconciliation project. The state's general fund investment pool balances had not been fully reconciled since the implementation of the SHARE system in July 2006. Reporting is now being conducted on a monthly basis. Secretary Clifford outlined the steps and phases that are being taken to address the issue, which include bringing third-party payments into the SHARE system. Secretary Clifford also noted several critical non-system factors that are affecting the success of SHARE:

- employee turnover and the ability to fill positions quickly and transfer knowledge;
- coordinated, structured and evergreen training programs;
- model accounting practices understanding and related training;
- the independence of agencies and resistance to change;
- the strength of the existing chart of accounts and other chart field items; and
- the continuing changes to system requirements due to new laws and regulations.

In conclusion, the presenters reiterated that SHARE is working and has been materially improved. The system continues to improve and is still being modernized.

In response to questions from the committee, the following topics were addressed:

- ownership of rights for the modules in the SHARE system and the PeopleSoft platform;
- system upgrades to the latest version of PeopleSoft, which include a staged upgrade;
- the need for real-time reporting of payments through third parties;
- criticisms of the initial rollout of the SHARE system and current collaboration with agencies to address issues;
- the time frame for the cash reconciliation process;
- concerns with the state's bond rating;
- the difficulty of finding qualified information technology professionals for personnel;
- requirements needed by the Office of the State Treasurer to consolidate operations under the SHARE system;
- the status of legislative appropriation for system upgrade;
- the need for employee training for system access and improvement of oversight for access;
- payroll payments from the DFA and third parties that issue payments;
- the entities in addition to state agencies that currently use the SHARE system; and
- issues with broadband related to the usage of SHARE.

Approval of Minutes

Upon a motion by Representative Garcia Richard and seconded by Representative Zimmerman, the minutes from the July and August STTC meetings were unanimously approved by the committee.

Net Neutrality

Mike Ripperger, Telecom Bureau chief, Public Regulation Commission (PRC), provided the committee with an overview of net neutrality. Net neutrality essentially refers to equal treatment of all internet traffic, with minimal or no interference from third parties, and is associated with maintaining an "open internet". There have been several court challenges regarding net neutrality, most recently in 2013 by the Federal Communications Commission (FCC). Mr. Ripperger recapped the background on the FCC 2010 Open Internet Order for the committee. The 2010 order adopted rules of transparency, no blocking and no unreasonable discrimination. At the time, the FCC did not apply the rules to wireless internet broadband service on the rationale that the market for wireless broadband service was still developing. In 2014, Verizon Wireless challenged the FCC 2010 Open Internet Order in the District of Columbia Circuit Court. The court struck down the no blocking and no unreasonable discrimination portions of the order but upheld the transparency rules, which the FCC stated were not contingent on network operators being classified as common carriers.

Mr. Ripperger discussed the most recent order by the FCC regarding net neutrality, which was issued in April 2015. This order set "bright line" rules for the management of internet traffic by internet service providers. These rules prohibited blocking and throttling of internet traffic, as well as paid prioritization. For the time being, the net neutrality order does not require contributions from broadband providers into the federal Universal Service Fund, pending further deliberations by the FCC. Mr. Ripperger defined several network considerations regarding the FCC's 2015 order and highlighted the key issues the order attempts to address. The presentation noted the pros and cons for net neutrality. There have already been appeals filed by industry leaders against the net neutrality order, with oral arguments scheduled for this December, he said. Party arguments state that the new rules will stifle innovation and harm consumers and the internet. The plaintiffs also believe that classification of broadband as a common carrier service is arbitrary and capricious and violates federal law.

Mr. Ripperger addressed the following inquiries from the STTC:

- an explanation of throttling;
- jurisdictional issues related to governing the internet and broadband;
- plans for statewide broadband infrastructure;
- the potential impact that increased state regulation might have on providers expanding services into rural areas; and
- approaches by other states regarding broadband infrastructure.

Drones — Balancing Economic Benefits with Public Safety and Privacy

Jennifer Sensiba, New Mexico Air Rangers, met with the STTC to discuss issues related to drones. Ms. Sensiba highlighted some of the benefits associated with drone technology, including aiding in public safety and infrastructure planning. Ms. Sensiba provided the committee with suggestions regarding potential legislation and with information on her group, New Mexico Air Rangers.

The committee discussed the following points with Ms. Sensiba:

- issues related to privacy and trespass;
- the capabilities of drones, including operational heights and ranges;
- drone operator registration;
- commercial versus hobbyist use;
- approaches by other states to address the usage of drones;
- the 2015 senate memorial regarding drone usage to track wildlife;
- the issuance of warrants based on drone findings and intelligence gathering; and
- polices used by companies like Google as a template for future legislation.

Following the presentation and discussion with the committee, Ms. Sensiba provided members of the STTC with a demonstration of a drone.

Recess

The meeting recessed at 4:33 p.m.

Tuesday, September 22

National Solar Observatory, Cloudcroft — Status

Jon Holtzman, professor and department head, Department of Astronomy, New Mexico State University (NMSU), addressed the STTC regarding the National Solar Observatory located in Cloudcroft. The observatory, originally founded in the 1950s as a United States Air Force facility, is scheduled to be decommissioned after 2017. Several entities, such as the National Science Foundation (NSF) and NMSU, want to keep the facility running, but these entities lack the funding to do so individually. NMSU is proposing to form a consortium of universities in order to keep the site open. Under this proposal, NMSU would operate the entity, and the NSF would retain ownership of the site. According to the proposal, NMSU is seeking \$273,000 for fiscal year 2017. NMSU has cited the National Solar Observatory as a top priority, recognizing its educational and research value to the university and to the state of New Mexico. Dr. Holtzman noted that an investment by the state would help to attract significant long-term external investment; help connection with statewide national laboratories and universities; create a tourism hotspot; and have a substantial impact on economic development in Otero County.

