

Georgia Courts Automation Commission Court Filing Interoperability Pilot Lessons Learned Document

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This document is dedicated to **Mr. Don Forbes**, recently retired as Executive Director of Georgia Courts Automation Commission, and **Judge Hilton Fuller**, former Chair of Georgia Courts Automation Commission. Without their continued vision, leadership and support since 1997, the Court Filing Interoperability Pilot would not have taken place and this document would not have been written.

Special thanks is given to Jerry Garland, current Executive Director of Georgia Courts Automation Commission, and Judge David Emerson, current Chair of Georgia Courts Automation Commission, for their continued support and leadership.

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Georgia Courts Automation Commission Court Filing Interoperability Pilot Lessons Learned Document

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By Winchel "Todd" Vincent III

Executive Summary

"Part I. Introduction" states Georgia Courts Automation Commission's ("GCAC") mission to encourage and facilitate automation in Georgia courts. Part I also introduces the phases of the Georgia Pilot and states that Phase I concluded with complete success and Phase II completed with partial success.

"Part II. Definitions" is a list of terms used during the pilot and throughout this document.

"Part III. Pilot Objectives" states the pilot's objectives to implement several end-to-end court filing systems, tests assumptions, make a business case for electronic filing, and test the viability of interoperability using the JTC/Legal XML Court Filing Proposed Standard.

"Part IV. History" provides background on GCAC's research and development and funding relationship with Georgia State University Electronic Court Filing Project. This section also provides history of Georgia State's promotion of standards and founding and development of Legal XML.

"Part V. Gathering Information and Selecting Participants" explains the Request for Information and Request for Proposal process and states the names of vendors and courts involved in the pilot.

"Part VI. The Pilot" provides a factual, chronological history of major pilot events, including face-to-face meetings, contract approval, addition and loss of participants, and successful completion of the pilot's phases.

"Part VII. Technical Agreements and Issues" provides a list of technical problems, issues and analysis. This section focuses on use of the Legal XML Court Filing DTD in the Georgia Pilot.

"Part VIII. Court Rules" provides a short summary of topics covered by draft rules written during the pilot. It also provides information on where to obtain a full draft of the rules.

“Part IX. Analysis” provides in-depth analysis of some of the more challenging issues faced during the pilot. This section defines "interoperability," explaining what interoperability is and what it is not. This section also analyzes competing business models, the architecture of the pilot's filing systems, the difficulties of mapping court information, electronic court filing payment systems, legal issues, and a number of other issues, including the hard reality of limited resources.

“Part X. Conclusions” summarizes the pilot’s successes and failures. Part X states that Phase I was completely successful with the implementation of four end-to-end filing systems all doing “live” filings. Part X also explains that Phase II was partially successful in that valid XML filings and confirmation were passed among vendors. This part notes, however, that Phase II did not test or implement robust security, live filings, or payments systems.

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Part I. Introduction

Georgia Courts Automation Commission's ("GCAC") mission is to encourage and facilitate automation in courts in the State of Georgia. In furtherance of this mission, GCAC sponsored a Court Filing Interoperability Pilot Project ("Interoperability Pilot" or "Georgia Pilot"). The purpose of the Interoperability Pilot is to provide Georgia courts and attorneys with proof-of-concept of electronic court filing and to better understand the need for, and barriers to, developing court filing systems and standards in Georgia.

The Pilot had two phases. Phase I completed in July and August 2001 and was completely successful. Phase II completed in October and November 2001 and was partially successful. The Interoperability Pilot closed in November 2001. This document details lessons learned during the pilot.

This document and associated documents can be found on the Georgia State University Electronic Court Filing website at <http://e-ct-file.gsu.edu/CourtFilings/Interoperability/>.

Part II. Definitions

1.1 Administrative Interface (“Administrative Interface”)

The “Administrative Interface” is a web or application-based interface available to court administrators and other court personnel. The Administrative Interface is used for reviewing incoming e-filings and for performing other administrative tasks.

1.2 Case Management System (“CMS”)

A “CMS” is software that records and manages information about court cases, records, calendars, finances, and other court information. A CMS will usually have an existing interface that is different and distinct from the “Administrator Interface.” CMSs vary among courts and vendors.

1.3 Court-Specific DTD

"Court-Specific DTD" is a preliminary DTD based on the "Legal XML DTD" that a specific vendor may use in a specific court for a to-be-determined period of time.

1.4 Court Data Elements

"Court Data Elements" are data elements from the court's case management system that the court deems necessary for filing and docketing an electronic document.

1.5 DTD

A “DTD” is a document type definition as specified in the W3C’s XML 1.0 Recommendation published at <http://www.w3.org/TR/1998/REC-xml-19980210>.

1.6 Docket

A “Docket” is an index of all documents filed in a particular case. In Georgia, O.C.G.A. § 15-6-61 and Georgia’s Uniform Superior Court Rule, 39.1 define the information to be contained in a docket for the Superior Courts. That information usually includes a Civil Action Number (a unique case number assigned to each action); names of all attorneys of record; names of all parties; date of filing; advance cost paid; additional costs paid; date of service; type of service, including whether a second original is sent and where; the date and type of specific disposition of the action, including clear entries for dismissals (with or without prejudice), settlements, judgments and the type of judgment, five-year and other administrative termination, and, transfer to court with proper jurisdiction and venue; whether the verdict or judgment is for the plaintiff or defendant; whether there was a mistrial; the date of the trial, if any; whether the case was tried (with or without jury); the name of the judge making the final disposition in the case; date a Fi. Fa. was issued; a cross-reference to the minutes and final record and page number; a cross-reference to the records storage area and box number if the case file is stored off-site, and; a summary of all pleadings in the case and the dates of their filings, transcripts filed, motions for new trial, notices of appeal, and remittiturs.

1.7 Document Management System (“DMS”)

A “DMS” receives, manages, stores, and retrieves, electronic court documents.

1.8 Electronic Document Index

An “Electronic Document Index” is an index of electronic court filings and associated information filed in a case. An “Electronic Document Index” is different than an “Electronic Docket.” An “Electronic Docket” is a complete index of both paper and electronic filing and associated information in a case.

1.9 Electronic Docket

An “Electronic Docket” is a “Docket” that is electronic and available via the Internet or an open network. A “Docket” may be password protected or otherwise limited to certain parties. For purposes of this pilot, an “Electronic Docket” may, but must not, contain all of the information in a “Docket.” Courts, Vendors, and GCAC will cooperate to determine information to be contained in an “Electronic Docket” on a court-by-court basis.

1.10 Electronic Filing or E-filing

An “Electronic Filing” or “E-Filing” is an electronic document delivered to a court by electronic means. “Electronic documents”, “electronic court documents” and similar terms are synonymous unless the context provides otherwise.

1.11 Filer Interface (“Filer Interface” or “Filers Interface”)

The “Filer(s) Interface” is a web or application-based interface available to lawyers, judges, and other court officials or citizens used to file electronic documents into a court.

1.12 JTC/Legal XML Court Filing 1.0 Proposed Standard

“JTC/Legal XML Court Filing Standard” is the July 24th JTC/Legal XML Court Filing standard published at <http://www.legalxml.org/CourtFiling/>. JTC is The Joint Technology Committee. The JTC is a joint committee of Conference of State Court Administrators (“COSCA”) (<http://cosca.ncsc.dni.us/>) and National Association of Court Managers (“NACM”) (<http://nacm.ncsc.dni.us/>).

