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# Presentation to CJIN Board

## Digital Signature/eForms Pilot

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# Agenda

- ⌘ What is the problem that the State is trying to solve?
- ⌘ Background/Legislation
- ⌘ eForm Digital Signature Pilot
- ⌘ What Other States are Doing
- ⌘ Criminal Justice Applications
- ⌘ Discussion



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# The Problem

- ⌘ **Unstructured content is everywhere and growing** – Agencies continue to struggle with information overload and document processing
- ⌘ **Inefficiency and expense** – Paper based systems and processes limit productivity, are expensive to maintain, and do not scale well
- ⌘ **Inadequate information access** – Difficult to rapidly retrieve needed information and view all content across one or more agencies
- ⌘ **Compliance** – Many legacy systems housing mission critical content do not meet compliance requirements (e.g. DOD5015.2 9 security), HIPAA, etc..)
- ⌘ **Constituent Services** – Increasing demands from inside and outside State government for real time information and access to State provided services 24x7





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# Background/Legislation

**ITS**

- ⌘ In 1998, the General Assembly enacted a new article in Chapter 66 of the General Statutes on Electronic Commerce in Government.
  - ☑ This legislation established digital signatures as having the same force and effect as a manual signature, but only where government was one of the parties of the action.
- ⌘ In 2000, two more important pieces of legislation were enacted:
  - ☑ The Federal E-sign Act – allows a personal to personal or personal to business e-transactions as well as those between a public entity and a private one.
  - ☑ The Uniform Electronic Transactions Act – NC legislation to mirror the federal language in the Federal E-Sign Act. Requires a “security procedure” which verifies and detects changes or errors.



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# Background/Legislation **ITS**

- ⌘ State government runs on forms---we have forms for taxes, for hiring, for buying things, for retirement, citizen and business permits, etc.
- ⌘ How many forms are there? No one is sure, but DOT has 558 and AOC has 770 on their web sites.



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# Evolution of eForms

Paper  
Form

- ✂ Print-out a hard copy and fill-in the blanks
- ✂ Traditional method of initiating a form based transaction
- ✂ "Wet" signature
- ✂ Save a hard copy
- ✂ Submitted via postal mail or FAX

Hybrid  
Paper/eForm

- ✂ Fill-in an electronic form using a computer and then print-out a hard copy
- ✂ Can leverage localized software (e.g. WORD) or a simple web based form
- ✂ Could have data edits with no workflow and "wet" signatures
- ✂ Save a hard or soft copy
- ✂ Submitted via postal mail, FAX, or eMail

Interactive  
eForm

- ✂ Completely electronic fill-in and submission process via a web site
- ✂ Pre-filled data, edits, and personalization possible
- ✂ Workflow with various forms of digital signature support
- ✂ Audit trails and integration with an EDM platform
- ✂ Save a hard copy, soft copy, or on-demand retrieval via a web site



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# Maturity Model

⌘ Where is NC on the maturity model?

⌘ Most examples that we found are in the hybrid paper/eForm category. That is, we have forms on our web sites, but they have to be downloaded, filled in, and printed before being signed. Then, the paper copy is returned to the agency by hand, by fax or by mail for processing. Each of the processing steps adds time and complexity.

⌘ Remember, digital signatures were enabled in 1998 in North Carolina for actions involving public entities.



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# Digital Signature/e-Form Pilot

- ⌘ In the 2008-09 budget, funds were allocated for a document management/digital signature pilot.
- ⌘ The Department of Cultural Resources, Office of the Secretary of State, and ITS are to participate in the project and are to develop program requirements:
  - ☐ Creation of a uniform and consistent set of policies and procedures for managing and preserving electronic records through their life cycle in an efficient, effective, and economical manner.
  - ☐ Development, establishment and promotion of statewide electronic records management training and certifications programs
  - ☐ Promotion of the use of public records in digital format





