Out With the Old

2010 Amendments to RA9 and the Impact on the IACA UCC Standard
Overview – “Out with the Old”

- Background – ITS Session
- Instigators of Change – identifying what needs to happen.
- How to implement from a technology standpoint.
  - Can current system accommodate
  - Is this an opportunity to upgrade the whole system
  - Does the existing hardware support additional loads
  - Build vs. Buy
  - Incorporate new Technology.
Introductions

• Panelists
  o Sherri DeMarco – Michigan
  o Ben Ark – NCR
  o Trevor Timmons – Colorado
  o Andrew Wightwick – Georgia

• Participation Encouraged
  o All STS and ITS members
The Path Forward

- Technology 101 session
  - XML and other fun acronyms
  - “Out with the Old” considerations
- Discuss the proposed amendments and potential impact of the forms and filing systems
- A history lesson
  - The IACA Standard as it exists today
  - How / if the jurisdictions are using the standard
- Going forward – what should IACA do regarding the xml standard
- Putting it all together, Colorado’s system
Tech Talk
XML Defined

- Extensible Markup Language
- A flexible text format for creating structured computer documents
- Supposedly human readable and “Self Describing”.
- Can be used to convey data in a meaningful way.
• When we talk about XML and other fun tech topics, it should be understood that we are talking about representing documents electronically so that they can be delivered and/or filed.
• One of the ways we can talk about eFiling is to generally define ways in which a document is represented electronically.

• Labeling documents based on these representations is a convenient way for us to easily identify and agree on what is happening in an eFiling process.

• Generally we group documents into three broad categories.

• These categories are called “Levels” or “Models”, depending on what you are talking about and who you are talking to.
Simply put: Scanned paper.

Document images submitted for filing/recording rather than paper.

Static Images

No index information or “metadata”.

Any information needed by the receiver must be retrieved/created from the image through manual processes.
• Simply put: Document images with a little something extra.
• Document image still stands on its own, but the transmission of the image includes metadata, such as indexed fields.
• The amount of extra information can vary widely.
• While the document images may be included as part of a XML document, the data in the XML and the images are separate and do not influence each other.
• For instance, if the XML data changes, the image remains unaltered.
• Simply put: Fully electronic documents
• All document data is contained within an XML or other data structure.
• The document itself is generated from the data contained in the XML.
• Changing the xml data will change the document appearance.
Somewhere in Between

Submitter Organization

1. Paper-based, scanned image (TIFF of document), No indexing data
   - Limited indexing data (First Grantor, First Grantee)

2. Paper-based, wet signed, notarized, scanned image (TIFF of wet-signed document). Includes indexing data

3. Pure Electronic Document, electronically signed and notarized, render-able view, ALL indexing data (derived from render-able view or explicitly added)

Recording Agency

1.5. Paper-based, scanned image (TIFF of document), Limited indexing data (First Grantor, First Grantee, and Parcel Information)

2.5. Electronically/digitally signed and notarized, Document image (TIFF/PDF of document, executed electronically), Includes indexing data

- References to models 1.25, 1.5 and 2.5, etc, are for illustrative purposes only.
Which Model is Best?

- IT DEPENDS!!!!
- Define the job that needs to be done, then pick your tool!
- Sometimes a user requirement or business rule will limit your options.
- You can have a GREAT level 3 system, but if your filers can’t submit XML documents, will it work?
What’s an XSD

- Anyone?
- Related to XML. It has an “X” in it after all.
- Matter of fact, it even has the word “XML” in it. That’s right, an acronym that starts with an acronym!
- It stands for “XML Schema Definition”.
What is it Good For?

- A XSD file is sort of like a blueprint for an XML document... On steroids...
- It defines how XML documents can be built. It gives XML documents some structure in which to conform to.
- XSD is sort of like a contract that is used to make sure different parties build their XML document in the same way.
Yup, even more XSD.