1.13 Legal XML Court Filing 1.0 Proposed Standard (“Court Filing Standard”)

“Legal XML Court Filing 1.0 Proposed Standard” is the July 24th JTC/Legal XML Court Filing standard published at <http://www.legalxml.org/CourtFiling/>

1.14 Legal XML Court Filing DTD (or Court Filing DTD)

“Legal XML Court Filing DTD” (also called “Court Filing DTD”) is the DTD specified in the July 24th JTC/Legal XML Court Filing standard. See <http://www.legalxml.org/CourtFiling/>.

1.15 Middleware

“Middleware” is software that logically resides between the Filer Interface and the court’s CMS and DMS. Middleware must be able to receive and process well-formed XML that can be validated against the “Pilot DTD” or a “Court-Specific DTD” depending on the stage of the pilot. Middleware must be able to pass information from any “Valid, Well-Formed XML” it receives to a court CMS or DMS. “Middleware” may have other functionality. It is expected that different vendors will implement “Middleware” differently.

1.16 Parser and Validating Parser

A "Parser" is software used to check for well-formedness. A “Validating Parser” is a parser that validates well-formed XML against a DTD. Although all parsers and validating parsers are supposed to implement the W3C XML 1.0 standard the same way, there are slight nuances among them that may interfere with interoperability.

1.17 Pilot DTD

This is a DTD based on the "Legal XML Court Filing DTD" but modified and harmonized based on rules agreed upon by pilot participants and GCAC. The Pilot DTD is located on the Georgia State University Electronic Court Filing Project website at <http://e-ct-file.gsu.edu/Interoperability/>. The Pilot DTD makes only two minor changes to the Legal XML Court Filing DTD. However, the Pilot DTD incorporates (in conformance with the proposed standard) a “Georgia Cover Sheet DTD,” included in this document below, and available on the Georgia State Project’s website.

1.18 Technical Interoperability

“Technical Interoperability” is the ability of any Filer Interface to successfully file an electronic document into any court. For instance, if Filer Interface A is created by Vendor A; Middleware B and Administrative Interface B are created by Vendor B; and Middleware C and Administrative Interface C are created by Vendor C, then a filer should be able to successfully use Interface A to file a document into either Court B or C. Likewise, a user should be able to use Filer Interface B or C to file into Court A, B, or C.

1.19 Valid, Well-Formed XML

For purposes of the pilot “Valid, Well-Formed XML” is XML that validates against the Pilot DTD or a Court-Specific DTD, depending on the stage of the pilot.

1.20 Well-Formed XML

"Well-Formed XML" is an XML document that meets the W3C standard. See <http://www.w3.org/TR/1998/REC-xml-19980210#sec-well-formed>.

1.21 XML

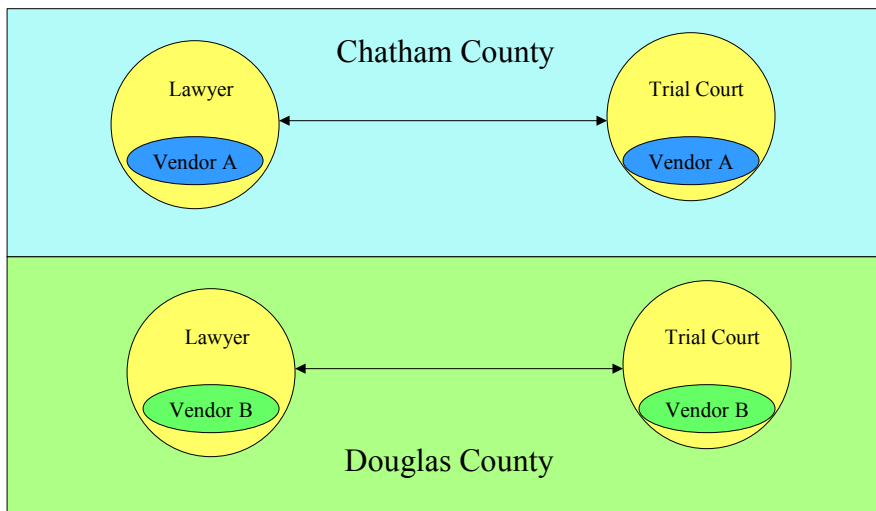
“XML” is a technology developed and recommended by the World Wide Web Consortium (“W3C”) and defined at <http://www.w3.org/TR/1998/REC-xml-19980210>.

Part III. Pilot Objectives

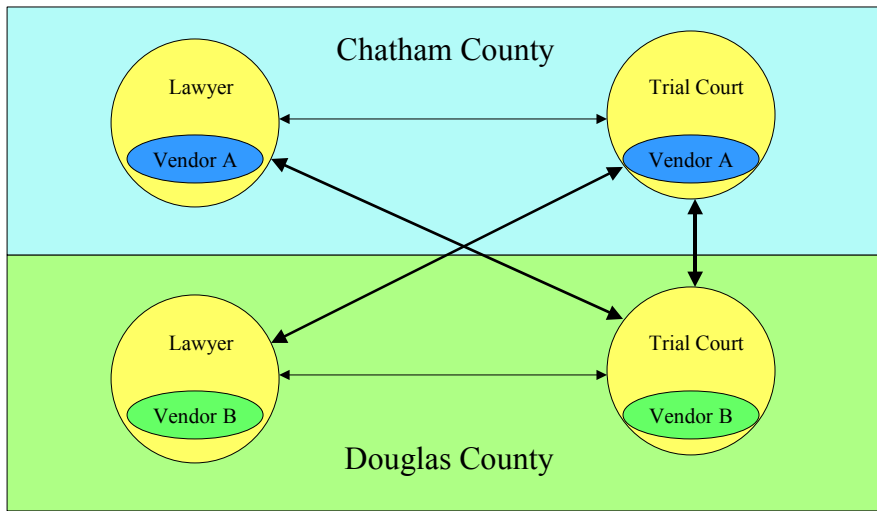
The Georgia Interoperability Pilot was divided into two phases with two objectives, respectively. The objectives of the Interoperability Pilot were:

- **Phase I:** Establish one or more “end-to-end” court filing systems to show proof-of-concept, test assumptions, develop business and court rules, determine costs and benefits, and develop a business case.
- **Phase II:** Test interoperability among attorneys and courts using different court filing systems and, more specifically, to test interoperability using the JTC/Legal XML Court Filing Proposed Standard.

A Phase I, end-to-end implementation is diagrammed below:



Phase II, interoperable implementations, are diagramed below.



Part IV. History

Georgia State University Electronic Court Filing Project

GCAC began investigating electronic court filing in late 1997. In January 1998, as part of its research effort, GCAC began funding Georgia State University College of Law Electronic Court Filing Project (“Georgia State Project”), a project originally established in 1997 as a pilot project under Georgia’s Electronic Records and Signatures Act (1997).

Early in its research, the Georgia State Project identified approximately twenty-five to thirty barriers that stood in the way of implementing electronic court filing in Georgia courts. To overcome several of these barriers, the Georgia State Project identified three areas that it believed required standardization: (1) civil procedure and court rules (2) document format, and (3) signatures.