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# Digital Signature Pilot

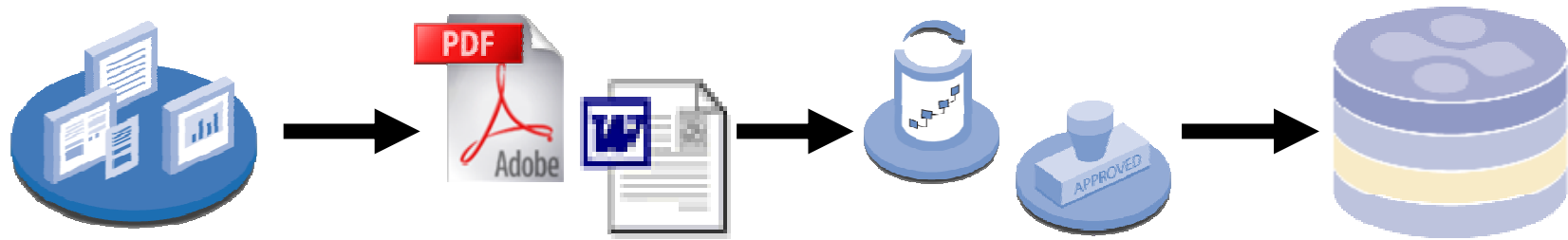
- ☒ Development of statewide procurement standards for the electronic records infrastructure.
- ☒ Provision of guidance and assistance to all customers on issues relating to public records in digital formats including, but not limited to, e-mail, e-commerce, electronic signature encryption, filings, public web pages, metadata, and system documentation.
- ☒ We are to report back to the General Assembly on the “status and effectiveness of the electronic document management pilot” on April 1, 2009.



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**ITS**

# Qualification for Pilot



Agency Internet / Intranet  
Web Portal Application

Create/Capture  
eForm(s)

Workflow Review  
and Digital Signatures

EDM Services  
& Repository

## ⌘ **Select a pilot agency(s) and application(s) with the following qualifications**

- ☑ A forms driven process that could/would be initiated via a web portal application
- ☑ Editing rules governing the capture of data for the above mentioned eForms(s)
- ☑ A workflow requirement for review and/or approval of the submitted eForm(s)
- ☑ A digital signature requirement for one or more parties involved with the submission and/or approval of the submitted eForm(s)
- ☑ A short or long term storage, retrieval, and records management requirement for the submitted eForm(s)



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# BEACON Pilot Application

## Internal

ITS



Agency Internet / Intranet  
Web Portal Application



Create/Capture  
eForm(s)



Workflow Review  
and Digital Signatures



EDM Services  
& Repository

PDF-4-Bus 100  
Office of Information Technology Services  
Personnel Services Division  
EMPLOYEE SELECTION FORM

1. Position Information (Completed by Reporting Supervisor)

Classification Title: \_\_\_\_\_  
Salary Grade: \_\_\_\_\_  
Position Number: \_\_\_\_\_  
Position Type: Permanent ☐ Temporary ☐  
Hours per Week: \_\_\_\_\_  
Date Posted: \_\_\_\_\_  
Date Closed: \_\_\_\_\_

2. Employee Information (Completed by HR)

Name: \_\_\_\_\_  
New Hire: \_\_\_\_\_  
Current Position: \_\_\_\_\_  
Current Salary: \_\_\_\_\_

3. Budget Information (Completed by HR)

Company: \_\_\_\_\_  
Budgeted Amount: \_\_\_\_\_  
Position Funding: 4107 531212 Center: \_\_\_\_\_

4. Recruitment Data (For Personnel Office)

Date of Posting: \_\_\_\_\_  
Effective Date: \_\_\_\_\_  
Approved: \_\_\_\_\_  
Comments: \_\_\_\_\_

Approved By: \_\_\_\_\_  
Reporting Supervisor: \_\_\_\_\_

Section Head: \_\_\_\_\_

Special Minimum Rate: \_\_\_\_\_  
Estimated Ad Cost: \_\_\_\_\_  
Actual Ad Cost: \_\_\_\_\_  
Insertion Date(s): \_\_\_\_\_  
Date: \_\_\_\_\_