James McAteer, assistant professor, NMSU, discussed the technological capabilities of a telescope that is housed at the observatory. Dr. McAteer shared with the committee several

images produced by the telescope, noting that the observatory's building may be dated but the technology in use is top-of-the-line. In addition, Dr. McAteer highlighted the many educational opportunities that the facility offers, including hands-on graduate student training.

Presenting with representatives from NMSU, Mark Klaene, site operations manager, Apache Point Observatory, provided information about the site adjacent to the National Solar Observatory. While the Apache Point Observatory is privately owned, the two facilities operate complementary to each other. Mr. Klaene discussed some of the economic impact the sites have had on the region, including high-salaried professionals employed by the observatories. Mr. Klaene concluded the presentation by talking about the Sunspot Astronomy Visitor Center at the National Solar Observatory, which receives approximately 20,000 visitors per year.

The panelists discussed with the STTC the following topics:

- interest from other state educational institutions and national defense installations in both observatories;
- occasional use of the facility by White Sands Missile Range and the National Aeronautics and Space Administration;
- usage of the National Solar Observatory by members of the consortium;
- the uniqueness of the technology housed at the facility;
- the number of potential employees at the facility and economic impact on the region;
- alternative uses of the facility, including conventions and summer camps;
- the importance of hands-on training for graduate students;
- real-world applications for the technology and the uses of the information gathered by the telescope; and
- the commitment by NMSU to submit the funding request as part of its budget in the 2016 session.

Connect America Fund Status

Leo Baca, state legislative affairs director, CenturyLink, provided an update on the federal Connect America Fund (CAF). Mr. Baca reported that in August, CenturyLink announced that it will accept CAF-2 funding from the FCC to bring high-speed internet services to more than 25,000 households and businesses in FCC designated rural census block areas across CenturyLink's New Mexico service area. The FCC created the CAF program by transitioning money currently supporting traditional rural landline service and using this money to build out broadband in rural America. Out of this money, New Mexico will receive approximately \$70 million over the next six years to expand and support broadband in rural parts of the state. The CAF-2 funding is expected to bring many benefits to rural communities, including economic development and better access to education and health care services, including distance learning and telemedicine. Following the initial build-out plan finalization, Mr. Baca stated that construction will begin no later than early 2016.

The FCC's CAF-2 program enables broadband expansion to approximately 55 percent of the eligible homes and businesses in rural New Mexico. In order to expand on and complement what the FCC has done, CenturyLink is asking the New Mexico Legislature to consider the following: 1) establishing broadband tax incentives; and 2) implementing a state broadband program similar to the FCC's CAF-2 program for census block areas that are not eligible for CAF-2 support.

Adriana Badal, a representative from Sacred Wind Communications, explained that not all companies are initially eligible for CAF-2 funding. Because some companies opted not to take the funding, there is a reverse option for the money left over. Sacred Wind Communications has since applied for the remainder of the CAF-2 funding and is working with engineers to identify areas of service improvement.

The committee discussed several topics relating to the presentation, including:

- actions being taken by other states to address broadband infrastructure needs in rural areas;
- current proposals by state agencies, such as the DoIT;
- types of tax incentives and credits that might be beneficial;
- consumer protection and reasonable rates;
- a request for maps identifying the census block areas and the proposed build-out areas;
- explanation of the technology being used and its speed specifications; and
- potential for local matching funds for broadband projects.

Broadband Task Force Steering Committee Report to the PRC

Charlie Ferrell, executive director, New Mexico Exchange Carrier Group, introduced members of the Broadband Task Force Steering Committee and the PRC to the STTC. Mr. Ferrell also recognized stakeholders and industry representatives present in the audience. Mr. Ferrell began his presentation by providing background on the Broadband Task Force Steering Committee and the task force's makeup. The PRC, in recognition of the fact that many areas of the state are either unserved or underserved in regard to broadband services, established a task force to investigate ways to address this lack of adequate broadband services in the state. The task force was charged with:

- reviewing minimum upload/download speeds;
- producing a map showing technology used in various parts of the state and showing the lack of broadband in some areas;
- identifying barriers to deployment of broadband;
- reviewing possible funding sources; and
- recommending specific actions.

On June 10, 2015, a report and action plan were filed with the PRC. Mr. Ferrell highlighted some of the key findings laid out in the report. The task force determined that the PRC does have the authority to adopt a statewide broadband program under the auspices of the Rural Telecommunications Act of New Mexico (Section 63-9H-6 NMSA 1978). The task force recommended that the PRC establish an infrastructure grant program in which carriers can apply for funding based on need, which would be part of the broadband support program. Applications for funding would be submitted by carriers certified as eligible telecommunications providers and would be analyzed with a focus on unserved, underserved and comparable-access areas.

Mr. Ferrell explained that the PRC's next step has been the issuance of a notice of proposed rulemaking, including a draft rule. The draft includes the implementation of a statewide broadband program. A hearing has been set for November 4, 2015. The PRC will utilize the existing State Rural Universal Service Fund rules as a vehicle for the creation of a broadband program. The rulemaking process will allow for all parties to participate in the process. According to Mr. Ferrell, the PRC has determined that the new rules will go into effect on January 1, 2016. The draft rule also incorporates a definition of "rural", accountability measures and a sunset clause of five years.

Following the presentation, members of the committee and industry representatives discussed the findings of the report and its recommendations. Some key points addressed were:

- funding options in the form of surcharges;
- issues affecting the unsustainability of the State Rural Universal Service Fund;
- dissenting opinions from industry representatives regarding the action plan;
- support from some service providers for a legislative appropriation;
- the importance of broadband access for economic development, health care and education; and
- the need for a comprehensive plan regarding broadband infrastructure.

Adjournment

There being no further business before the committee, the fourth meeting of the STTC adjourned at 12:35 p.m.