Legal XML Court Filing 1.0 Proposed Standard

In 1999, in an effort to facilitate the creation of standards, the Georgia State Project founded and organized Legal XML (<http://www.legalxml.org/>). Legal XML is a non-profit organization comprised of volunteer members from private industry, non-profit organizations, government, and academia. The mission of Legal XML is to develop open, non-proprietary technical standards for legal documents using XML and related technologies.

From November 1999 to July 2000, Legal XML and the Joint Technology Committee of Conference of State Court Administrators (“COSCA”) and National Association of Court Managers (“NACM”) worked together with members of the national and international court community to develop a “proposed” Court Filing XML 1.0 standard.

Accordingly, as part of the GCAC Interoperability Pilot, GCAC required the implementation of the Legal XML proposed Court Filing standard. The purpose of this requirement is to test the proposed standard’s usability and as proof-of-concept of interoperability among courts and vendors.

Part V. Gathering Information and Selecting Participants

In September 1999, GCAC published a Request for Information ('RFI') requesting information from Electronic Court Filing vendors about their systems. Responses to the RFI became the basis for a Request for Proposal ('RFP') that GCAC published in June 2000.

On June 30th, 2000, twelve vendors attended the GCAC bidders conference. Subsequently, six vendors responded to the GCAC RFP. GCAC selected five vendors to participate in the Interoperability Pilot. Additionally, because the Gwinnett County Court System is developing a court filing system, GCAC also invited Gwinnett County to participate in the pilot. Gwinnett County unfortunately declined to participate.

The five originally selected vendors are:

- Counterclaim.com
- @Court
- CourtLink (formerly JusticeLink)
- E-Filing.com
- Verilaw

In August 2000, at the start of the pilot, two vendors had existing contracts and were already implementing systems in Georgia Courts. GCAC matched the others vendors with participating courts, as follows:

- Chatham County (E-Filing.com) (existing contract)
- Douglas County (@Court)
- Floyd County (Counterclaim.com)
- Fulton County (CourtLink) (existing contract)
- Whitfield County (Verilaw)

Later in the pilot Clayton County joined the pilot. In Clayton County, E-Filing.com implemented an electronic filing system for collecting traffic fines. The Clayton County system uses a form of Legal XML Court Filing 1.0 proposed standard, but this system did not undergo interoperability testing.

Part VI. The Pilot

Face-To-Face I

On September 11th, 2000, representatives from each of the five participating courts and vendors met in Atlanta for a face-to-face meeting to discuss the Interoperability Pilot Contract and technical interoperability.

Based on GCAC requirements and agreements made at the meeting, the Georgia State Project drafted a Technical Requirements document. The technical requirements document contains definitions (slightly modified and included in this document), scope of the pilot, technical requirements for Phases I and II, and a list of milestones. The reader is encouraged to become familiar with the technical requirements document before proceeding. The document is located in the Georgia State University Electronic Court Filing website at <http://e-ct-file.gsu.edu/CourtFilings/Interoperability/>.

Pilot Contract Approval

In late September 2000, GCAC, the courts, and the vendors finalized the Interoperability Pilot Contract. GCAC forwarded the Pilot Contract to the State of Georgia's General Counsel for approval in late September. The Georgia General Counsel approved the Pilot Contract in early January 2001 after a three-month delay. As a result, between late September 2000 and early January 2001, pilot activities were halted.

Loss of Participants

During the time when Georgia's General Counsel was reviewing the pilot contract, Fulton County and CourtLink pulled out of the pilot, as did Floyd County. Counterclaim.com, however, the vendor partnered with Floyd County elected to remain in the pilot. Without a court, Counterclaim.com was not be able to develop an end-to-end court filing system, but it was able to participate in the interoperability phase of the pilot.

Phase I Completion

By August 2001, three of the vendors in each of their respective courts had installed end-to-end court filing systems. Clayton County and E-Filing.com had also implemented an e-fines electronic filing system. Three of the four systems used an interpretation of the Legal XML Court Filing 1.0 Proposed Standard. One system did not. Counterclaim.com did not have the opportunity to install an end-to-end system because its court pulled out of the project.

Face-to-Face II

On May 21st, 2000, representatives from each of the remaining four vendors and several participating courts met in Atlanta for a second face-to-face meeting to discuss specific technical interoperability issues.

From this meeting came a number of technical agreements, detailed in the next part of this document.

Phase II Success

On October 3rd, Counterclaim.com passed an XML filing to @Court and received an XML confirmation in return. Both the XML filing and the XML confirmation validated against the Court Filing DTD. Shortly thereafter, E-Filing.com received an XML filing from Verilaw and Verilaw received the corresponding XML confirmation. Again, both the XML filing and the XML confirmation validated against the DTD. Subsequently, several other tests filings and confirmations were sent among vendors.

Part VII. Technical Agreements and Issues

When Phase II of the pilot began, GCAC requested that vendors send sample XML filings to the Georgia State Court Filing Project for analysis and harmonization. Initial samples had a variety of problems or inconsistencies, outlined below. As a result of these inconsistencies, a second face-to-face meeting was held in Atlanta on May 21st, 2001. The agreements reached at the Face-to-Face II as well as in subsequent communication are detailed below.

Issues with XML Prior to May 21st Face-to-Face

The following is a list of problems or issues with XML submitted for testing prior to the May 21st face-to-face meeting. These problems occurred in one or more XML samples:

- XML not well-formed
- XML, when well-formed, did not validate against the DTD. In many cases, the elements were rearranged. For example, the <To> element came after the <From> element. In some situations, out-of-order elements may have occurred as a result of changes in the May 21st 2000 published version of the DTD and the July 24th, 2000 version.
- Inconsistent use of DOCTYPE declaration.
- Missing mandatory attributes.
- ID values beginning with numeric character.
- Inconsistent or non-use of IDs and IDREFs.
- Inconsistency in naming roles and parties (e.g., PLF and Plaintiff).
- Inconsistency in case categories.
- Inconsistency in using <Actor> element.
- Inconsistency in using <Role> and <RoleWith>.
- Missing court information. In an end-to-end system, the court information is known and obvious. In an interoperable system, court information must be defined.
- Extended elements added for coversheet using “_x” notation.
- Inconsistency in pointing to a document using an “href” and including the document as a base64 encoded BLOB.
- <MessageIdentification> not populated.
- Inconsistent use of time and dates in <Creation> element.
- Inconsistent use of passwords inside the XML.
- <CourtInformation> mandatory <Location> and <CourtType> elements not used.
- Time and date in <Submitted> element not used correctly.
- <DocumentTitle> not used correctly. Using file name rather than the title from the document.
- <DocumentType> used inconsistently.
- <DocumentContent> not base64 encoded.

Technical Agreements Made at or After May 21st Face-to-Face

Changes to Legal XML Court Filing DTD

Pilot participants agreed to change the <Address> element so that an address and a URI could be placed in the <From> element. The <Address> element was changed from:

```
<!ELEMENT From (Addressee)>
```

To:

```
<!ELEMENT From (Addressee+)>
```

To account for fee information passed in the filing, the <FilingInformation> element was changed from:

```
<!ELEMENT FilingInformation (SpecialHandling?, PaymentInformation*,  
Authentication*, CourtInformation, CaseInformation, Actors?, Memo?)>
```

To:

```
<!ELEMENT FilingInformation (SpecialHandling?, Fee*, PaymentInformation*,  
Authentication*, CourtInformation, CaseInformation, Actors?, Memo?)>
```

To allow for coversheet information, the Georgia State Court Filing Project created a Georgia Coversheet DTD. Elements from this DTD are to be added in the ANY content in the FilingInformation\CourtInformation\Civil element. The DTD is set forth below and is also available on the Georgia State University Electronic Court Filing Project's website at <http://e-ct-file.gsu.edu/CourtFilings/Interoperability/>.