TASK: Create an XML doc for a CAR

TWO TEAMS

```
<car>
  <color>RED</color>
  <size>
    <width>10 feet</width>
    <height>8.5 feet</height>
  </size>
  <features>
    <interior>
      <option id="leather">NO</option>
      <option id="sirius">YES</option>
    </interior>
  </features>
</car>

<automobile color="#ff0000">
  <width>1.52 meters</width>
  <height>1.22 meters</height>
  <leather>NO</leather>
  <siruis>YES</siruis>
</automobile>
```
What it Does

- XSD defines the allowable element names
- Defines the order in elements can appear
- Defines required and non-required data
- Defines allowable range of values and types of data (words, numbers, units)
- Defines *cardinality*. This is a $0.50 word that describes how things relate. 1:1, 1:many, 0, etc.
- XSD can be used to validate an XML document. XML that validates against a XSD is said to be compliant.
AKA...

- XSDs may be referred to as
  - “The Schema”
  - The Standard
POST and GET

- **POST**
  - Simply put, it’s a method of retrieving or submitting information to a web server.
  - The “information” being submitted is hidden and included as part of the header of the information that is sent to the server.
  - Form Submissions typically use POST

- **GET**
  - Simply put, it’s a method of retrieving or submitting information to a web server.
  - The Information is sent to the webserver as part of the URL as a “querystring”
  - Querystring starts with a “?” and key/value pairs separated by “&”
  - http://www.google.com?user=andy&desc=awesome
WSDL

- Anyone?
- Web Service Definition Language
- Basically, it’s an XML document that computers can use in order to determine HOW to exchange information.
- Defines what is often referred to web services, and technical folks tend to (incorrectly) use these interchangeably
- What is a web service? A way for a computer to ask a question or make a request to another computer using web technology.
SOAP and REST

- **SOAP - Anyone?**
  - Simple Object Access Protocol
  - Loosely analogous to an envelope

- **REST – Anyone?**
  - Representative state transfer
  - Really a fancy way of saying normal web usage with some caveats.
A Simple Web Service

Math Web Service
- Add(number 1, number2)
- Subtract(number1, number2)
- Square(number1)

What’s $1 + 8$?

Add(1,8) → 9
A More Complex Web Service?

User Filing Service
- Submit(user, pass, xml)
- GetStatus(filingID)
- GetAccepted(filingID)
- GetRejected(filingID)

File this document please.

Submit(filer, password, <xml>...</xml>)

Document OK, received
Instigators of Change

- **Internal Drivers**
  - Feature Requests
  - Bug Fixes
  - Process Changes
  - Budgetary considerations
  - Faulty or out of support hardware / software

- **External Drivers**
  - Availability of Software and Support
  - Technology Changes
  - Industry Changes
  - Needs of Partners
  - Legislative Changes
Proposed Amendments - Sherri

- Background on Legislation
- High level impact on forms and filing systems
The IACA UCC Standard

- History
- Considering the changes, what role should IACA take concerning the xml standard?
- Survey questions and Results from Sherri, along with comments from jurisdictions that have adopted the legislation.
A Filer’s Perspective

BEN ARK - NCR
The IACA UCC XML specification is closely followed by some jurisdictions.

Some jurisdictions have taken a very different approach.

No two implementations are the same!

Let’s take a look at some implementations...
Major Differences Between XML Implementations
Less Dramatic Differences Between XML Implementations
Many Ways to File

- **Simple “post” of XML**
  - XML is treated like a single document string
  - Similar to how web forms are submitted to the server but the filer is submitting XML text instead
  - Usually has no schema pre-validation
  - XML may be bundled up with authentication info or may be sent just as-is to the jurisdiction

- **SOAP Web Service with String**
  - XML is treated like a single document string
  - May or may not have schema pre-validation
  - Ends up being a wrapper around the XML doc
More Ways to File

- SOAP Web Service with Objects
  - XML is treated like a complex object hierarchy
  - Requires strong schema pre-validation
  - Requires filers to be more sophisticated
  - Can use IACA specification (CO) or not (TX)

- Current IACA Specification recommends implementing simple “post” as well as a web service to receive an XML string (not objects)
Synchronous vs Asynchronous

- **Synchronous** acknowledgement is an immediate response with the completed filing:
  - There is no waiting for a response; the completed filing is returned in the same transmission
  - Only works when there is no manual review of the filing prior to acceptance
  - Requires immediate processing; a queued approach will not work well
  - If there are processing delays then there will be timeouts and that leads to additional complications
Synchronous vs Asynchronous

