Technology Initiatives in Legislatures
North Carolina General Assembly

The Information Systems Division (ISD) is a service-based organization providing the Members and Staff of the North Carolina General Assembly with the technology infrastructure required to support the business and legislative needs of the General Assembly. ISD's client focus, respect for individual employees, and teamwork are the keys to providing outstanding service and value to its clients.

ISD's workload is dependent on session activity and Leadership's direction. During session, changes to the technical infrastructure are limited to break-fix, security, and business demands. Technical changes are deferred until the session interim. The session interim is when ISD embarks on larger, necessary changes and initiatives that have higher risks associated with them.

I am sure we all have similar opportunities and challenges – both technically and organizationally. Over the next few minutes, I would like to share some of our key accomplishments and upcoming plans (challenges?) with you.

Business Applications

- **Chamber Automation**
  This year we rolled out two "APPS" related to automation of the Chambers:
    - Member Dashboard (any platform)
        - Allows following of the Calendar in real-time
        - Can see the text of the current bill, related documents, fiscal notes, and bill digests
        - Can switch between chambers to observe their progress
    - Mobile Access to the General Assembly's Website (designed for Mobile Use)
        - Audio (Chambers, Finance Room, Appropriations Room, and Press Room)
        - Committee Websites
        - Calendars – past & present
        - Bill Look-up
        - Member Information (Bios, committee assignments, etc.)
        - General Statutes

Upcoming Chamber Automation activities include:

- Enhancements to the Member Dashboard such as:
  - Member speaking notes
  - Floor amendments – Displaying amendments "Engrossed" in the bills
  - Attempt to narrow down the hardware and operating system that need to be supported – Are we developing for tablets, laptops, both, etc. Are they IOS, Android (which versions), Windows 8, etc. Each device and operating system has its own "special considerations"
- Develop a public version of the Member Dashboard
- Evaluate and install new LED Voting and Name Boards in the Chamber

- **Fiscal Research Budget System**
  During the year, we worked with the Fiscal Research Division (FRD) to install, tailor, and implement a new budget system that interfaces with the Office of State Budget Management (OSBM) budgeting system. The FRD Budget System was developed using IBM's Cognos and Cognos/TM1 software products with a goal of being able to use the new FRD Budget System during the 2012-13 budget process. The target date shifted to after the short session because of a problem with the spell checker and the unavailability of good data from OSBM.

Infrastructure and Desktop Services

- **Public Wi-Fi - *NCGAPUBLIC***
  In April, the NCGA Public Wi-Fi Network (NCGAPUBLIC) became available for use by visitors of the NCGA Complex. NCGAPUBLIC is Internet-only with no access to the General Assembly domain (protected by firewall and a separate VLAN).

  Prior to releasing the NCGA Public Wi-Fi Network, an announcement e-mail accompanied by a Legislative Services Commission Policy titled "*Use of the NCGA Public Wi-Fi Public Network*" was sent to all Members and Staff. The e-mail and policy stressed that the NCGA Public Wi-Fi is not intended for day-to-day use by Legislative Members and Staff to conduct General Assembly business.

  The public Wi-Fi has been well received and is busy! We are averaging 294 users per day with a high water mark of 552 users.

- **Windows 7**
  In December of 2009, we began our migration to Windows 7 within the Information Systems Division. We did this to familiarize ourselves with Windows 7, test for application related issues, and most of all, be prepared to deploy Windows 7 to the entire General Assembly whenever funds became available for new computers. Based on our experience, a decision was made to stay with a 32-bit operating system due to driver problems and some application concerns.

- **Laptop and Desktop Deployments**
  In December of 2011, funds were made available to purchase **laptops** for the Central Staff. The laptops being replaced were between six and eight years old.

  We completed the deployment of over 150 laptop computers to the Central Staff in February 2012. As part of the deployment, we held informal "drop-by-to-see-us" workshops instead of holding formal classroom training.

  Laptop Specifications:
  - Lenovo ThinkPad T520
  - Intel i7-2640M
  - 4GB Memory
  - Discrete Graphics Card
  - Intel Ultimate-N 6300 Wireless
  - Integrated Gigabit Ethernet Intel
  - 128GB Solid State Disk
  - DVDRW
  - Windows 7 Enterprise, 32 bit

  In May of 2012, we received approvals to purchase replacement **desktop** computers for all the Legislative Assistants and common areas. The desktops being replaced are seven to nine years old. In June, we received 256 desktop units and are currently deploying them.

