

# Blue Suede News

Update on ELection Voter Information System November 2005

## How PKI works for ELVIS

Several articles have already been published in Blue Suede News regarding Public Key Infrastructure (PKI) and the importance of security surrounding ELVIS. Confidentiality of voter registration information remains of paramount importance.

Without question, the security mechanisms defined by Kansas and employed in ELVIS have set a new security standard for centralized voter registration under HAVA. Already, other states are considering similar implementations to tighten up their systems.

How did PKI begin? In 2002, the Kansas Legislature approved the Uniform Electronic Transactions Act, which provided for recognition of electronic transactions and documents as having the same standing and binding effects as those conducted on paper. To do this, the law provides for electronic and digital signatures. Subsequently, a number of state agencies, lead by the Secretary of State, established the rules and policies needed to establish a "Public Key Infrastructure."

Any "infrastructure" combines rules, technology and physical assets to yield a shared utility. An example would be the high-

way transportation system. Technology is used to determine where and how roads, tunnels and bridges will be located and constructed. The physical assets are those things made real by constructing them. The rules define *how* we use and manage all this cooperatively to the benefit of everyone. The result is the highway moving people and materials from one place to another effectively. Power transmission, railroads and telecommunications are other examples of infrastructures.

To enable electronic transactions and documents we need a new infrastructure. This one provides rules, technology and physical assets to create a utility that will allow for digital trust. This is the digital equivalent of your signature.

When you sign a document, you accomplish several things. First, you give your approval to it. Second, we establish formally that you are a party to the transaction and you are who you say you are. Finally, we secure that transaction in time as your intent. In some cases, just putting your signature on the line is not quite enough. If it is a high-dollar transaction you are asked to pro-

vide evidence of who you are. In those cases, you produce identification such as a driver's license or birth certificate. The relying party accepts that the issuer of that credential did a good job of establishing your identity. For PKI to work in the digital world we must be able to establish the same level of identity verification.

Once your identity is established, we issue a digital certificate – the electronic equivalent of your signature – as your credential or proof. This credential can be used for many things, but everything surrounding its issuance and use must be protected.

ELVIS takes advantage of this infrastructure to allow people to use the system. For it to work properly, everyone has to follow the rules and be responsible for their part.

The USB token issued to every user of ELVIS is your digital certificate or signature. It is a string of numbers exclusive to you, and those numbers are matched to another set of numbers housed in a repository that, while different, are mathematically derived from it using a technique called asymmetric cryptography. The certificate in your token is your

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## A message from Secretary of State Ron Thornburgh..

I want to share with you a little information on the Carter-Baker Commission on Federal Election Reform. This is a 21-member private commission organized by American University and charged with finding ways to strengthen the country's electoral system. The commission is comprised of former members of Congress, scholars and nonpartisan leaders.

I had the honor to testify before this group in April, and I expressed to the commission that HAVA is working. The number of votes lost dropped by 42 percent during the 2004 election. I told them that Congress needs to focus on funding the requirements of HAVA rather than on passing additional legislation that might come from the study. I also reminded the group that a single system will not work across the entire country. What works for New York City will not work for Cawker City, Kansas.

Based upon the results of public hearings conducted, the commission published a report in September regarding its findings. The report identifies five aspects of election reform - voter registration, voter identification, voting technology, increased access to voting and nonpartisan elec-

tion administration - and recommended ways to strengthen these areas.

The five major proposals include: a universal voter registration system in which the states, not local jurisdictions; are responsible for the accuracy and quality of voter lists; a uniform system of voter identification based on the "real ID card" or an equivalent for people without a driver's license; states taking more responsibility to get citizens registered and making voting more convenient; increasing confidence in voters by using electronic voting machines with an auditable paper backup; and restructuring the US Election Assistance Commission and state election management bodies on a nonpartisan basis to become more independent and effective.

The report has been delivered to the President and Congress. It will be up to Congress or the White House to decide if all or some of these recommendations will be adopted.

Sincerely,

  
**RON THORNBURGH**  
Secretary of State

### New addition to SOS office

Kansas Secretary of State Ron Thornburgh announced the addition of Stephanie Wing to the Public Affairs Staff as the Public Information Officer.

As PIO, Wing will serve as the primary agency spokesperson for all media requests, as well as coordinate public relations programs, including voter education.

Originally from Wichita, Wing is a graduate of Kansas State University with degrees in Journalism and Public Relations and a minor in Political Science. She previously worked as Communications Coordinator for the Lawrence-based not-for-profit Cottonwood, Inc. and as a Legislative Assistant for Speaker Pro Tem John Ballou.

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# Voting equipment update

## Voting equipment tested in Salina election

It started as an idea to further civics at one high school in Salina. It turned into a fun way to test out the voting equipment in Saline County. Curtis Stevens, a Constitution/social studies instructor at Salina South High School, and Don Merriman, Saline County clerk, last summer discussed having a referendum election for Salina South students during the school year. Merriman suggested the possibility of using some electronic voting equipment for the election. Stevens liked the idea, and in early September asked if the voting equipment could be used to put together a homecoming queen election for late September.