- **Asynchronous** acknowledgment is a delayed response with the completed filing, which is sent back to the filer in a separate transmission
  - Works when manual review is required prior to acceptance
  - Can work with a processing queue as the response back to the filer can be delayed without fear of timing out
  - Requires filers to be more sophisticated and have a “listener” web page or web service
  - Still requires some sort of immediate, synchronous response to the filer confirming receipt of the submission

- Asynchronous pickup by the filer at some point in the future
  - Jurisdiction does not “post back”
  - Very uncommon
UCC XML: Beyond the Filing

- Provide a reliable test/QA environment for filers
  - Having a test/QA site available after implementation allows for additional filers to come online as well as allowing existing filers to test any of *their* system changes

- Checking the status of a filing
  - Provide a web service or URL to make an automated “status check” request (common)
  - Provide a website/portal for XML filers to manually check a filing status (less common)
  - Nothing at all 😞

- Providing an acknowledgement PDF
  - In the returned, completed XML filing
  - Provide a web service or URL to request the file
  - Nothing at all 😞
Discussion Points

- Why are specifications important?
  - What value do they add for the jurisdiction?
  - What value do they add for the filer?

- Why have a specification if no one adheres to it?
  - Provides a reference for getting started
  - Guides implementers toward an ideal result
  - Helps answers questions for filers (reduces support calls)

- Does it matter?
  - Filers (banks, service companies) will make it work if it’s a priority—that’s their business!
  - Similarity makes it easier for filers to adopt XML which can lead to reduced handling of paper filings
IACA Standard

CURRENT VERSION SUFFICIENCY FOR NEW REQUIREMENTS
2011 UCC Forms and XML

- XML is data-centric
- Paper is presentation-dependent
- 04/20/2011 IACA model UCC forms mostly re-arrange the presentation of the same data

- Over half of US jurisdictions have adopted the amendments to Article 9
  - Many are adopting the new forms
  - Others may adopt, if prescribed by their Secretary
2011 UCC Forms and XML

• The XML spec is already in very good shape to handle the new forms!

• Potential Issues:
  – UCC-1 block 6a and 6b:
    • On paper, one option from 6a may be selected and one option from 6b may be selected; on XML, only one option from either 6a or 6b may be selected
  – UCC-3 Addendum block 13: Name of Debtor on Related Financing Statement
    • Argument could be made that this is not required/applicable to XML filings
# UCC FINANCING STATEMENT

## FOLLOW INSTRUCTIONS

A. NAME & PHONE OF CONTACT AT FILER (optional)

<table>
<thead>
<tr>
<th>ContactName</th>
<th>ContactPhone</th>
</tr>
</thead>
</table>

B. E-MAIL CONTACT AT FILER (optional)

<table>
<thead>
<tr>
<th>ContactEmail</th>
</tr>
</thead>
</table>

C. SEND ACKNOWLEDGMENT TO: (Name and Address)

<table>
<thead>
<tr>
<th>Names.OrganizationName</th>
</tr>
</thead>
<tbody>
<tr>
<td>Names.MailAddress</td>
</tr>
<tr>
<td>Names.Country</td>
</tr>
</tbody>
</table>

---

**THE ABOVE SPACE IS FOR FILING OFFICE USE ONLY**

## 1. DEBTOR'S NAME: Provide only one Debtor name (1a or 1b) (use exact, full name; do not omit, modify, or abbreviate any part of the Debtor's name); if any part of the Individual Debtor's name will not fit in line 1b, leave all of item 1 blank, check here ☐ and provide the Individual Debtor information in item 10 of the Financing Statement Addendum (Form UCC1Ad)

<table>
<thead>
<tr>
<th>1a. ORGANIZATION'S NAME</th>
<th>1b. INDIVIDUAL'S SURNAME</th>
<th>FIRST PERSONAL NAME</th>
<th>ADDITIONAL NAME(S)/INITIAL(S)</th>
<th>SUFFIX</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrganizationName</td>
<td>LastName</td>
<td>FirstName</td>
<td>MiddleName</td>
<td>Suffix</td>
</tr>
<tr>
<td>MailingAddress</td>
<td>CITY</td>
<td>State</td>
<td>PostalCode</td>
<td>Country</td>
</tr>
</tbody>
</table>