Message Identification

The <MessageIdentification> element exists as a required element in the Court Filing DTD. As a result, the element must appear. However, none of the vendors populate the element. In the spirit of conforming to the DTD and to allow messages to be tracked among vendors, each vendor agreed to produce their own <MessageIdentification> based on their own format. A value for <MessageIdentification> must be present, but it must only be meaningful to the vendor.

It was recommended that the <MessageIdentification> value should correspond to the message identification value in the HTTPS post message so that messages can be tracked in case parsing fails.

User Name and Password

Pilot participants agreed that usernames and passwords would not be contained in the <LegalEnvelope> and would not be used if contained in the <LegalEnvelope>. Instead, usernames and passwords were used to authenticate each user at each vendor's system. Each vendor maintained its own username/password system. The systems are not interoperable.

Username and passwords for vendor-to-vendor communication were to be placed in the HTTP header in a cookie in the HTTP post message.

Name of DTD Reference in Court Filing XML

Initially, pilot participants agreed to include a DOCTYPE declaration to an external Pilot DTD in each instance of an XML filing.

However, this approach was later rejected as either (a) unnecessary, because the vendors ignored the declaration, or (b) potentially harmful, because no standard existed for placement of the DTD on a system and, therefore, there could no guarantee that the DTD would actually exist on the receiver's system in the place where the DOCTYPE declaration pointed.

Vendors were, however, strongly encouraged to validate XML both on the way out of their system (out of courtesy to the receiver) and on the way in to their system (to ensure their systems received a valid XML filing). The Georgia State Project maintained the official version of the Pilot DTD and supplied the DTD to each vendor for this purpose.

<To> and <From> Elements

The Court Filing DTD only allows one <Addressee> in the <From> element. Pilot participants agreed that the <From> element would contain both URI and address information, so that both an address informative to both a machine and to a human would be present in the <LegalEnvelope>. As noted above, the DTD was changed to allow this.

<RoleName> and <RoleWith> Values

See IDs and IDREFs, <Actor> element.

IDs and IDREFs

The W3C XML 1.0 standard requires ID values to begin with a character and be unique. The Court Filing DTD uses ID and IDREFs in a variety of situations. Many of the vendors had difficulty using ID and IDREFs. None of the vendors used the ID and IDREF's in the same way, if at all. Generally, the use of ID and IDREFs was not valuable and simply added complexity and confusion to the DTD.¹

¹ This is not to say that the use of IDs is a bad practice. It is simply to say that the use of ID and IDREF in the Court Filing specification was problematic.

The Court Filing specification does not specify the format or content of ID values if or when they are used or required. The format of ID values in Georgia for various elements is described below (although in practice, the vendors either did not use ID values, did not follow these guides, or ignored ID values):

<Actor>

The Court Filing DTD uses ID values with the <Actor> element. Similar values are required in the <RoleName> and <RoleWith> elements to associate actors. For instance, an <Actor> named “Tim Jones” might have a <RoleName> value of “Plaintiff” and another <Actor> might have a <Role> value of “AttorneyForPlaintiff.” To associate the two actors, the <RoleWith> element uses an IDREF to refer to the ID of an <Actor> element. Only one vendor used ID and IDREFs in a similar manner.

In general, none of the vendors used the <Actor> element in the same way.

<FilingInformation>

The Court Filing DTD requires that the <FilingInformation> element have an ID value. In a corresponding <Confirmation> the <ConfirmationInformation> **RefersTo** attribute must correspond to the <FilingInformation > ID value. Generally, the vendors were not using this method to track filings and confirmations. Vendors were asked to do so at the May 21st face-to-face meeting.

<LeadDocument>

The <LeadDocument> must have an ID value. In a corresponding <Confirmation> the <LeadDocumentDisposition> **RefersTo** attribute must correspond to the <LeadDocument > ID value. Generally, the vendors were not using this method to track documents. Vendors were asked to do so at the May 21st face-to-face meeting.

All Other ID Values

All other ID values, if present, should (but must not) be in the format “ElementNameX”, where “ElementName” is the name of the element and “X” is equal to the position of the type of element in the XML file in document order. For instance, the <Legal> element would have an ID value of “Legal1”.²

Names of Parties and ID Values

Pilot participants agreed that the names of parties and corresponding ID values (not including the numerical suffixes) must use the following case-sensitive values:

- Plaintiff
- Defendant
- AttorneyForPlaintiff
- AttorneyForDefendant

² This is generally a good practice because ID values can be easily numbered using a variety of techniques available in DOM and XSLT.

- Judge

Other values were not used for the pilot.

<DocumentContent>

The pilot participants agree that the document in <DocumentContent> must be a base64 encoded PDF document. References to a file using an URI are not allowed. Document formats other than PDF are not allowed.

<CoverSheet> Element

Georgia coversheet elements were added to the DTD. The new elements are contained in the GeorgiaCourtFiling.2001.08.08.dtd, but are not directly referenced by the main DTD.

The elements are, however, available for use in ANY content in the <Civil> element, which has the path:

LegalEnvelope\Legal\CourtFiling\Filing\LeadDocument\DocumentInformation\Civil

These elements correspond to the Georgia General Civil and Domestic Relations civil case initiation form. The form is available on the Georgia State University Court Filing website at <http://e-ct-file.gsu.edu/CourtFilings/Interoperability/>.

```
<!ELEMENT GeorgiaCoverSheet (GeorgiaGeneralCivil |
GeorgiaDomesticRelations)>
<!ELEMENT CivilType (#PCDATA)>
<!ATTLIST CivilType
  CaseType (Contract-Account | Will-Estate | RealProperty | Dispossession-
Distress | PersonalProperty | Equity | HabeasCorpus | Appeals-Reviews |
PostJudgmentGarnishmentAttachmentOrOtherRelief | Non-DomesticContempt | Tort
| OtherGeneralCivil) #REQUIRED
>
<!ELEMENT DomesticRelationsType (#PCDATA)>
<!ATTLIST DomesticRelationsType
  CaseType (Divorce | SeparateMaintenance | Adoption | Paternity |
InterstateSupportEnforcementAction | DomesticationOfForeignCustodyDecree |
Modification-CustodyOrVisitation | Modification-ChildSupportAndAlimony |
Modification-ChildSupport | Modification-Alimony | Contempt-CustodyOrVisitation |
Contempt-ChildSupportAndAlimony | Contempt-ChildSupport | Contempt-Alimony |
OtherDomesticContempt | OtherDomesticRelations) #REQUIRED
>
<!ELEMENT ExparteReliefGranted EMPTY>
<!ATTLIST ExparteReliefGranted
  Answer (Yes | No) #REQUIRED
>
<!ELEMENT ExparteReliefRequested EMPTY>
<!ATTLIST ExparteReliefRequested
```

```
    Answer (Yes | No) #REQUIRED
  >
  <!ELEMENT FamilyViolence (ReliefRequested, ExparteReliefRequested,
  ExparteReliefGranted)>
  <!ELEMENT GeorgiaDomesticRelations (DomesticRelationsType+,
  FamilyViolence)>
  <!ELEMENT GeorgiaGeneralCivil (NumberOfPlaintiffs, NumberOfDefendants,
  CivilType+, Tort?)>
  <!ELEMENT NumberOfDefendants (#PCDATA)>
  <!ELEMENT NumberOfPlaintiffs (#PCDATA)>
  <!ELEMENT ReliefRequested EMPTY>
  <!ATTLIST ReliefRequested
    Answer (Yes | No) #REQUIRED
  >
  <!ELEMENT Tort (#PCDATA)>
  <!ATTLIST Tort
    CaseType (AutoAccident | PremisesLiability | MedicalMalpractice |
  OtherProfessionalNegligence | ProductLiability | Other) #REQUIRED
    PunitiveDamages (Yes | No) #REQUIRED
  >
```

<PaymentInformation> and <Fee> Information

Pilot participants agreed that payment information must be passed in the <PaymentInformation> element under the <FilingInformation> element. Payment information must not be passed in the <PaymentInformation > element under <LegalEnvelope>.