Revised: October 13, 2015

**TENTATIVE AGENDA
for the
FIFTH MEETING
of the
SCIENCE, TECHNOLOGY AND TELECOMMUNICATIONS COMMITTEE**

**October 19-20, 2015
Room 311, State Capitol
Santa Fe**

Monday, October 19

- 10:00 a.m. **Introductions**
- 10:10 a.m. (1) **[Statewide Victim Notification System, Case Management System and Paperless Project](#)**
—Henry Valdez, Director, Administrative Office of the District Attorneys
- 11:30 a.m. **Lunch**
- 1:00 p.m. (2) **[Unspam](#)**
—Eric Langheinrich, Chief Executive Officer (CEO), Unspam (invited)
- 2:30 p.m. (3) **[FatPipe ABQ Technology Startup Incubator Model](#)**
—Lisa J. Adkins, Chief Operating Officer and Director, FatPipe ABQ
- 3:30 p.m. (4) **[Kit Carson Broadband](#)**
—Luis Reyes, CEO and General Manager, Kit Carson Electric Cooperative, Inc.

Tuesday, October 20

- 9:00 a.m. (5) **[House Memorial 24 \(2015\), Abusive Telemarketing Practices](#)**
—Sandra Skogen, Associate General Counsel, Public Regulation Commission
—Joseph Yar, Esq., Office of the Attorney General
- 10:00 a.m. (6) **[Personal Transportation for Hire Policies](#)**
—Representative Monica Youngblood
—Marla Shoats, Lobbyist, Uber
- 11:00 a.m. (7) **[Light Direction and Ranging](#)**
—Tasia Young, Lobbyist, New Mexico Association of Counties
—Erle Wright, Data Integration Administrator, Santa Fe County
—Mike Inglis, New Mexico Geospatial Advisory Committee
- 12:00 noon **Adjourn**

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

**October 19-20, 2015
Room 311, State Capitol
Santa Fe**

The fifth meeting of the Science, Technology and Telecommunications Committee (STTC) was called to order by Representative James E. Smith, chair, on Monday, October 19, 2015, at 10:10 a.m. in Room 311 at the State Capitol in Santa Fe.

Present

Rep. James E. Smith, Chair
Sen. Michael Padilla, Vice Chair
Sen. William F. Burt
Rep. Stephanie Garcia Richard
Rep. Jason C. Harper
Sen. Bill B. O'Neill
Rep. Debbie A. Rodella
Rep. Carl Trujillo
Rep. John L. Zimmerman

Absent

Sen. Daniel A. Ivey-Soto
Rep. Conrad James
Rep. Bill McCamley
Sen. John C. Ryan

Advisory Members

Sen. Carlos R. Cisneros
Rep. Kelly K. Fajardo
Sen. Richard C. Martinez
Rep. Nick L. Salazar
Rep. Luciano "Lucky" Varela
Rep. Monica Youngblood

Sen. Jacob R. Candelaria
Sen. Ron Griggs
Rep. Antonio Maestas
Sen. Steven P. Neville
Sen. Mary Kay Papen
Sen. William H. Payne
Sen. Nancy Rodriguez
Sen. Peter Wirth

Staff

Ralph Vincent, Legislative Council Service (LCS)
Nancy Martinez, LCS
Alexandria Tapia, LCS

Guests

The guest list is in the meeting file.

Handouts

Handouts and other written testimony are in the meeting file and are located on the New Mexico Legislature website (www.nmlegis.gov). Please see handouts for more presentation details.

Monday, October 19

Introductions

The chair welcomed everyone to the fifth meeting of the STTC and invited members of the committee and staff to introduce themselves.

Statewide Victim Notification System, Case Management System (CMS) and Paperless Project

Henry Valdez, director, Administrative Office of the District Attorneys (AODA), presented the agency's current projects to the committee. Mr. Valdez began by introducing the other district attorneys present at the meeting. The AODA is responsible for providing administrative and technical support for all 14 judicial districts in the state through the standardization and coordination of staff development, human resources, fiscal guidance, central victim notification, development and implementation of an automated case management and tracking system and by acting as the central communication link with other criminal justice agencies. Mr. Valdez highlighted some of the agency's major accomplishments for fiscal year (FY) 2015.

Eddy Chavez, information technology (IT) manager, AODA, discussed the technological services and capabilities of the AODA. The IT provided by the AODA is separate from the Department of Information Technology (DoIT), with its network operations center housed in Albuquerque. Mr. Chavez provided background on the AODA's statewide victim notification and case management systems. The victim notification system provides information to all victims that registered; in FY 2015, more than 85,000 notifications were disseminated via the system. The CMS allows its more than 2,000 external users to track the progression of a case. Mr. Valdez emphasized the importance of the statewide CMS to district attorneys and law enforcement officers, which transcends jurisdictional limitations. The CMS also allows for reporting, which can provide interested parties with data on how many types of cases were prosecuted.

Mr. Chavez explained that security is a major issue for and of concern to the AODA due to the sensitive nature of material in its database. The last security audit on the system was conducted over four years ago. The AODA views the lack of funding for crucial security systems as a critical issue and a top priority moving forward. The agency has not received enough funding for IT in the last few years. There is a continuous need to replace aging software and hardware, as well to address security vulnerabilities.

The agency is requesting a total of \$1,140,064 to aid in the support and expansion of these projects. This request includes funding for personnel, software contracts and IT equipment. Mr. Valdez provided a breakdown of the request with an explanation for how the funding would be used.

Several district attorneys stood to testify to the importance of the programs and the need for continual funding and support of them. It was expressed that the programs are vital not just to the district attorneys, but to the safety of the residents of New Mexico. Because confidential information is held in these programs, it is crucial that the information is protected against external threats. A district attorney from the First Judicial District reported that the district is completely wireless at this time, which is very efficient. The system is great for personnel to be able to access information anywhere and anytime.

Members of the committee and the presenters discussed several topics, including:

- the agency's coordination with the DoIT;
- ramifications of not being a part of the DoIT;
- concern over duplication of processes, tasks and expenditures;
- clarification of budget requests — one-time requests versus recurring funding;
- other agencies that have access to the system;
- retention of employees, particularly in IT; and
- access to the internet in the different districts and the types of providers being used.