Source of advertising funds: \_\_\_\_\_  
Classified Advertising: \_\_\_\_\_  
Structured Interview Questions Attached: \_\_\_\_\_

ITS\_Report\_In\_First\_Position\_Sample.doc  
Rev. 12/09

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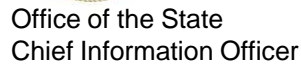
⌘ (3) frequently used HR forms initiated via the BEACON Intranet portal

- ☒ Request to Post a Position form
- ☒ Selection Decision Log form
- ☒ Employee Selection form

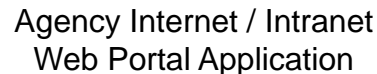
⌘ eForms driven data capture process over a secure Intranet connection that is NCID enabled

⌘ Rules based editing and multiple workflow stops with integrated digital signature capability (authenticated)

⌘ Integration with ITS EDM services platform for storage, retrieval, and management of electronic forms



**ITS**



## Create/Capture eForm(s)

## Workflow Review and Digital Signatures

EDM Services  
& Repository

- ⌘ Application for a retail permit to sell alcoholic beverages initiated via the ABC web site for permit requestors
- ⌘ eForms driven data capture process over a secure Internet connection
- ⌘ Rules based editing, data pre-fill, and multiple workflow stops with integrated digital signature capability (authenticated) for ABC officials and the permit requestor
- ⌘ Integration with ITS EDM services platform for storage, retrieval, and management of electronic forms



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## Digital Signatures in Other States

- ⌘ Illinois—Is widely recognized for its work in digital signature implementation. Illinois issues more than 5,600 digital certificates every four months, and the total count has passed 107,000 - the most of any state in the country. Used by various agencies within the state. (Own CA - Cross certified with Federal Bridge CA)
- ⌘ Maine—established its own digital signature program. The State of Maine's Certificate Services Public Key Infrastructure – CERTS. Used by the EPA for licenses and permits, zoning notices, conservation easements, & etc.



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# Benefits of Using eForms/Digital Signatures

ITS

## ⌘ Reduce costly paper handling and manual routing/workflow

- ☒ Paper-based forms are costly to distribute, print, mail, process and store.
- ☒ Automation of form processing ensures there is no disconnect between a form and the business process required for that form.
- ☒ E-signatures can cut down processing time and steps.

## ⌘ Tracking, auditing, and process awareness

- ☒ Instant access to current and previously completed forms and processes
- ☒ Having visibility into a form's complete lifecycle reduces cost, improves quality, and ensures access to vital information
- ☒ Any changes made to information after a document has been electronically signed will be noted

## ⌘ Accelerate the delivery of form-based information

- ☒ Automatically route/workflow completed forms to appropriate users for review/approval
- ☒ Automated eMail notifications and personalized task lists for users who must review or approve a form submission
- ☒ Accelerates the total cycle time for the completion of any given transaction which improves productivity and reduces cost

## ⌘ Reduce errors and improve accuracy

- ☒ Pre-populating form fields from external sources and form segment isolation enable users to input only the required data
- ☒ This results in fewer areas to complete, reducing errors, and ensuring greater accuracy

## ⌘ Expedite collection of quality information

- ☒ Presenting users with eForms that appear similar to their paper-based predecessor eases the transition to an eForm based process while eliminating "lost" forms
- ☒ Integrated digital signature capabilities, eForm help, field pre-population, and instant data validation improves the end user experience and reduces errors



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# Criminal Justice Applications

## ⌘ State of California

- ☑ Parole Violation Decision Making Instrument
- ☑ Driver Performance Evaluation Score Sheet

## ⌘ Portland Police Bureau

- ☑ Investigation Report



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## Where do we go next?

- ⌘ Review potential use with agencies, courts, local governments – all of NC.
- ⌘ Complete pilot and report back to legislature
- ⌘ Develop joint business case for functionality, share examples of needs that can be met, cost savings gained.





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