Pilot participants agreed to the following guidelines for submitting payment and fee information among vendors.

Usually, a vendor will take payment from its customer using a credit card or by debiting an existing account. Without a second vendor involved, the first vendor charges the filer and remits payment to the court for necessary filing fees (which in Georgia must accompany the filing).

With a second vendor involved, each vendor sets up an account with other vendors. The first vendor takes payment from its customer. The first vendor passes fee information in a new <Fee> element. The first vendor must not, but may, pass <PaymentInformation> in the <Account> element of <PaymentInformation> element. This may not be necessary because an account will have been created with the second vendor and the first vendor will be readily identifiable using other information.

The second vendor will remit payment to the court in the usual way. The first and second vendor will do an accounting as if the first vendor were a normal customer.

An additional <Fee> element has been added to the <FilingInformation> element as the previous sibling of <PaymentInformation> for this purpose.

An example of how fee information should be passed in both the filing and confirmation follows:

```
<Fee Type="Filing Fee">$75.00</Fee>
<Fee Type="Sheriff Fee">$10.00</Fee>
```

Court Codes for <CourtInformation>

The Pilot participants agreed that the <CourtInformation> element would be populated with the following codes for each of the corresponding courts:

- 48, Douglas, Douglasville
- 25, Chatham, Savannah
- 155, Whitfield, Dalton

For example:

```
<CourtInformation>
  <Location Qualifier="48"/>
  <CourtType>Superior Court</CourtType>
  <CourtName>Douglas County</CourtName>
</CourtInformation>
```

Although the codes are not an official standard in Georgia, a full set of county codes for Georgia are located on the Georgia State University Electronic Court Filing Project's website at <http://e-ct-file.gsu.edu/CourtFilings/Interoperability/>.

Vendor-to-Vendor Communication And Confirmations

Georgia Pilot participants agreed to send filings from one system to another using HTTP and HTTPS POST. Pilot participants adopted @Court's method of sending XML over HTTP and HTTPS. GCAC gives special thanks and recognition to Michael Holst from @Court for his help working with other vendors to make communication between vendors possible.

The @Court method of sending XML over HTTP, and the method adopted by the Georgia Pilot, is to open a socket and send XML inside an HTTP message body with a cookie included in the HTTP message header. The cookie contains a user name, password, and an identifier. @Court has the ability to encrypt the cookie for added security. However, this method was not used in the pilot.

Return XML Confirmations are sent over the same socket, without breaking the socket connection, also with the XML confirmation included inside the body of an HTTP message.

This method was successfully used to send XML filing and receive XML confirmations among multiple vendors.³

³ Pilot participants considered, but rejected, the use of SOAP messages to send XML over HTTP. None of the vendors had experience with SOAP; therefore, resource and time constraints prevented the use of SOAP. Pilot participants agreed, however, that given its acceptance as an Internet standard, SOAP may be the appropriate method in the future to send XML over HTTP.

SOAP did not exist at the time the <LegalEnvelope> in the Court Filing DTD was created. If XML is to be passed over HTTP using SOAP, then it makes sense to eliminate or change the <LegalEnvelope> element in the Court Filing DTD in favor of SOAP since there is conceptual overlap between the <LegalEnvelope> and SOAP.

Part VIII. Court Rules

At the beginning of the pilot each court issued an order enabling electronic court filing and electronic signatures in their courts. As the pilot progressed and systems were implemented, at least one court and vendor voiced some uncertainty about the legal effect of signatures, timeliness of filings, and other legal issues. As a result, under the guidance of Judge David Emerson, Douglas County Superior Court, more formal rules were drafted and, in at least one court, implemented by administrative order.

The rules contain provisions on the following:

- Electronic Filing Rules Generally
- Court and Court Agents
- Document Format of Pleadings, Motions, Briefs, and Exhibits
- Filing of Complaint, Petition or Other Document Requiring Service of Process
- Exhibits
- Time of Filing, Confirmation of Filing, Notices
- Service Interruption
- Privacy

The draft rules are available on the Georgia State University Electronic Court Filing website at <http://e-ct-file.gsu.edu/CourtFilings/Interoperability/>.

Part IX. Analysis⁴

Introduction

In parts of the following analysis reference is made to “standards,” “policy,” and “best practices.” For the purposes of this paper, “standards” are business, legal, and technical rules that experience shows should be implemented to achieve a well-functioning, rational, and scalable court filing system. Policy, on the other hand, is a choice between two or more viable policy alternatives. In some cases, there may be a “best practice” among viable alternatives, but a “best practice” does not rise to the level of a standard. Additionally, some standards may be necessary or desirable on a statewide, jurisdictional level, but not on a national level. Finally, some policies or best practices, while today not rising to the level of a standard, may over time qualify for standardization as court filing systems evolve and mature and as best practices are identified.⁵

The Definition of Interoperability

Interoperability is the successful exchange of information between two independently created systems.⁶ There is a difference between “technical” interoperability and “business” or “legal” interoperability. Technical interoperability may be achieved without achieving business or legal interoperability. For instance, it may be technically

⁴ This following analysis is the analysis of the author and does not necessarily reflect the analysis of Georgia Courts Automation Commission, Georgia Courts, or other pilot participants.

⁵ An illustration of the distinction between “policy” and “standards” is the example of the “time-to-file” issue. The “time-to-file” issue is the question of whether a filing made after 5:00 p.m. (the usual close of business for most courts) should be deemed filed on the day of filing or on the next business day. Among Georgia pilot participants, there seemed to be a split of opinion. While it would be beneficial and desirable for all courts to have the same policy on this issue, it is not essential to “basic” or “core” court filing services that every court standardize on this issue.

An illustration of the distinction between a necessary statewide standard and an unnecessary national standard is the example of case categories. In the Georgia pilot, interoperability and case category reporting requirements necessitated standardized case categories. While it became clear that Georgia has an immediate need for standard case categories, it could not be said that there is an immediate need for national case category standards. Given the immediacy of the statewide need weighed against the time it would take to reach consensus at a national level, Georgia pilot experience suggests that states should move ahead in this area without attempting to reach national consensus.