Merriman contacted Dan Erker, regional sales manager for Election Systems & Software (ES&S) to see if ES&S would be able to put together direct recording electronic equipment for an election. "I was very pleased when he said it was a go,"

Merriman said. Ivan Gearhart, senior sales specialist from ES&S, programmed four iVotronics with the five homecoming queen candidates' names and shipped the equipment to Merriman's office. Write-in candidates were not accepted.

The election was held September 27 during students' lunch time in the commons area. Only the junior and senior classes were allowed to vote on the homecoming queen candidate. Constitution/social studies students took care of the registration process and verification of junior or senior class students.

The candidates' pictures were posted around the school, but campaigning (electioneering) was not allowed. "We also provided a comment card after each student voted to get opinions on what they thought about the experience," Merriman said. Most of the students that filled out the cards said it was an easy way to vote and they would be willing to

use the equipment for future elections.

A representative of ES&S was present to help with the setup and final count. "We had 219 students vote of the 450 eligible and the tally process only took about 10 minutes this year," Merriman said. "The faculty student council representative stayed up last year until 3 a.m. counting votes. When I gave the faculty student council representative the final count, he hollered 'WOO HOO,' and it could be heard around most of the school."

Using the voting equipment for this kind of an election is a step toward using it in a much bigger election and making people feel comfortable with the new equipment. "I have to say it was a great experience, and hopefully some of the students who voted went home and related the experience to their parents," Merriman said.

## Spotlight on Chad Sump

One of the resident experts on voting equipment in the Secretary of State's office (SOS) is Chad Sump. Originally from Clifton, Kansas, in rural Clay County, Sump has worked for the SOS office for five years. When he is not serving as the project manager for voting equipment, Sump researches and recommends hardware and software purchases, answers calls at the IT help desk and helped on a process to convert microfilm roll images into TIFF images and import them into our system.

In his five years with the SOS, Sump also has microfilmed documents, picked up and delivered mail, and worked scanning and indexing documents.

He has an associate's degree in applied science from Cloud County Community College and an associate's degree in accounting and a diploma in Web design from Topeka Technical College. Sump is currently working on a bachelor's degree in business information systems from Baker University.

In his free time, Sump enjoys spending time with his family, helping his parents on the farm, being outdoors, watching TV and reading.

# Voting equipment update

## Vendor fairs considered a success

About 60 counties participated in the vendor fair, which took place October 18 in Emporia and October 19 in Great Bend. At the fairs, vendors provided presentations and demonstrations to chief election officers in an effort to persuade the counties to purchase their voting equipment. The county election officers were afforded the opportunity to talk with all five vendors and view voting equipment before making a decision.

The fair gave CEOs a chance to clear up any confusion about which vendor offers what type of equipment and what would work best in a certain county. Many CEOs left with a good idea of what

equipment they plan to purchase. Others narrowed down their choices and planned on consulting their colleagues or the Secretary of State's office before choosing the equipment. "I was surprised at the differences between the vendors as to what they offered," Stacia Long, Seward County clerk, said.

Several CEOs commented the features matrix document was helpful as well. They used the matrix to narrow down choices before they got to the vendor or to ask questions about features summarized on the matrix.

"I thought the vendor fairs were helpful and productive. They were worth putting together because it was a good opportunity

to gather information, compare notes with others and move toward a decision. The CEOs on the Evaluation Committee recommended putting the vendor fairs together, and it proved to be good advice," Brad Bryant, Deputy Secretary of State for Elections and Legislative Matters, said.

The CEOs appreciated the chance to take a look at their options before making a final decision. "I was glad I attended. I appreciated the fact it was easier to compare all the equipment in one location," Long said.

## Social engineering preys on kindness

Computer hacking is often thought of as an activity that takes place on the Internet from faraway locations. While some intruders use this technique, most use a tactic called social engineering. Social engineering is the direct manipulation of legitimate users to gain sensitive information about an information system. For example, an intruder may call or visit a county election office posing as someone offering technical support for ELVIS. Once the intruder gains the trust of the county official, they may ask for sensitive information such as passwords, user names, or information about the PKI process. Hackers are able to use this information gleaned from social engineering to paint a more complete picture of ELVIS security features.

Social engineers prey upon our willingness to help and our Midwestern good-natured approach to strangers. We certainly would not want to be rude to a stranger. However, we must find a balance between public service and system security. Even the best electronic security measures are only as strong as the weakest link. We are all links in the ELVIS security chain.

How can we strengthen the chain by not becoming "the weakest link?" Here are some tips we can all follow:

- Live by the network security motto of *In God we trust, all others we authenticate*. Be suspicious of anyone asking questions about ELVIS. ELVIS is a multi-faceted project that requires the cooperation of counties, state agencies, and private contractors. Legitimate ELVIS support personnel will gladly provide identification when asked. Call the SOS help desk @ 785-296-7810 if you would like to verify someone's identity.
- Never divulge passwords to anyone. Be sure to change any default passwords provided to you with your own password.
- If you do believe that you have unknowingly become the target of a social engineering attack, report it immediately to the SOS help desk and to your local IT staff. Like many crimes, the victim is often too embarrassed to report the incident.