## 2. DEBTOR'S NAME: Provide only one Debtor name (2a or 2b) (use exact, full name; do not omit, modify, or abbreviate any part of the Debtor's name); if any part of the Individual Debtor's name will not fit in line 2b, leave all of item 2 blank, check here ☐ and provide the Individual Debtor information in item 10 of the Financing Statement Addendum (Form UCC1Ad)

<table>
<thead>
<tr>
<th>2a. ORGANIZATION'S NAME</th>
<th>2b. INDIVIDUAL'S SURNAME</th>
<th>FIRST PERSONAL NAME</th>
<th>ADDITIONAL NAME(S)/INITIAL(S)</th>
<th>SUFFIX</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrganizationName</td>
<td>LastName</td>
<td>FirstName</td>
<td>MiddleName</td>
<td>Suffix</td>
</tr>
<tr>
<td>MailingAddress</td>
<td>CITY</td>
<td>State</td>
<td>PostalCode</td>
<td>Country</td>
</tr>
</tbody>
</table>

## 3. SECURED PARTY'S NAME (or NAME of ASSIGNEE of ASSIGNOR SECURED PARTY): Provide only one Secured Party name (3a or 3b)

<table>
<thead>
<tr>
<th>3a. ORGANIZATION'S NAME</th>
<th>3b. INDIVIDUAL'S SURNAME</th>
<th>FIRST PERSONAL NAME</th>
<th>ADDITIONAL NAME(S)/INITIAL(S)</th>
<th>SUFFIX</th>
</tr>
</thead>
</table>
Potential conflict: AltFilingType for both 6a AND 6b
<table>
<thead>
<tr>
<th><strong>Secured Party’s Name</strong> or</th>
<th><strong>Assignor Secured Party’s Name:</strong> Provide only one name (11a or 11b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrganizationName</td>
<td></td>
</tr>
<tr>
<td>11a. ORGANIZATION'S NAME</td>
<td></td>
</tr>
<tr>
<td>11b. INDIVIDUAL'S SURNAME</td>
<td></td>
</tr>
<tr>
<td>LastName</td>
<td></td>
</tr>
<tr>
<td>FirstName</td>
<td></td>
</tr>
<tr>
<td>ADDITIONAL NAME(S)/INITIAL(S)</td>
<td></td>
</tr>
<tr>
<td>MiddleName</td>
<td></td>
</tr>
<tr>
<td>SUFFIX</td>
<td></td>
</tr>
</tbody>
</table>

**Mailing Address**

<table>
<thead>
<tr>
<th>CITY</th>
<th>City</th>
<th>STATE</th>
<th>Postal Code</th>
<th>COUNTRY</th>
</tr>
</thead>
</table>

**12. ADDITIONAL SPACE FOR ITEM 4 (Collateral):**

Collateral.ColText

**13. This FINANCING STATEMENT is to be filed [for record] (or recorded) in the REAL ESTATE RECORDS (if applicable):**

- [ ] covers timber to be cut
- [ ] covers as-extracted collateral
- [ ] is filed as a fixture filing

**14. Description of real estate:**

FileInRealEstate.Description

**15. Name and address of a RECORD OWNER of real estate described in item 16 (if Debtor does not have a record interest):**

OrganizationName
MailingAddress
City, State, PostalCode, Country

**16. MISCELLANEOUS:**

MiscInfo

### UCC-1 Ad (continued)

UCC FINANCING STATEMENT ADDENDUM (Form UCC1Ad) (Rev. 04/20/11)
UCC FINANCING STATEMENT AMENDMENT

FOLLOW INSTRUCTIONS

A. NAME & PHONE OF CONTACT AT FILER (optional)
   ContactName  ContactPhone

B. E-MAIL CONTACT AT FILER (optional)
   ContactEmail

C. SEND ACKNOWLEDGMENT TO:  (Name and Address)
   Names.OrganizationName
   Names.MailAddress
   Names.Country

   [ ] FileInRealEstate

THE ABOVE SPACE IS FOR FILING OFFICE USE ONLY

1a. INITIAL FINANCING STATEMENT FILE NUMBER
   InitialFileNumber

1b. This FINANCING STATEMENT AMENDMENT is to be filed [for record]
    (or recorded) in the REAL ESTATE RECORDS
    Filer.  attach Amendment Addendum (Form UCC3Ad) and provide Debtor's name in item 13