⁶ The Georgia Pilot Requirements documents defined “technical interoperability” as:

“Technical Interoperability” is the ability of any Filer Interface to successfully file an electronic document into any court. For instance, if Filer Interface A is created by Vendor A; Middleware B and Administrative Interface B are created by Vendor B; and Middleware C and Administrative Interface C are created by Vendor C, then a filer should be able to successfully use Interface A to file a document into either Court B or C. Likewise, a user should be able to use Filer Interface B or C to file into Court A, B, or C.

possible to connect different systems, but there may be a compelling business reason for parties not to want to connect their systems. The goal of the Georgia Pilot was to achieve “technical interoperability.” GCAC did not require vendors to achieve business interoperability. Further, the Courts and Legislature in Georgia must still do considerable work before a legal infrastructure is in place to support interoperability.

Interoperability Is Not

To gain a perspective on what “technical interoperability” (hereafter “interoperability”) *is* in the context of electronic court filing, it is useful first to know what interoperability *is not*.

Simple Validation Against the DTD

Interoperability is *not* simple validation against the Legal XML Court Filing 1.0 DTD (or any other agreed schema). In the Georgia Pilot, simple validation against the DTD was not sufficient because validation alone still left significant room for differing interpretations of how and where content in the XML should be represented.

Different people and, therefore, different implementations, used the Court Filing DTD in different ways. These interpretations were reasonable interpretations. That is, it cannot be said that anyone’s interpretation was right or wrong; interpretations were simply different. The reasons for differing interpretations seemed to be the following:

- **Experience in the Development Process:** People who had not been engaged in the development process, either on the mailing lists or at face-to-face meetings, did not understand the intricacies of the Court XML DTD.
- **Complexity of the DTD:** One of the philosophies used in developing the DTD was the idea of being “overinclusive and optional.” This allowed participants to have what they wanted in the DTD, but resulted in a large DTD with elements available for many situations. Analysis of vendor XML submissions shows that only a limited number of elements were actually used to create a filing (perhaps 10% of the available elements). Further, in some cases, there were two ways to encapsulate the same information (usually the “easy, but not intended way” or the “hard and intended way”), in which case, the XML, although valid against the DTD, looked very different to the human reader.
- **Lack of Specification:** For participants who had not been intimately engaged in the DTD development process, the DTD was under-specified.
- **Lack of Previous Experience and Interoperability Testing:** Interpretations of the DTD were reasonably different because there had been no previous interoperability testing of this kind.

- **Inexperience with XML:** Some interpretation problems were enhanced by inexperience with XML.
- **DTD Validation:** DTD's, compared to XML Schema, provide less ability to validate information in XML. Better technical validation would have helped avoid interpretation problems. Even so, neither DTDs nor XML Schema are able to validate certain types of logic or complex business rules. Therefore, even the use of XML Schema would not have been enough to avoid all interpretation problems.

It is important to note that, while the DTD posed some difficulties in enabling interoperability, with only two minor changes, the DTD (if used properly) was entirely suitable for electronic filing.

Unilateral Proclamation That a System Uses Court Filing DTD

In addition to simple validation, interoperability is not the unilateral proclamation that a system “uses Legal XML” or “uses the Court Filing DTD.” Several of the vendors used XML that validated against the Court Filing DTD, but because each vendor had its own interpretation on how to use the DTD, their XML was not immediately exchangeable and, therefore, not interoperable.

Interoperability Is

Communication Among Multiple Courts and “Vendors”

One long-term goal of interoperability is the facilitation of a statewide electronic court filing system where different systems can “plug and play” into the larger system (or other larger integrated justice systems), at any time, over time, simply by adhering to system standards. Seen in this light, interoperability requires communication among multiple courts and multiple “vendors.”⁷

Over the past few years, the most common paradigm for electronic court filing has been the “one-off”,⁸ web-based, “end-to-end” filing system connected to one court. As jurisdictions move to statewide electronic court filing, input into the system is likely to come from a wide variety of potentially unexpected sources (matter management systems, authoring applications, etc.) and mediums (wireless, web, standalone applications, etc.). If such a system is to be scalable, it must be possible for multiple different courts and vendors to seamlessly integrate products and services with multiple

⁷ The term “vendors” is quoted here because it is used in a relaxed way. A third-party integrator, hired as a contractor by a court, could be considered a “vendor” but might also resemble in-house court IT staff. The line between a vendor with an “off-the-shelf” court filing product and an integrator is, in today’s court filing industry, blurred at best, because there are no “off-the-shelf” court filing systems – every system requires a great deal of integration.

⁸ “One-off” refers to what has been the traditional notion of electronic court filing – the single filer going to a website and filing one case or one document (a “lead document” and “attachments”) one at a time.

other systems. Interoperability is not, therefore, one court system speaking to itself or one vendor with multiple implementations. It is communication among multiple courts and vendors and other public and private entities.

Many Sources-to-One Court/Middleware Implementation

Interoperability requires many sources to come through one court/middleware implementation. In the Georgia Pilot, a vendor (A) suggested that to allow another vendor (B) to file into the vendor's (A) court (A), that it (vendor A) would create a separate middleware installation (A2). If this had been allowed, then the court would have had two middleware installations (A1 and A2), one for each filing application (A and B). While this may have solved the immediate problem, it is not a scalable solution. Instead, the Georgia Pilot required one middleware (A) to receive filings from multiple sources (A, B, and C).

(Might Be) Implementation of a Court Filing XML Subset

As stated above, in "Interoperability is Not," the GCAC Pilot participants did not use all of the available elements in the Court Filing DTD. It may, therefore, make sense for individual jurisdictions to create a "backwards-compatible subset" of the Court Filing DTD for specific purposes and requirements.

A "backwards-compatible subset" would be an XML DTD or XML Schema that contained a smaller number of elements than the Court Filing DTD, but that still validated against it.⁹ Using an XML Schema to subset the Court Filing DTD would be especially useful because XML Schema provide additional validation.

A Somewhat Standard Architecture

The Court Filing 1.0 specification does not standardize or suggest a standard architecture for court filing systems. During the DTD development process, the consensus of participants was that the job of the workgroup was to define a data standard, but not to define business rule or legal or policy standards. Interoperability, however, requires not a rigid standard, but, at least, a somewhat standard architecture. See below for additional information.

Connecting the Last Mile

The Court Filing 1.0 specification defines a "Legal Envelope" that contains information needed to send an XML filing from one point to another point (e.g., from one URL to another URL or from one address to another address).

The Court Filing 1.0 specification does not, however, define how the "last mile" – the actual transmission – should be done. To accomplish interoperability, it is absolutely essential to come to an agreement on the "last mile" issue otherwise systems simply

⁹ The creators of XML intended XML to be a backwards-compatible subset of SGML. In theory, this is a good idea. In practice, XML and the family of standards around it are not backwards compatible.

cannot talk to each other. See the Technical Agreements section of this document, above, for more information.

Connected Payment Systems

The Court Filing 1.0 specification does not define practices or protocols for payment systems. In the Georgia Pilot, there was a split among vendors using credit card payments over the Internet and those using ACH or other account systems. Interoperability does not require one system over another; however, interoperability requires that a chain of payments and necessary accounting take place. See below for more information.

Security Infrastructure

The Court Filing 1.0 specification does not define security practices or protocols. Early in the pilot, participants from Georgia Courts agreed that security is an important issue for live filings. As a result, courts and clerk participants required robust security. Interoperability, therefore, requires a robust and interoperable security infrastructure.

