Enterprise Electronic Forms and Digital Signatures

Report to the Joint Legislative Oversight Committee on Information Technology

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Legislative Request

A provision in the 2013-2015 budget bill transferred enterprise electronic forms and digital signatures projects from the Office of the State Controller (OSC) to the Office of Information Technology Services (OITS). Section 7.15(a) of Session Law 2013-360 directed the State Chief Information Officer (SCIO) to continue the planning, development and implementation of a coordinated enterprise electronic forms and digital signatures capability.

The General Assembly also authorized the SCIO to continue to fulfill the electronic forms and digital signatures needs of the executive branch agencies utilizing the established enterprise capabilities. The legislature requested quarterly reports, beginning November 1, 2013, on the status of the initiative.

The full text of the budget provision can be found in Appendix A.

Report Focus

This report will provide an update on implementation of the digital signature and enterprise license, inspections and permitting service, issues identified and plans for the future.

Introduction

Legislation passed by the General Assembly in 2011 directed the State Controller to plan, coordinate and implement a statewide capability for enterprise electronic forms and digital signatures. (Section 6A.18 (a) of Session Law 2011-145.)

A survey of high-level agency requirements and some of the possible approaches led OSC to organize this effort into two projects:

- The **Authentication Project** focused on digital signatures, eliminating resource-intensive processes that require agencies, citizens, and staff to manually sign documents.
- The **Automation Capability Project** focused on helping agencies be more efficient while eliminating paper processes by automating complex processes that encompass multiple forms and checkpoints. The initial effort was on inspections, licensing and permitting.

Based on feedback from agencies, OSC adopted a decentralized approach on the projects. This allowed OSC to enter into contracts with vendors and allowed agencies to access services as they needed them. Separate vendors were selected to provide the electronic forms and digital signatures capability.

OSC's role was to provide contract administration, help agencies adopt the systems, and help provide training and help desk support. Agencies maintained their own forms, workflows, and configurations that met their business needs.

As mentioned previously, the General Assembly transferred responsibility for the enterprise electronic forms and digital signature services from OSC to OITS effective October 1, 2013.

Authentication Project

Approach

The Authentication Project focused on the use of digital signatures, eliminating resource-intensive processes that required agencies, citizens and staff to manually sign documents.

After an open procurement, OSC awarded a contract to DocuSign, Inc., in August 2012. DocuSign is a Software as a Service (SaaS) vendor. Under the SaaS model the State has no hardware or software installed and running on its infrastructure, all processing is done in the cloud.

The original contract was a 2-year contract that procured 100,000 electronic signature transactions for each year. The contract also includes onboarding services, training for users, assistance with template creation and access to DocuSign's Enterprise Support services. The envelopes are good for two years.

A two-year extension of the contract with DocuSign was negotiated and signed in August 2014. Included in this extension was a provision that all of the envelopes that had been purchased by the state but not utilized will continue to be available for the duration of this contract extension. In addition, there is no requirement for the state to procure any additional envelopes unless the current supply of paid envelopes is fully utilized. The terms and pricing of the contract remains the same.

The convenience contract is available for use by Executive Branch agencies as well as non-state agencies as permitted by law. The contract offers a tiered volume pricing model that leverages the state's purchasing volume.   OITS is working with the Executive Branch agencies to expand the usage within this branch of state government.

Current Users

Several entities are using the digital signature contract. Shown below are some examples of use:

- The Governor's Office - Application for Boards and Commissions
- University of North Carolina - UNC Wellness Center
- East Carolina University – HR Department
- Office of Information Technology Services (OITS)
    - Personnel Changes, Contract signing, travel reimbursement, forms with agencies
- Department of Transportation – Roadway Construction
    - DOT Engineering – routing and approval of engineering plans

- Department of Public Safety
  - Hiring Process
- Department of Public Safety -- Juvenile Justice Division
  - NCALLIES system to manage grant cost reports and effectiveness measures
- Department of Public Safety – Emergency Management and State Highway Patrol
  - Travel reimbursement
- Rowan Cabarrus Community Colleges – Financial Office
  - Travel authorizations and expense reimbursements
- NC Community College System (7 Community Colleges and System Office)
  - Travel authorizations
  - Budget allocations and reallocations
- Department of Agriculture
  - Travel authorizations

Issues

- The funding for this initiative was reduced in the current fiscal year budget. There is currently no funding to support a centralized program to drive adoption and changes to business processes within the Executive branch agencies, nor is there funding to provide any centralized support to those agencies who have chosen to utilize the DocuSign solution.
- The roadblock to automation of the travel reimbursement forms was the need to significantly change the business office processes and procedures within each agency. Since there was no mandate for the agencies to participate, agency adoption has been slow.
- As of this report the following executive branch agencies (Office of the Governor, Department of Transportation, Department of Public Safety, Office of State Human Resources, Department of Secretary of State, Office of State Auditor, Wildlife Resource Commission, Office of the State Controller, Office of State Budget & Management, Office of Information Technology Services, and North Carolina Community Colleges System Office) are using this contract.
- There are several groups outside the executive branch agencies who are buying off this convenience contract and paying DocuSign directly for their use of this contract.