Unspam

Eric Langheinrich, chief executive officer (CEO) and cofounder, Unspam, addressed the committee regarding the potential for a New Mexico child protection registry. The registry would allow for families to register their contact points for free, i.e., email addresses, mobile phone numbers and instant messenger/social networking accounts. Registered addresses are protected from adult-oriented marketing for items that are otherwise prohibited to be purchased by minors. Creating a registry would impose no fiscal impact to New Mexico taxpayers. Only adult-product marketers will pay a small fee to check each entry on their sending lists. The fee covers the administration of the program, and any revenue generated from the fees would be earmarked to fund the enforcement of state laws to protect children online. Mr. Langheinrich explained that the registry is a one-way process through "hashing", meaning the state list cannot be accessed by the marketers or the state. Sign-up is secure and simple for users. Two other states have passed legislation enacting a child protection registry: Utah and Michigan.

Michelle Scharf, vice president of government relations, Unspam, explained the need for a state registry. According to her presentation, children as young as two are spending more and more time on computers, tablets and cell phones. While laws are in place that limit the marketing of adult products to children in stores, there is nothing on radio or television or in magazines limiting electronic marketing. Ms. Scharf shared the successes and challenges of the programs in Utah and Michigan since their implementation in 2004. Ms. Scharf added that

adoption of a child protection registry is likely to follow the development of the National Do Not Call Registry.

In response to questions from the committee, the following topics were addressed:

- legislation introduced during the 2015 session regarding a child protection registry (House Bill (HB) 237);
- how the program is implemented;
- impact and cost in Utah and Michigan since enacting legislation;
- the scope of the program and its ability to block specific items;
- revenue potential;
- enforcement and violation penalties for the registry;
- other companies offering similar services;
- applications that are being used by minors that gather information; and
- the need for public awareness regarding information being collected from minors.

Members of the committee requested information from the Office of the Attorney General (OAG) regarding its stance on HB 237 and whether or not it agrees with the associated fiscal impact report. The committee also recommended that the OAG release a consumer notice regarding certain social media applications, specifically "Jott Messenger", which is being used by minors, and their collection of user information.

FatPipe ABQ Technology Start-Up Incubator Model

Lisa J. Adkins, chief operating officer and director, FatPipe ABQ, provided background on the business incubator. FatPipe ABQ is a unique, collaborative, community co-working space that brings start-ups, existing businesses and entrepreneurs together in downtown Albuquerque. It is a state-of-the-art facility that seeks to connect like-minded professionals and entrepreneurs with necessary business amenities. Ms. Adkins explained the open concept model and how companies have benefited from working together. The company is privately funded by founder Stuart Rose. Ms. Adkins also talked about the original incubator founded by the group — the BioScience Center. The BioScience Center has experienced tremendous success and maintains full occupancy. The center is a high-tech laboratory focused on nurturing bioscience and life science start-ups.

The committee discussed the following points with Ms. Adkins:

- the duration of stay for entrepreneurs;
- rates for rental space and opportunities for investing;
- the need for private sector support and community interest;
- education and resources for members on managing intellectual property;
- the hosting of networking events to encourage resource exchanges;
- successes of incubator graduates; and

- the creation of a new charter school that aims to teach entrepreneurship to high school students.

The chair requested that Ms. Adkins share information about upcoming open house events with the STTC through staff.

Kit Carson Broadband

Luis Reyes, CEO and general manager, Kit Carson Electric Cooperative, Inc., updated the committee on the company's broadband project. Mr. Reyes provided background on the company, which is a member-owned, nonprofit electric distribution co-op founded in 1937. As the second-largest co-op in New Mexico, Kit Carson Electric serves 29,484 members in Taos, Colfax and Rio Arriba counties, including two tribes: the Pueblo of Taos and the Pueblo of Picuris. The co-op currently provides electric, internet, telecommunications and propane services. The most recent project is fiber-to-the-home (FTTH) implementation. FTTH seeks to revolutionize northern New Mexico communities with affordable and accessible high-speed broadband services, while creating a model for rural communities. Mr. Reyes highlighted some of the benefits this installation will bring to the surrounding communities.

A member of the committee praised Kit Carson Electric for its dedication to the community, lauding it as a role model for service. The STTC questioned Mr. Reyes about the following aspects of the presentation:

- service and package options for customers;
- problems facing rural New Mexico regarding reliable connectivity;
- the need for collaboration among co-ops;
- the federal Connect America Fund and options for Kit Carson Electric to apply during the second round of applications;
- other opportunities for funding;
- the average cost of fiber drops;
- issues with RediNet and current negotiations;
- an explanation of the technology and testing of speeds;
- Kit Carson's marketing strategy; and
- legislators' role in developing a comprehensive statewide plan.

Recess

The meeting recessed at 3:40 p.m.

Tuesday, October 20

House Memorial (HM) 24 (2015), Abusive Telemarketing Practices

Sandra Skogen, associate general counsel, Public Regulation Commission (PRC), presented the study findings of abusive telemarketing practices prompted by the passage of HM 24. HM 24 requested the OAG and the PRC to study ways to enforce the federal Telemarketing

and Consumer Fraud and Abuse Prevention Act, recommend state legislation to further protect New Mexico residents against deceptive and abusive telemarketing practices and produce a report of recommendations. The presentation focused primarily on the federal regulation of telemarketing under the National Do Not Call Registry, Telemarketing and Consumer Fraud and Abuse Prevention Act, the Federal Trade Commission's (FTC's) Telemarketing Sales Rule and the federal Telephone Consumer Protection Act of 1991. Ms. Skogen noted that state law is not preempted, and New Mexico can have greater regulation as long as it does not violate any First Amendment rights. Ms. Skogen covered the details of the three federal regulations.

In June 2015, the Federal Communications Commission (FCC) issued an order addressing robocalls. This action was taken in response to a flood of consumer complaints and 19 petitions and closed perceived loopholes in FCC rules. The order confirmed that carriers and voice over internet protocol providers may implement call blocking for both individuals and businesses to stop unwanted robocalls. Businesses were not protected under earlier regulations. New Mexico has two laws relating to telemarketing practices: the Fraudulent Telemarketing Act (Section 30, Article 50 NMSA 1978) and the Unfair Practices Act (Chapter 57, Article 12 NMSA 1978).