Competing Business Models

The pilot Request for Information (‘RFI’) and Request for Proposals (‘RFP’) stated that the purpose of the pilot was to test assumptions, develop business rules, and proof-of-concept electronic court filing. Accordingly, GCAC’s RFP made clear that GCAC was open to any proposed business model. Three business models emerged:

- Vendor Financed, Vendor Implemented
- Court Financed, Vendor Implemented
- Court Financed, Court Implemented

In a “vendor financed, vendor implemented” model, a vendor installs a court filing system free-of-charge to the court, but requires that the court allow it to charge attorneys or other non-court filers a service fee for each filing. The advantage of this model is that an experienced vendor can bring up a system in a relatively short time with little investment of resources by the court. The disadvantage of this model is that attorneys seem to be less likely to file when there is an additional charge.

In the Georgia Pilot, there was success with the vendor-financed, vendor-implemented model in both Chatham and Clayton Counties with “mass filing.”¹⁰ In both of these situations, mass filers were given a discount, yet the vendor profited from volume. At the same time, the courts were pleased with increased efficiency and a significantly lighter paper-filing burden. In other “one-off” filing implementations, attorneys did not take a strong interest in filing.

In a “court financed, vendor implemented” system, a third-party integrator is paid to implement the court filing system. Only one company put forward this model in its

¹⁰ “Mass filing” is a term coined by Dr. Mohammed Shaikh, E-Filing.com.

response to GCAC's RFP. GCAC found this vendor to be competent and was favorably disposed to the company's proposal; however, the integration cost was too expensive for GCAC's budget. As a result, GCAC did not select the proposed integration company for the pilot.

In a "court financed, court implemented" system, in-house court technical staff implement the court filing system. Gwinnett County Georgia is currently implementing a system under this model. GCAC invited Gwinnett County to participate in the pilot. Gwinnett, however, declined.

In terms of increasing the ratio of electronic-to-paper filings, "mass filing" was far more successful than "one-off" filing.

Reasonably Standard Architecture

Although there is no standard, it is a generally recognized best practice to provide an "administrative interface" for court clerks so they can review incoming electronic filings before they are committed to a backend case or document management system. This means that an e-filing system will have at least two main interfaces: (1) a filer's interface (for lawyers and judges)¹¹ and (2) an administrative interface (for the court clerk and other administrative staff).

An important Pilot requirement was to have only one administrative interface for each court clerk. GCAC and the clerks did not want to learn different interfaces for electronic filings coming from different sources. In an end-to-end system, this would not have been a problem. Interoperability requirements, however, raised issues because some vendors only had an API that would handle Court Filing XML documents as they came into their system, but not from different parts of their system (e.g., from filers interface to middleware).

Prior to the pilot, each of the vendors implemented variations of one or more of three generalized architectures:¹²

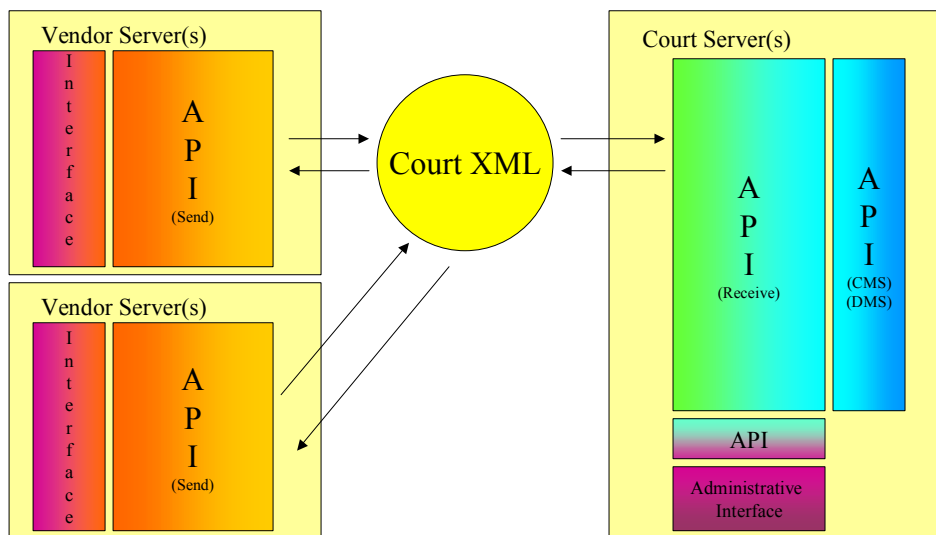
- **"ASP" Architecture:** In an ASP architecture, the court filing application and data are hosted on servers owned and maintained in the vendor's facilities.
- **Court Hosted Architecture:** In a court-hosted architecture, the court filing application and data are located on servers owned and maintained in the court.
- **Hybrid Architecture:** In a hybrid architecture, part of the application is hosted on the vendor's server (usually the filer interface and sometimes the administrative interface) and part of the application is hosted on a court server (usually the middleware).

¹¹ In one Georgia Pilot court, the judge was not happy with the "lawyer" interface. As a result, the vendor created a "judge interface."

¹² There are variations to these architectures. The architectures described are generalized for illustration purposes. This is not to suggest that these are the architectures.

In addition to GCAC and the clerks’ requirement for one administrative interface, a few of the vendors preferred to send filings from their systems directly to the court, rather than send them via another vendor’s server. This preference, coupled with the requirement to have only one administrative interface, necessitated a standard architecture where the administrative interface resides on the court’s server, as illustrated below.¹³

Administrative Interface Architecture



Mapping Court Information

Probably the most difficult issue faced in the pilot was mapping court information. In Phase I of the pilot, each vendor was able to relatively easily, yet in their own way, map the elements of the Court Filing DTD to the data of their respective court. In Phase II, however, difficulties arose in mapping case category information as well as other information in the Court Filing DTD. The problem was not so much a problem with the Court Filing DTD, but instead with the wide variety of data schemas in the courts and individual interpretations of what to call the data and where to put it in XML. From a macro perspective, the data in each of the courts was the “same” data. However, from a micro perspective, the difference between a capital “P” and a lower case “p” or an abbreviated name and a non-abbreviated name made mapping court information difficult.

Payment Systems

Although different methods of connecting payment systems are possible, Georgia Pilot participants decided that each vendor would establish an ACH account with its partner

¹³ At least two vendors were able to implement this architecture for the pilot. It is unclear whether the other two vendors were able to do so.

court. When filer A filed with, and paid, vendor A (by whatever means)¹⁴, vendor A would file into vendor B's middleware. Vendor B's middleware would then calculate fees and other costs and would pay court B any and all necessary fees required to accompany the filing through the court-B-vendor-B ACH relationship. Later, vendor A and vendor B would settle accounts between themselves.

To accomplish payment, it is necessary under this system to pass fee information with the filing. One of the few significant problems with the Court Filing DTD is the lack of a <Fee> element in <FilingInformation> with which to pass fee information. While there is a <Fee> element in the <Confirmation> element, there is no <Fee> element in the filing envelope.¹⁵ This is a problem from an interoperability perspective when vendor A's customer files through vendor B's middleware. In this case, vendor B has a financial relationship with court B, but vendor A does not.¹⁶ As a result, vendor A must pass fee information with the filing information so vendor B can do an accounting (both to the court at the time of filing and later to vendor A when settling up). To solve this problem, a <Fee> element was added to the Pilot DTD as a child of <FilingInformation>.