Plans/Actions

- As time permits, we will continue to communicate the benefit and value of this capability.
- Provide already purchased envelopes to executive branch agencies interested in using DocuSign, eliminating the agency need to purchase envelopes.

Value

- The DocuSign service is extremely easy to use and quite intuitive. It is simple to build workflows for a process to route and sign any required documents, and it is easy to know where the document resides and upon whom it is waiting for review and signature.
- Feedback from those who are using DocuSign indicate a high level of satisfaction with the service and they are pleased with the value and benefits that are realized from this service.

Electronic Certification, License, Inspection and Permit System (ECLIPS) Project

Approach

The goal of the ECLIPS Project is twofold: to change the business processes around licensing, inspections and permits within the executive branch, and to develop an enterprise automation capability that enables the total automation of current processes that use paper forms and duplicate data entry. This new approach will significantly streamline the cycle time and the processing time for permitting, licensing and inspections. It will also improve data integrity and automate the workflow, which reduces the administrative time and support required.

In addition to reducing cycle time, improving the quality of the data and eliminating manual steps in the process, the goal is to add functionality that is not available in the current business processes. This includes providing ability for the citizens to improve their ability to communicate with state government, understand the status of their current licenses, permits and inspections and to provide an electronic method for payment of all fees and services.

As with digital signatures, a convenience contract was established for Executive Branch agencies and others authorized by law to use services provided by the OITS, such as local governments and universities. The Controller's Office awarded the contract to CSDC Systems. The initial efforts have focused on inspections, licensing and permitting. Future efforts will place more emphasis on reducing duplication and streamlining and improving business processes, as described later under Next Steps.

OITS manages the service, which includes providing the systems and core components of the application in test and production, support staff, vendor and contract management, and program management. Each agency purchases client licenses to access the application and configures the system to meet its business processes requirements for a wide variety of inspection, licensing, and permitting functions.

Current Users - Pilots

The first two pilot initiatives on the ECLIPS platform are well under way and the agencies using the capability believe they will see operational benefits very quickly. These deployments are the Department of Environment and Natural Resources (DENR) Sedimentation and Erosion Control Permits and Department of Agriculture Nursery Licenses/Certificates.

The Department of Environment and Natural Resources (DENR) -- Sedimentation and Erosion Control Permits

The department conducts an average of 18,756 inspections annually, utilizing multiple forms. The automated back office component on ECLIPS went into production in June 2014. The mobile inspection phase and portal phase went live in September 2014. As of this report, 30 agents are using the mobility platform of this application in their daily job and an additional 17 agents are expected to begin using the mobility platform December 2014 or early January 2015.

The public portal component has been installed in development and DENR is waiting for the vendor, CSDC, to release the system for testing.

Expected benefits defined by the agency include:

- Enhanced customer service through an organized and transparent regulatory process
- Decreased processing times through direct data entry instead of using handwritten forms that are then entered into a system
- Improved data accuracy
- Improved workflow management
- Fewer status calls; customers can look up their status online
- Improved tracking, scheduling and reporting

Businesses will also save time and money since an entire construction project must wait for DENR approval before beginning a project. When the approval time is reduced, costs for the construction company are potentially reduced.

The state will save on certified mail, postage, printing, ink, envelopes and paper costs. Time savings will be redirected to plan reviews during peak times, process improvements, customer follow-up and other customer service tasks.

The Department of Agriculture and Consumer Services – Nursery Licenses/Certificates

Nineteen plant protection specialists inspect over 10,000 acres of nursery stock each year and issue nursery licenses/certificates to authorize the distribution or sale of nursery stock or collected plants. The automated back office system went live on ECLIPS in November 2013. The mobile inspection component testing phase is almost complete. The department is working to deploy the mobility

tablets to the specialists so that the mobility capability of this solution can be utilized in the 2015 nursery inspection cycle. The public portal component has been installed in development and Agriculture is expected to begin testing shortly. It is expected that the public portal will be deployed into production in the 2015 inspection cycle along with the mobility components.

Expected benefits defined by the agency include:

- Increased efficiency
- Improved planning, scheduling and navigation to inspection sites
- Greater efficiency of inspection reporting/processing, resulting in less time spent processing inspection results and more time performing inspections
- Reduced backlog of overdue inspections
- Reduced cost of operations
- Future cost avoidance
- More effective inspection techniques resulting from improved plant pest specialist access to data and inspection resources resulting in:
- Improved ability to identify violations and discrepancies
- Greater violation enforcement—ensuring that all known violations are addressed in a timely manner
- More effective management capabilities resulting from faster, broader access to higher-quality data resulting in:
    - Better short-term deployment of resources by identifying problem areas
    - Improved long-term strategic planning
    - Identification of training needs and process improvement opportunities
    - Improved fee collections

The back office system is yielding process improvements and the portal and mobile phases will help the department realize cost savings in the future.

Future Plans

Agriculture has identified other uses for the ECLIPS capabilities. They are currently assessing the feasibility of implementing this solution for Structural Pest Control and Sleep Products.