# The future of ELVIS looks bright

Lanetta Schatz, Sedgwick County departmental information analyst, had the opportunity to go to Cary, North Carolina, in mid-October to see ELVIS taken to new heights. Kansas counties will be offered this new ELVIS through Power Profile 8.2. Julie Johnson, Quality Assurance and Release Manager for ES&S, guided Schatz through the changes. "It was good to see items we here in Kansas have identified as problems in the system being fixed or changed to our standards," Schatz said.

Some of the changes for the new system include: "ID required" showing up in bold red letters on the registrant's detail window, the ability to indicate a person is a permanent advance voter on the new registrant entry window, and the ability for attachments as well as the activity log to transfer with the voters to a new county. The changes will make

the process flow more smoothly, and very little training will be needed to work with these changes. "Seeing firsthand the support and detailed attention that is being paid to our needs within Power Profile, gives me confidence in the success of ELVIS," Schatz said.

Schatz also saw firsthand how Team Track works. Team Track is a tool used to log problems and issues with the system. Calls logged at the help desk are picked up by Tier II support staff working for InfiniTec. If problems can be resolved by the Tier II staff, the ticket is closed and no further action is taken. If the problem needs to be taken to the next level, Tier III support services from ES&S and Cosentry will work with the county and state developers or conversion staff to resolve the problem. All information, screen shots and communication are captured as the prob-

lem works its way up the support ladder until it is resolved. Dane Nannen is the customer account representative for Kansas.

My views on the new election system are quite simple. I like it. My staff likes it.

**- Alberta Klaus, Ellis County clerk, talking about using ELVIS in a special election held October 18, 2005 in Ellis County.**

## Featured staff:

**Melissa Wangemann**

Handling any legal issue that might arise from the ELVIS project, such as an interpretation in HAVA law, is just one of the many roles Melissa Wangemann holds at the Secretary of State's office. She has been the Secretary of State legal counsel for nine years. In that time, Wangemann has worked on a variety of legal issues because of the diversity of the office.

Wangemann is involved in a number of projects on any given day. She is currently spending most of her time writing contracts for the voting equipment vendors. Wangemann also is helping the SOS Business Services division with the procurement process for a new filing system. During the legislative session, she keeps busy carrying legislation for the SOS office.

Wangemann wants the counties to know that they can call her with questions anytime. She is only able to provide legal advice to the SOS, not the general public, so she cannot give legal opinions to persons outside the SOS office. However, she is always willing to discuss her thoughts on a matter and let the county clerk or attorney reach their own conclusions once they have looked at the statutes together. Wangemann's best advice for counties working through ELVIS is to follow the security policy to protect the integrity of the data and to protect against any liability.

Wangemann received an English degree from Wichita State University and her law degree from the University of Kansas. While she was in law school, she worked as a law clerk at the SOS. A native of Wichita, after receiving her law degree, she returned to Wichita and worked in private practice. Eventually, Wangemann moved to Topeka and worked as an attorney and lobbyist before returning to the SOS. When she is not working, Wangemann loves spending time with her husband, Jared Maag, and their two-year-old daughter, Emma. Daughter Emma will be welcoming a new brother in January. She also enjoys spending time working on her house and in the yard.

**PKI continued from page 1**

private key and its corresponding certificate is your public key. They are mathematically related and, when put together, prove who you are. This is the technology and physical asset elements of the infrastructure.

You received the token when an election official established your identity. When it was issued it was paired to information that should be known only to you.

Without it, you cannot log into ELVIS. Once logged in, the system records every transaction you make and assumes you are the one signing off on it.

It is essential that the identity of every person being issued a token be established and that tokens and associated user names and passwords never be shared. If someone does something inappropriate with your credentials,

you have signed off on it and become responsible for it.

Any person holding a token no longer working with ELVIS must return it. SOS staff should be notified immediately anytime someone holding a token is no longer working with ELVIS so credentials can be revoked.

**UPCOMING ATTRACTIONS & TIMELINE 2005**

- |                          |                                                               |
|--------------------------|---------------------------------------------------------------|
| <b>November 4</b>        | <b>56 counties have gone live!</b>                            |
| <b>November of 1959</b>  | <b>Elvis first meets Priscilla Beaulieu</b>                   |
| <b>November 8</b>        | <b>Voting machines demonstration in Salina</b>                |
| <b>November 9 - 11</b>   | <b>KCOA Conference in Wichita</b>                             |
| <b>November 16, 1956</b> | <b>Elvis' first movie, <i>Love Me Tender</i>, premieres</b>   |
| <b>November 21 - 23</b>  | <b>Kansas Association of Counties Conference in Topeka</b>    |
| <b>November 23</b>       | <b>Voting machine orders due to SOS</b>                       |
| <b>December 11 - 14</b>  | <b>Midwest Election Officials Conference in Overland Park</b> |
| <b>January 2006</b>      | <b>ELVIS live statewide!</b>                                  |