Legal Issues

Pilot Contract

The begin date for work on the pilot was delayed for nearly three months while the pilot contract, agreeable to all Pilot participants, waited on approval from the Georgia Attorney General. An important lesson learned is to start early on contracts and sorting out other state government legal requirements.

Software Licenses

Each court involved in the pilot has a different case management system. A CMS vendor in one court would not license its software development kit to the court filing vendor responsible for building and installing middleware in the court. Fortunately, GCAC owned a license for the software development kit. The result was that GCAC built an intermediate middleware solution that sat between the court filing vendor's middleware and the case management system. This would not have been necessary had the CMS vendor licensed its software.

Filing Stamp and Signatures

At least one court clerk raised concerns about electronic file stamps and signatures on documents. The clerk required an electronic document that looked like a paper document with a file stamp on it. The clerk felt more comfortable with an electronically file

¹⁴ Some vendors accepted online credit card payment. Other vendors established accounts with their customers.

¹⁵ There is a <PaymentInformation> element in the filing envelope, but this element is not suitable for carrying fee information and, in any case, was not intended for this purpose.

¹⁶ Each of the vendors could have established a financial relationship with each of the courts. This option was discussed and rejected for the same reason that each vendor did not install its own middleware in each court.

stamped document that on its face looked the same as a paper file stamped document. In addition, as the clerk pointed out, if an electronic case needed to be transferred to another county which did not accept electronic files, then the printed paper version of the electronic document would look the same as a paper copy, thus making it more acceptable to transfer county.

Likewise, the clerk required some mark or typed indication of a signature on filed documents. The result is an electronic document with a signature block with the following typewritten mark:

```
//Electronically Signed  
Jon Lawyer
```

Printing Cost for the Clerk

Electronic court filing does not mean the complete elimination of paper. Parties and clerks still want paper and will probably want paper for some time to come in the future. At least one clerk in the pilot was concerned about printing costs and the additional work necessary to accommodate parties requesting paper.

Attorney Receipt

Some Pilot participants reported that attorneys required (or desired) a stamped copy of a filed electronic document, in the same way a paper-filer would receive a file-stamped paper original. At least one vendor provided this service at the inception of the pilot and another vendor added the functionality during the course of the pilot.

The Court Filing DTD has both a filing and a confirmation component. The filing component has an element named <DocumentContent> where an “XML-safe” base64 encoded version of a document can be stored for transmission. The confirmation component does not have a <DocumentContent> element. As a result, only text messages can be sent back to the filer (e.g., the filer’s application), not an entire document. Although it would be possible to base64 encode XML and put it in an element within the <Confirmation> (such as <Memo>), this was not the original intent of the <Confirmation> element. Future versions of the DTD should include a <DocumentContent> (or something similar) in the <Confirmation> to allow for the return of an electronically file stamped document.

Standardizing on Document Format: TIFF versus PDF versus Something Else

For several years, a recurring question in the court filing industry has been “What Document Format Is Best for Electronic Court Filing?”¹⁷ Lawyers usually author documents in Microsoft Word or Corel Word Perfect. Electronic evidence and archives, however, are often stored in TIFF format. At the same time, PDF has emerged as the

¹⁷ See Winchel Vincent, “What Document Format is Best for Electronic Court Filing?”
<<http://gsulaw.gsu.edu/gsucp/CourtFilings/DocumentFormat/DocumentFormatContents.htm>>

leading document exchange format, primarily because it is web-friendly and (unlike other web technologies such as HTML and XML) it preserves the exact look of a document, a requirement essential for the legal profession. XML, on the other hand, is the elusive “Holy Grail” of document formats.

For the Georgia Pilot, GCAC decided, for simplicity sake, to require PDF as the document format for electronic filings. At the inception of the pilot, one vendor converted all documents to TIFF, while the other vendors either required the filing of PDF or converted to PDF during the filing process. As a result, the TIFF vendor altered its system to accommodate PDF documents.

While this result is logical, it is important to note that it is not trivial. Certainly, it was not trivial for the vendor required to change its system. Not only were there costs and delays involved in making the change, but there were some services lost in the vendor’s system because it could not immediately provide all the technical functionality it has previously provided using TIFFs.

The Hard Reality of Limited Resources

Not including amounts paid to employees and existing contractors, the Pilot cost GCAC under \$50,000. Per their business model, some vendors worked for free. Other vendors worked at an extremely reduced cost. The vendors assumed the risk that current efforts would be rewarded with future filings fees.

In two courts, the number of filings was very low after the successful completion of Phase I. At the same time, some vendors either had other opportunities to do work in courts with greater volume or had resource constraints on fulfilling current work. Indeed, the hard reality is that building effective and robust court filings systems costs time, money, and resources.

Although levels of funding vary widely among courts in different jurisdictions, the Georgia experience shows that systems suffer when not funded adequately. On one hand, courts are happy to have a system installed for free. On the other hand, vendors must earn money to survive. At the moment, the return on investment from court filing fees seems more and more remote (i.e., there are few court filing companies that appear to be making a profit). If funding electronic filing systems through filing fees is not a viable business model, then courts must either hire contractors or additional in-house staff to build systems or simply remain in the paper age.

Whatever the model, building a court filing system costs money and, at least in Georgia, sufficient funding to build systems does not seem to be available except to the largest, richest, or most politically well-connected courts. It can be expected that over time this hard reality will have an effect on the dispensation of justice in rich and poor jurisdictions.

Part X. Conclusions

The Georgia Pilot was completely successful in completing its Phase I objectives. That is, in each of the four participating courts, each respective vendor implemented an end-to-end court filing system and each of those courts did live filings in real cases.

The Georgia Pilot was partially successful in completing its Phase II objectives. On October 3rd, Counterclaim.com passed an XML filing to @Court and received an XML confirmation in return. Both the XML filing and the XML confirmation validated against the DTD. Shortly thereafter, E-Filing.com received an XML filing from Verilaw and Verilaw received the corresponding XML confirmation. Again, both the XML filing and the XML confirmation validated against the DTD. Subsequently, several other test filings and confirmations were sent among vendors. This is the first time in Court Filing history that this has happened. In this respect, the pilot was successful.

However, interoperability testing did not incorporate a few important requirements. First, testing was not done using robust security. All of the test filings were done without authenticating the source filer (that is, anyone who knew the URLs of the test machines could have attempted to file). Further, while it was a requirement to use SSL, only one of the vendors had a server available with a server certificate. There were also budget issues and delays in acquiring a server certificate for one of the courts. Eventually, time ran out so testing never occurred over SSL.

Second, the vendors did not use live data. It was recognized at the outset of the pilot that vendors could have valid business reasons for not wanting to create live, interoperable systems. As a result, agreements among GCAC, the courts, and the vendors, embodied in the Technical requirements document, made live testing an “optional requirement.”

Related to passing live data, the participants never completely harmonized case category information. Without standard case categories, while courts and vendors can successfully send and receive information in XML, the case category is not useful.

Finally, payments systems were not tested for interoperability.

Partially because of the business models employed by the vendors and partially because of budget constraints, the pilot was conducted on a very low budget (under \$50,000, not including staff and contractors already employed or under contract). Given this, Phase II of the pilot can be considered to have concluded with reasonable success. Certainly, the Pilot has shown proof-of-concept of electronic filing and that, given appropriate resources, interoperability is achievable.