DENR recognizes the great potential for ECLIPS. Once the short-term and long-term planning has been completed, DENR will engage the DENR Technology Management Committee for prioritization and associated budget considerations.

Potential deployments that have been identified by both agencies can be found in Appendix B.

Challenges

As the ECLIPS project has moved into production, a number of issues have been identified that need resolution. CSDC, the vendor, has addressed some of these concerns but there is still a list of items that need to be addressed by the vendor. OITS is working with CSDC, the Department of Agriculture and DENR, to address the issues and build a sustainable operating environment.

Some of these challenges include:

- Need to clarify roles & responsibilities for ongoing support
- Vendor implementation and support model for both services and products
- Improved skills and knowledge transfer to state support team
- Technical and functionality issues that need to be addressed by CSDC Systems
- The contracted solution from CSDC has not been fully implemented and there are open issues that have not been addressed to the satisfaction of the State. As a result, the state has not "accepted" the solution and is withholding payments.
- Architecture & scalability

This project has significant value to the State but as of this report, the benefits of the two pilots are only beginning to be realized. Full realization of the benefits will not be seen until 2015. The funding cut for FY 14-15 has limited the ability of OITS to build up the state's skills and expertise with this solution. The first two implementations have encountered significant difficulty but many of those issues have been resolved. The ability of OITS to provide a viable enterprise e-Forms solution and to see the operational cost savings and efficiencies realized is dependent on sufficient and stable funding for the future.

Actions/Plans

- Work with vendor to complete remaining items for these two pilots and resolve all remaining open vendor issues
- Complete all phases of first two pilots by early 2015
- Document lessons learned from first two pilots
- Stabilize operational platform and assess enterprise readiness
- Gain agreement on funding for this project in FY 15-17 biennium budget
- Review and gain agreement on staffing needs to include business process re-engineering skills
- Work with agencies to identify next process to implement and develop an implementation plan

Next Steps

To gain the full efficiencies of electronic forms and digital signatures, the State must look for ways to streamline and improve agency business processes. Otherwise, we are simply automating inefficient business practices. To fully realize these efficiencies, agencies need to be invested in re-engineering processes. OITS and the agencies involved need to plan to include re-engineering of business processes with future processes incorporated into the ECLIPS platform. Additionally, the ongoing funding model for this service and others should be explored as part of the IT Restructuring initiative to determine how best to provide and support this enterprise capability.

Appendix A: Session Law 2013-360, Senate Bill 402

This is the text of Section 7.15 of Session Law 2013-360.

ENTERPRISE ELECTRONIC FORMS AND DIGITAL SIGNATURES

SECTION 7.15. (a)

The state's enterprise electronic forms and digital signatures project shall be transferred from the Office of the State Controller to the Office of the State Chief Information Officer (CIO) as a Type I transfer, as defined in G.S.143A-6. The State CIO shall continue the planning, development, and implementation of a coordinated enterprise electronic forms and digital signatures capability, as well as the use of digital certificates. As part of the process, the Office of the State CIO shall include the capability to allow one-time data entry for multiple applications.

SECTION 7.15. (b)

The State CIO shall continue to integrate executive branch agencies developing, or identifying the need to develop, electronic forms or digital signatures projects, or both. The State CIO shall also review existing electronic forms and digital signatures capabilities and develop a plan to consolidate them. The State CIO may consolidate current agency electronic forms and digital signature capabilities, and cancel ongoing projects, and may redirect the resources associated with the capabilities and projects to the enterprise electronic forms and digital signatures project. Beginning November 1, 2013, the State CIO shall submit quarterly reports on the status of the project to the Joint Legislative Oversight Committee on Information Technology and the Fiscal Research Division.

Appendix B: Potential Users of Inspections, Licensing and Permitting Automation System

Listed below are potential projects that have been identified. OITS believes there is even further potential for the requested solution.

Department of Agriculture

Anticipated Deployment	Anticipated Number of Inspections/Permits/ per Year	Total Number of Professional and Business Licenses	Current Professional and Business Licenses (New or Renewed)	Anticipated System Users	Concurrent System Users
Fertilizer (PIFF)		710	446	2	2
Plant Protection (PIPP)	6500	8492	4637	3	3
Seed (PISE)		6882	4612	4	2
Structural Pest (SPSP)	5600	8653	5253	15	10
Pesticide (FDPR)	850	21378	14778	15	10
Pesticide (FDPE)	7050	25152	12542	17	10
Sleep Products	3000	1700	1700	5	2
Animal Welfare (VEVE)		1151	750	9	6
Avian/Livestock (VERL)		3677	1565	10	3
Food (FDCL)		5191	842	5	2
Prescription Drug (FDPD)		2290	1560	3	2
LP Gas (STLP)	6676	2653	1602	5	3
Scale & Petroleum Device (STSL)		3071	1304	1	1
Weighmaster (STWM)		12032	6603	5	2
Fiscal Mgmt Grain (ADFM)		612	354	2	2

Department of Environment and Natural Resources

The Department of Environment and Natural Resources manages 140 types of permits, plans, licenses and certifications across air quality water quality, waste management land management and marine fisheries. We are working with DENR to build a plan for the remaining permits, plans, licenses and certifications.