2. ☐ TERMINATION: Effectiveness of the Financing Statement identified above is terminated with respect to the security interest(s) of Secured Party authorizing this Termination Statement

3. ☐ ASSIGNMENT (full or partial): Provide name of Assignee in item 7a or 7b, and address of Assignee in item 7c and name of Assignor in item 9
   For partial assignment, complete items 7 and 9 and also indicate affected collateral in item 8

4. ☐ CONTINUATION: Effectiveness of the Financing Statement identified above with respect to the security interest(s) of Secured Party authorizing this Continuation Statement is continued for the additional period provided by applicable law

5. ☐ PARTY INFORMATION CHANGE:
   Check one of these two boxes:
   This Change affects ☐ Debtor or ☐ Secured Party of record
   AND Check one of these three boxes to:
   CHANGE name and/or address: Complete item 6a or 6b; and item 7a or 7b and item 7c
   ADD name: Complete item 9a or 9b; and item 7a or 7b and item 7c
   DELETE name: Give record name to be deleted in item 6a or 6b

6. CURRENT RECORD INFORMATION: Complete for Party Information Change - provide only one name (6a or 6b)
   6a. ORGANIZATION’S NAME
   OrganizationName
   OR
   6b. INDIVIDUAL’S SURNAME
   LastName
   OR
   FIRST PERSONAL NAME
   FirstName
   ADDITIONAL NAME(S)/INITIAL(S)
   MiddleName
   SUFFIX
   Suffix

7. CHANGED OR ADDED INFORMATION: Complete for Assignment or Party Information Change - provide only one name (7a or 7b) (use exact, full name, do not omit, modify, or abbreviate any part of the Debtor's name)
   7a. ORGANIZATION'S NAME
   OR
   7b. INDIVIDUAL’S SURNAME
   OR
   FIRST PERSONAL NAME
   ADDITIONAL NAME(S)/INITIAL(S)
   SUFFIX
   Suffix

AmendmentAction
### UCC-3 (continued)

#### AmendmentAction

<table>
<thead>
<tr>
<th>5. PARTY INFORMATION CHANGE:</th>
<th>6. CURRENT RECORD INFORMATION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check one of these two boxes:</td>
<td>Complete for Party Information Change - provide only one name (6a or 6b)</td>
</tr>
<tr>
<td>This Change affects [ ] Debtor or [ ] Secured Party of record</td>
<td><strong>OrganizationName</strong></td>
</tr>
</tbody>
</table>

#### AmendmentAction

<table>
<thead>
<tr>
<th>7. CHANGED OR ADDED INFORMATION:</th>
<th>8. COLLATERAL CHANGE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check one of these two boxes:</td>
<td>Also check one of these four boxes:</td>
</tr>
</tbody>
</table>
| / | ADD collateral /
| / | DELETE collateral /
| / | RESTATE covered collateral /
| / | ASSIGN collateral |

### Collateral ColText

<table>
<thead>
<tr>
<th>9. NAME or SECURED PARTY or RECORD AUTHORIZING THIS AMENDMENT:</th>
</tr>
</thead>
<tbody>
<tr>
<td>If this is an Amendment authorized by a DEBTOR, check here and provide name of authorizing Debtor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9a. ORGANIZATION'S NAME</th>
<th>9b. INDIVIDUAL'S SURNAME</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OrganizationName</strong></td>
<td><strong>LastName</strong></td>
</tr>
</tbody>
</table>

### AmendmentAction

<table>
<thead>
<tr>
<th>10. OPTIONAL FILER REFERENCE DATA:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SubmitterRef</strong></td>
</tr>
</tbody>
</table>