Federal statutes are enforceable by the FTC, FCC, state attorneys general (or other authorized officers) and private rights of action. State statutes are also enforceable by the OAG, which has the authority to regulate companies but not the authority to regulate users. Joseph Yar, Esq., OAG, explained the abilities of the OAG in terms of procedures and enforcement of violations. According to Mr. Yar, the laws in place at the federal and state levels are more than adequate; however, there are often issues with gathering evidence proving a violation of those laws. Mr. Yar outlined the steps taken when a consumer files a complaint with the OAG. The OAG receives approximately 20,000 calls per year at its Consumer Protection Division.

In response to the presentation, the committee addressed the following topics with the panel:

- clarification on how the National Do Not Call Registry operates;
- cold calling of computer-generated numbers;
- the need to make registration and complaint reporting more accessible for consumers;
- consumer alerts for major scams targeting consumers; and
- specific regulations preventing the targeting of seniors and vulnerable populations.

The members of the committee expressed a concern for vulnerable populations like the elderly and the need to protect them from scams and fraud via telemarketing calls. It was suggested that the OAG reach out to senior facilities with telephone numbers for consumer protection. Individuals can call 1-888-382-1222 or go to www.donotcall.gov to add their telephone numbers to the National Do Not Call Registry.

Personal Transportation for Hire Policies

Representative Youngblood addressed the committee regarding potential legislation of personal transportation for hire policies. Presenting with Representative Youngblood was Michael Dorsey, director of public policy, Uber. Founded in 2009, Uber is a rapidly growing transportation network company (TNC) that allows individuals to sign up as drivers and provides more options for individuals seeking transportation. Mr. Dorsey covered the technology of Uber and its user-friendly, mobile application. The application allows users to request a ride, receive a rate quote, track the route and safely monitor the ride. After the ride, the user gives the driver a star rating. Uber continuously evaluates ratings and comments to maintain the highest-quality experience on every ride. Uber currently operates in Las Cruces, Albuquerque and Santa Fe.

Representative Youngblood sponsored a bill during the 2015 legislative session that would have provided a framework for the transportation for hire industry in New Mexico. The bill, in substituted form, passed the house 56-8 but failed to pass out of the Senate Judiciary Committee. At the time, New Mexico would have been one of the first states to implement legislation relating to TNCs. To date, 23 states have passed laws creating a framework for TNCs. In March 2015, major insurance companies and insurance associations adopted an insurance model that would extend coverage to TNCs and TNC drivers. Representative Youngblood intends once again to sponsor the legislation in the upcoming session.

On questioning, Representative Youngblood and the committee members discussed the following topics:

- the growth in popularity and usage of the service;
- the potential impact reduction of DWIs by increasing alternative transportation options;
- cost comparisons between taxi fares and Uber fares;
- application in rural communities;
- economic opportunity for individuals to earn extra income;
- background and driving record checks on drivers to ensure user safety;
- flexibility of use for both driver and passenger;
- the impact on the taxi industry; and
- automobile standards for drivers.

Light Detection and Ranging (LIDAR)

Representatives from the New Mexico Elevation Data Planning and Acquisition Subcommittee to the New Mexico Geospatial Advisory Committee of the DoIT gave a presentation to the STTC about statewide LIDAR acquisition. LIDAR is light detection and ranging, sometimes called 3D laser scanning or laser elevation profiling. LIDAR measures distances to the Earth using laser pulses. Processed pulses give precise 3D information about surface shape and features, resulting in a dense, detail-rich cloud of elevation points.

Mike Inglis, New Mexico Geospatial Advisory Committee, provided the committee with several examples and images produced by LIDAR. The technology has many applications and can be beneficial in the mapping of: watersheds, drainage, irrigation, flooding, water resource protection and delivery, economic development and tourism, wildfire and urban impacts, urban growth and planning, forest management, energy development, homeland security and defense, tribal lands and agricultural demands. Mr. Inglis highlighted several projects around the state that have used LIDAR. LIDAR acquisition has been set as a 2016 legislative priority for the New Mexico Geospatial Advisory Committee.

The panel addressed the following inquiries from the STTC:

- background on the development of the technology;
- differences between topography and LIDAR technology;
- the estimated cost for statewide surveying;
- the potential for fund matching from federal grants, counties and municipalities; and
- the need for a formal proposal for a legislative funding request.

Motion 1

Upon a motion duly made and seconded, the committee voted to approve the minutes from the September meeting.

Adjournment

There being no further business before the committee, the fourth meeting of the STTC adjourned at 12:06 p.m.

Revised: October 28, 2015

**TENTATIVE AGENDA
for the
SIXTH MEETING
of the
SCIENCE, TECHNOLOGY AND TELECOMMUNICATIONS COMMITTEE**

**November 3-4, 2015
Room 311, State Capitol
Santa Fe**

Tuesday, November 3

- 10:00 a.m. **Introductions**
—Representative James E. Smith, Chair
- 10:15 a.m. (1) **[Spaceport America Status Update](#)**
—Christine Anderson, Executive Director, Spaceport America
- 12:00 noon **Lunch**
- 1:30 p.m. (2) **[National Laboratories Status Update](#)**
—Richard Marquez, Executive Director, Los Alamos National Laboratory
—James Chavez, Vice President, International, Homeland and Nuclear
Security Program Management Unit, Sandia National Laboratories
—Philip D. Heermann, Senior Manager, High Consequence Automation and
Robotics, Sandia National Laboratories
- 3:30 p.m. (3) **[Connect America Fund; Round II Status](#)**
—Adriana Badal, Sacred Wind Communications
- 5:00 p.m. **Recess**