  Desktop specifications:
  - Lenovo ThinkCentre M71z All-in-one
  - Intel i5-2400S (6M Cache- 2.50GHz)
  - 4GB Memory
  - Integrated Video
  - Integrated Gigabit Ethernet Intel
  - DVD Recordable
  - 320GB- 7200RPM SATA
  - Windows 7 Enterprise, 32 bit

- **Exchange 2010 Migration (In progress)**
  Product support and technical limitations of Exchange 2003 are two major reasons for the NCGA to migrate to the latest version of Exchange 2010. In preparation of the migration, all laptop and desktop computers were upgraded to Office 2010 during the preceding year.
  Some benefits of migrating to Exchange 2010 (for us) are:
  - Support currency (Exchange 2003 support ends in April 2012)
  - Improved Outlook Web Access (OWA) user interface – similar to Outlook
  - Ability to directly use Outlook on an NCGA device when not connected to the NCGA network
  - Easier calendar sharing – internal and external
  - Improved (Higher) Availability - Continuous replication of mailbox data
  - Support for Apple OS Users
  - Able to have larger Mailboxes – Public Records requirements require the NCGA to retain data for long periods of time. This results in large mailboxes.

- **Network Equipment Refresh**
  Our core network equipment (Cisco) is now 11 plus years old. Over the past few years, we performed several upgrades to the core components of the network to prolong the life and usability of the equipment. Today, the core equipment has reached its official End of Life/End of Service (EOL/EOS) status where service and parts will no longer be available effective October 2012. Some of the edge network equipment will begin to reach their EOL/EOS in 2013.

  For sizing purposes, the NCGA network is comprised of:
  - Core Routers – two 6500 Series Catalyst Switches and one 4510 Series Catalyst Switch
  - Edge Switches – 57 various models (all Cisco)
  - Several wireless controllers, around 80 Cisco Wireless Access Points, and our Cisco VoIP telephone systems are <u>not</u> included in the refresh.

  During the last twelve months, we have searched for options that are cost effective, state of the art in design, and meet our needs for the next 8 to 10 years. When analyzing the various offerings, we considered the offerings' technical design, vendor support capabilities, and cost. All the vendors offered similar technical architectural designs (virtual switching, virtual chassis, Qfabric, mesh network, etc.) and, as with any technology change, all have similar levels of risk associated with them.

  As of this writing, we have not completed our vendor selection. We expect to conclude the selection in August.

ISD Customer Support Improvements

Although ISD is known for providing good service, this initiative places more emphasis on the customer support process as a Division-wide responsibility. Currently, support requests are received, documented, and processed by service representatives in the Client Services Section of ISD. If necessary, the requests are escalated to developers, desktop, and network specialists. This has worked well with a couple of exceptions:

1. If the request is assigned to a developer or specialist that is out of the office, it may not get resolved in a timely manner, and
2. Requests made directly to a non-service representative via a telephone call, a hallway conversation, or an e-mail, go undocumented resulting in repeat calls and rediscovery of solutions.

To address the process flow, we reviewed our support processes and updated them to reflect a "queuing" process where requests are assigned to a queue instead of an individual. We also updated our helpdesk software (Service Desk) to improve the usability of its GUI interface and support the queuing process. The handling of how service requests received directly by the developers, desktop, and network specialists was addressed through documentation, policy, and training. Training and awareness is still in progress.

Studies

- Use of Tablets and Smartphones (awaiting the Joint Legislative Oversight Committee on Information Technology's Pilot Report and Recommendations)
    - Items to be addressed
        - Success of Pilot
        - Device procurement - NCGA or individual
        - Cellular Usage procurement
        - Device Management Hardware & Software – Security, applications, etc.
        - Need for both laptop and tablet
- Newsletter distribution using Listserver
- Explore the use of electronic pay stubs for permanent staff
- Investigate the use of SharePoint for Committee Internet presence, GARDS, etc.
- Review video conferencing possibilities for the Legislative Building Auditorium
- Review and revise all policies, procedures, and standards (annual process)