UCC FINANCING STATEMENT AMENDMENT (Form UCC3) (Rev. 04/20/11)
**UCC FINANCING STATEMENT AMENDMENT ADDENDUM**

FOLLOW INSTRUCTIONS

11. INITIAL FINANCING STATEMENT FILE NUMBER: Same as item 1a on Amendment form

<table>
<thead>
<tr>
<th>InitialFileNumber</th>
</tr>
</thead>
</table>

12. NAME OF PARTY AUTHORIZING THIS AMENDMENT: Same as item 9 on Amendment form

<table>
<thead>
<tr>
<th>12a. ORGANIZATION'S NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrganizationName</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OR</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>12b. INDIVIDUAL'S SURNAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>LastName</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FIRST PERSONAL NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>FirstName</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADDITIONAL NAME(S)/INITIAL(S)</th>
<th>SUFFIX</th>
</tr>
</thead>
<tbody>
<tr>
<td>MiddleName</td>
<td>Suffix</td>
</tr>
</tbody>
</table>

THE ABOVE SPACE IS FOR FILING OFFICE USE ONLY

13. Name of DEBTOR on related financing statement (Name of a current Debtor of record required for indexing purposes only in some filing offices - see Instruction item 13): Provide only one Debtor name (13a or 13b) (use exact, full name; do not omit, modify, or abbreviate any part of the Debtor’s name); see Instructions if name does not fit

<table>
<thead>
<tr>
<th>13a. ORGANIZATION’S NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO EFFECTIVE WAY TO PRESENT THIS IN CURRENT XML SPECIFICATION</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OR</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>13b. INDIVIDUAL’S SURNAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO EFFECTIVE WAY TO PRESENT THIS IN CURRENT XML SPECIFICATION</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUFFIX</th>
</tr>
</thead>
</table>

14. ADDITIONAL SPACE FOR ITEM 8 (Collateral):

Collateral.ColText
14. ADDITIONAL SPACE FOR ITEM 8 (Collateral):

Collateral.ColText

<table>
<thead>
<tr>
<th>FileInRealEstate.Designation</th>
<th>FileInRealEstate.Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. This FINANCING STATEMENT AMENDMENT:</td>
<td>17. Description of real estate:</td>
</tr>
<tr>
<td>□ covers timber to be cut □ covers as-extracted collateral □ is filed as a fixture filing</td>
<td></td>
</tr>
</tbody>
</table>

16. Name and address of a RECORD OWNER of real estate described in Item 17
   (If Debtor does not have a record interest):

OrganizationName
MailingAddress
City, State PostalCode
Country

18. MISCELLANEOUS:
   MiscInfo

UCC FINANCING STATEMENT AMENDMENT ADDENDUM (Form UCC3Ad) (Rev. 04/20/11)
Do we need a resolution to govern how we are going to modify and further maintain the IACA standard?
Colorado UCC System

TREVOR TIMMONS
XML

2012 IACA Conference
Background & Today

- Non-Standard Format Used in Our State for Years
- Aged System
-Submitter Flexibility!
- But Now…
XML

- Version 1.0 Adopted by the W3C in 1998
- Open Standard
- Human- and Machine-Readable
Colorado Variations

- Date and time are all W3C format
- Addition of custom enumeration for farm product item types
- Addition of claimant and owner entity type for authorizing parties
- MIME type for PDF is now a standard WWW type: application/pdf
Colorado Variations (cont’d)

- 2 mail addresses (mailAddress1 and mailAddress2) instead of street address
- Support for province in addresses
- Addition of new xml elements to return the filed image in the Acknowledgment element
- Moved Attachment element to filing/record level and not under the collateral level.
- Support Attachments up to 10MB
- Error Handling – We Modeled after CA!
Future

- Standardize to W3C conventions
  - Date/time
  - Attachments (SOAP)
- Move away from Asynchronous Batch to Real-Time (Web Services)
- Start With XSD
- Standardize Error Handling
Discussion & Thanks

- Trevor Timmons
  - Chief Information Officer
  - Colorado Secretary of State’s Office