Wednesday, November 4

- 9:00 a.m. **Reconvene**
- 9:05 a.m. (4) **[Broadband Redundancy and Reliability](#)**
—Maira Gerety, Deputy Chief Information Officer, University of New
Mexico
- 10:00 a.m. (5) **[Broadband Deficiencies Program](#)**
—Robert Gorrell, Director, Public School Facilities Authority

- 11:00 a.m. (6) [Information Technology Commission Status Review](#)
—Darryl Ackley, Secretary, Department of Information Technology
- 12:00 noon **Lunch**
- 1:00 p.m. (7) [Child Protection Registry](#)
—TBA, Office of the Attorney General (invited)
—TBA, Children, Youth and Families Department (invited)
- 2:00 p.m. **Adjourn**

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

**November 3-4, 2015
Room 311, State Capitol
Santa Fe**

The sixth meeting of the Science, Technology and Telecommunications Committee (STTC) was called to order by Representative James E. Smith, chair, on Tuesday, November 3, 2015, at 10:04 a.m. in Room 311 of the State Capitol in Santa Fe.

Present

Rep. James E. Smith, Chair (11/3)
Sen. Michael Padilla, Vice Chair
Sen. William F. Burt
Rep. Stephanie Garcia Richard (11/4)
Rep. Bill McCamley
Sen. Bill B. O'Neill (11/3)
Rep. Debbie A. Rodella
Rep. Carl Trujillo
Rep. John L. Zimmerman

Absent

Rep. Jason C. Harper
Sen. Daniel A. Ivey-Soto
Rep. Conrad James
Sen. John C. Ryan

Advisory Members

Sen. Jacob R. Candelaria (11/3)
Sen. Carlos R. Cisneros (11/3)
Rep. Kelly K. Fajardo
Sen. Richard C. Martinez
Sen. Nancy Rodriguez (11/4)
Rep. Nick L. Salazar
Rep. Luciano "Lucky" Varela

Sen. Ron Griggs
Rep. Antonio Maestas
Sen. Steven P. Neville
Sen. Mary Kay Papen
Sen. William H. Payne
Sen. Peter Wirth
Rep. Monica Youngblood

(Attendances dates are noted for members who were not present for both meeting days.)

Staff

Gordon Meeks, Legislative Council Service (LCS)
Ralph Vincent, LCS
Alexandria Tapia, LCS

Minutes Approval

Because the committee will not meet again this year, the minutes for this meeting have not been officially approved by the committee.

Guests

The guest list is in the meeting file.

Handouts

Handouts and other written testimony are in the meeting file and are located on the New Mexico Legislature website.

Tuesday, November 3

The chair welcomed the committee to the final meeting of the STTC for the 2015 interim. Members of the committee and staff were invited to introduce themselves.

Spaceport America Status Update

Christine Anderson, executive director, Spaceport America, provided a presentation to the committee that included a current status update, capital outlay requests and a budget overview. Spaceport America is one of 10 Federal Aviation Administration-licensed spaceports in the country. To date, it has held 23 vertical launches, with the next one scheduled in November 2015. In addition to its three tenants — Virgin Galactic, SpaceX and X2nSat — it also has 28 New Mexico companies that operate at the site. Spaceport America is working on increasing its marketing campaign to attract more companies and visitors to the facility. There is also large potential for venue events, sponsorships, photo and film shoots and virtual education. Spaceport America is seeking to build another hangar and expand its user capacity. Ms. Anderson shared a video with the committee featuring the visitor center that opened in June 2015.

Spaceport America is active in science, technology, engineering and mathematics (STEM) education and is working to grow its programs around the state to expand interest in STEM-related fields. Ms. Anderson provided an overview of Spaceport America's educational outreach. The facility has partnered with the Challenger Learning Center in Las Cruces as part of a three-week educational experience. It has been conducting real-time, online virtual classes and spaceport tours with public schools in Sierra and Dona Ana counties. The goal is to reach every sixth grade student in those counties during the year; eventually it hopes to expand to other counties.

Ms. Anderson explained that the spaceport has two types of budgets: (1) a capital budget; and (2) an operational budget. The capital budget is made up of \$142.1 million in severance tax capital funds and \$76.4 million in gross receipts tax capital funds from Sierra and Dona Ana counties. For fiscal year (FY) 2017, Spaceport America is looking to increase its operational budget to \$6,898,900. Of that, \$2,812,800 will be requested from the state's general fund.

Spaceport America is also looking to acquire a liquor license. This is seen as a way to attract more events and also add revenue for the facility. Ms. Anderson updated the committee

on the status of the "southern road". This road is viewed as critical to the success of the facility. It is scheduled for completion in August 2017.

In concluding her presentation, Ms. Anderson invited members of the committee to come out to the facility to see all of its additions and to see what educational opportunities there are for students. The committee discussed the following points with Ms. Anderson:

- how to expand the virtual school program to get more students to the facility;
- the Virgin Galactic crash and its economic impact on the site and the effect on the community;
- an explanation of vertical launches and payloads;
- an explanation of the budget increase from FY 2015 to FY 2016;
- the number of employees at the site and the difficulty of offering competitive salaries;
- the capability to support communications through existing fiber;
- progress on a potential hotel; Virgin Galactic has entered into agreements with two hotels — one in Truth or Consequences and one in Las Cruces;
- the benefit of a liquor license for the facility;
- the need to expand usage beyond aerospace;
- rumored proposals to sell the spaceport;
- the increasing number of spaceports and competition;
- what makes Spaceport America different from other spaceports; and
- the importance of completing the "southern road" and the causes of the delays.

National Laboratories Status Update

Richard Marquez, executive director, Los Alamos National Laboratory (LANL), presented the STTC with an overview of operations at the laboratory. LANL operates on a \$2.3 billion budget, 98% of which is funded by the federal government. Work at LANL is organized under five principal associate directorates: (1) global security; (2) weapons programs; (3) science, technology and engineering; (4) operations and business; and (5) capital projects.

The weapons program is the prime driver of operations at LANL, and it is essential to ensuring the U.S. nuclear deterrent. LANL has placed a large mission focus on science, with long-term investments in its four pillars of science: (1) materials for the future; (2) the science of signatures; (3) integrating information, science and technology for prediction; and (4) nuclear and particle futures. LANL's isotope program is the largest domestic supplier of isotopes for cardiac imaging and cancer imaging studies. The program is currently investigating isotopes for cancer therapy.

Mr. Marquez provided the committee with a breakdown of LANL's annual budget and workforce. Mr. Marquez stressed the importance of maintaining a pipeline between LANL and the universities. The STTC was given several examples of how LANL is working to increase its efforts in recruitment and retention of New Mexico professionals, while promoting ethnic and gender diversity. Mr. Marquez also discussed LANL's involvement in the community through

scholarships and its partnership with the United Way. Employees contributed \$2.2 million to nonprofit organizations and \$256,000 to a scholarship fund that was matched by LANL.

Following the presentation from Mr. Marquez, the committee had the following inquiries:

- the impact of the environmental management takeover;
- issues and efforts with recruitment and retention;
- implementation of different levels of security at LANL;
- Tennessee's model for a university consortium;
- modernizing intellectual property (IP) strategy;
- supply management chains and concern with reduction of contracts within the state;
- ongoing medical research, including the Athena project, which is a way to simulate how healing/treatment affects the organs in the body;
- the need to emphasize relationships with third parties and the private sector;
- LANL's shift to using third-party entities to determine the needs of the community and disburse funding accordingly (new use of the United Way);
- cybersecurity threats and issues; and
- incentives for attracting the next generation of scientists to New Mexico.

James Chavez, vice president, International, Homeland and Nuclear Security Program Management Unit, Sandia National Laboratories (SNL), provided some personal background, noting that he is part of the second generation working at SNL. SNL is managed by Lockheed Martin for the federal government and consists of numerous sites, the largest of which is located in Albuquerque. Mr. Chavez explained the organization of executive management, adding that Jill Hruby is SNL's first female director. SNL has a large national security mission outside of nuclear weapons, with focuses on cyberspace; reducing global chemical and biological dangers; and global nuclear assurance and security. Under congressional order, SNL is no longer building any new weapons but is in the process of updating and extending the life of existing weapons. In FY 2015, SNL's operating funding was \$2.81 billion. Mr. Chavez discussed the breakdown of the workforce at SNL by discipline and ethnicity. He commented that approximately half of the workforce at SNL has a degree from a New Mexico university.

Like LANL, SNL's economic impact on the nation and New Mexico is significant. In FY 2015, the total of New Mexico contract-related payments was \$381,884,000, and \$258,970,000 was paid to small businesses in the state. In 2014 alone, the New Mexico Small Business Assistance Program at SNL has provided assistance to 352 small businesses in 31 counties. Sandia is also looking to expand its support for STEM by engaging students in various activities and hosting many events. Mr. Chavez expressed SNL's commitment to community service by volunteers donating over 90,000 hours per year and SNL's donation of \$6.5 million to nonprofits through the United Way 2014 campaign.

Philip D. Heermann, senior manager, High Consequence Automation and Robotics, SNL, discussed unmanned aerial systems (UAS). SNL has an interest in UAS and is involved in many

programs relating to their testing and development. Mr. Heermann explained the rapidly developing technology of drones and the challenges their increasing popularity is posing for security and governments. UAS are the fastest growth sector within the U.S. aviation industry, with an estimated one million sold in the U.S. in 2015 alone. Mr. Heermann shared with the committee various models of UAS, as well as a few videos illustrating their capabilities. As of September 2015, 28 states have passed laws or policies regarding UAS. In considering potential legislation, Mr. Heermann cautioned the importance of not limiting national security and public service use.

Following the presentation from SNL, the committee had several comments and questions, including:

- efforts by SNL to move IP forward;
- changes in the supply chain and a national shift toward large-scale contracts;
- the process of re-engineering nuclear weapons and replacing aging technology;
- a request for additional information on employee makeup;
- the unintended consequences of legislation in other states regarding UAS usage;
- struggles regarding keeping up to date with rapidly evolving technology;
- current usage of UAS in New Mexico;
- the definition of hobbyist use; and
- what types of legislation could be beneficial in the state.

Connect America Fund; Round II Status

Adriana Badal, lobbyist, Sacred Wind Communications, testified before the committee regarding the Federal Communications Commission's (FCC's) Connect American Fund (CAF). Sacred Wind is a New Mexico telecommunications company established in 2006. It provides voice and broadband services in portions of the Navajo Nation in northwestern New Mexico; the Four Corners area; and Cañoncito, west of Albuquerque. Ms. Badal provided the committee with some background on the CAF program, which was started in 2011 and is now in phase two of the program (CAF II). The FCC announced several months ago that 10 telecommunications carriers will receive approximately \$9 billion in CAF II support over the next six years for rural broadband deployment to nearly 7.3 million rural consumers in 45 states and one U.S. territory. Companies eligible to receive funding are the larger national providers, also known as price-cap carriers. In New Mexico, CenturyLink, Frontier and Windstream are eligible for funding. Windstream declined \$3.8 million annually for six years for 8,720 eligible locations in New Mexico. CenturyLink accepted almost \$11 million annually for six years for 25,308 eligible locations. Frontier accepted \$4.4 million annually for six years for 7,032 locations. Next year, the FCC intends to make the funding that was declined available for other companies in a competitive bidding process. Sacred Wind intends to apply for those funds.

Ms. Badal explained the steps being made by Sacred Wind in preparation for the bidding process. Sacred Wind has purchased a Google Earth program that allows it to use CAF II map legends to identify specific details about the eligible census blocks for which funds are accepted

or declined. The FCC maps do not provide the addresses of eligible homes, businesses or critical community facilities. Ms. Badal explained several maps included in a handout to the STTC and offered some suggestions on how the legislature could help in the expansion. Sales or property tax incentives could potentially help expand broadband into rural parts of the state. In addition, the state could expedite the permitting process for right-of-way applications, reducing delays and cost to the provider. Allowing access to government buildings and federal land could also help providers that are trying to get to some locations.

Members of the STTC commended the eligible providers for accepting the money and Sacred Wind for pursuing the funding. In response to questions from the committee, the following topics were addressed:

- the status of the State Rural Universal Service Fund;
- other modes of delivering service in addition to laying fiber;
- Windstream's refusal of CAF funding;
- how the bidding for the remainder of CAF funding will be conducted;
- the difficulty in understanding why only some homes are eligible for CAF funding;
- costs to the carriers to provide the "last mile" of fiber;
- benchmarks for installation and the qualifying factor for selecting homes;
- the need for long-term planning to install broadband conduits when building roads and other infrastructure; and
- the increased need for public/private partnerships.

Recess

The meeting recessed at 4:32 p.m.

Wednesday, November 4

Broadband Redundancy and Reliability

Moira Gerety, deputy chief information officer, University of New Mexico, presented to the committee how redundancy is seen as an effective tool in information technology (IT). Ms. Gerety provided several key terms frequently used to evaluate network reliability. Three case studies were presented to illustrate how network redundancy can increase reliability and reduce costs: the Albuquerque GigaPoP and collaborative efforts in Gallup and Espanola. Ms. Gerety described how these networks are set up. These types of networks are beneficial in areas that have high utilization and are used for "real-time" activities like medical or public safety or to move around large amounts of data.

The biggest threats to network reliability are physical damage; cyberattacks or other software "damage"; and scarcity, which increases risk through single points of failure. Ms. Gerety explained several design countermeasures for affordability: volume purchasing; encouraging competition; owning rather than renting some assets; caching; aggregation; and "peering" by creating interoperating networks. In conclusion, Ms. Gerety reiterated that

redundancy is an important tool in network design as a countermeasure to the risk of network failure. Case studies have illustrated the value of investments in what might be considered extras, but which turn out to be necessary. Public network managers are working together to implement better reliability for constituents through sound network design principles, which sometimes require investment in "redundant" network capacity.

The STTC questioned Ms. Gerety about the following aspects of the presentation:

- the need for a cost-benefit analysis in determining whether to create initial networks or add fiber to create redundancy in certain areas;
- the benefits of having more carriers in areas to increase reliability and reduce rates;
- the importance of redundancy for institutions like universities and for public safety; and
- renting versus buying equipment and infrastructure.

Motion 1

The committee discussed the ongoing conflict regarding Jemez Mountain Electric Cooperative, Inc. (JMEC). A motion was made by Representative Rodella, seconded by Representative Trujillo, to send a letter to REDINet and JMEC regarding the concern of the STTC on this issue and requesting clarification on the matter. A subcommittee was appointed to include Representatives Trujillo, Rodella and Garcia Richard, who will work with staff on drafting the letter. The motion passed without objection.

Motion 2

Upon a motion by Representative Garcia Richard, seconded by Representative Zimmerman, the committee voted to approve the minutes from the October meeting of the STTC.

Broadband Deficiencies Program

Robert Gorrell, director, Public School Facilities Authority, appeared before the committee to discuss the Broadband Deficiencies Correction Program. Mr. Gorrell explained the background and purpose behind Senate Bill 159 (2014) — "Education Technology Infrastructure Funding". An explanation of encumbrances and expenditures of funding was provided. Mr. Gorrell explained that these funds will be used as the required E-Rate funding match on fiber installation projects for school facilities currently without a fiber connection. This infrastructure will support any future state broadband distribution model/solution. The funds will also be used to provide the required state/local funding to cover the nondiscounted portion of Category 2 E-Rate internal equipment purchases and leverage the FY 2016 E-Rate funding up to 80%. This matches the existing Public School Capital Outlay Council allocation process.

Mr. Gorrell outlined the E-Rate time line through July 2016. He stressed the importance of budgeting now, illustrating commitment to schools and school districts, vendors and the FCC.

Mr. Gorrell provided the proposed prioritization criteria to the committee. An emphasis is being placed on getting signals into the schools and working on wireless capabilities at a later date.

On questioning, Mr. Gorrell and committee members discussed the following topics:

- reducing the cost of equipment through bulk purchasing;
- attempts at equally applying technology to all parts of the state;
- recycling of technology and equipment when feasible;
- areas still in need of fiber and those needing wireless upgrades (92% of schools);
- collaboration among multiple departments and agencies; and
- clarification on prioritization.

Information Technology Commission Status Review

Darryl Ackley, secretary, Department of Information Technology (DoIT), followed up with the STTC regarding his presentation earlier in the interim. Secretary Ackley was asked by the committee to provide a proposal about what could be done to make the Information Technology Commission (ITC) more useful in its functions. Secretary Ackley presented the committee with a proposal that would replace the ITC with an IT advisory board (ITAB). The ITAB would consist of eight members who would provide guidance on the three-year IT strategic plan, identify cross agency collaboration and future needs and propose future rulemaking.

Following Secretary Ackley's proposal, members of the committee engaged in a lengthy discussion regarding acceptance of the proposal. Representative Varela made a motion for the proposal not to be accepted and provided background on the creation of the ITC. Members of the committee brought up issues that caused the ITC to become defunct, and there was discussion of the merits of the existing commission. Secretary Ackley explained that the proposal only seeks to address some of the issues raised during the Farmington meeting of the STTC and was intentionally ambiguous. After input from the other members of the STTC, Representative Varela withdrew his motion on the condition that this issue continue to receive attention and potentially be brought back for discussion prior to the next 60-day session. The STTC agreed to bring this item back during the first part of the next interim. In the meantime, it was recommended that the DoIT work with the executive branch to fill the vacancies on the ITC. Secretary Ackley was asked to provide staff with a current makeup of the commission and vacancies.

Child Protection Registry

This presentation was canceled due to scheduling conflicts.

Adjournment

There being no further business before the committee, the sixth meeting of the STTC adjourned at 12:00 noon.

