

IRS 1120/941 eFile Transport and Packaging Proposal

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October 2001

eFile Transport and Packaging Objectives

- Define standard wire format and protocol for business return submission and acknowledgements
 - Support any return type (e.g. 1120, 941)
 - Rely on standards whenever possible
 - lower risk/development costs
 - leverage existing tools
 - reduce training costs
 - Support XML and binary data
 - Usable over multiple communication channels (e.g. dial-up, Internet, FTP, HTTP)

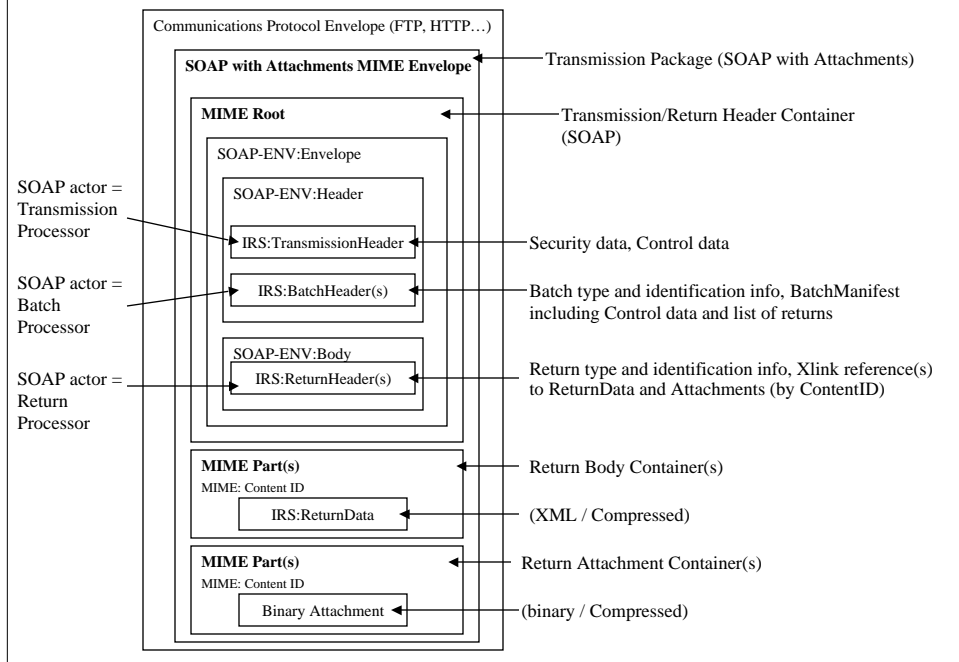
eFile Return Packaging Objectives

- Specify standard mechanism for structuring return components
 - supports any return type
 - consistent with eFile Transport and Packaging
 - simplifies XML schema definition and instance creation
 - facilitate development of standard return processing applications
 - provide flexibility to return storage and access

eFile Transport and Packaging Proposal

- Defines the message enveloping and header document schema used to transfer IRS return submissions and acknowledgements over a communication protocol such as FTP, HTTP, etc.
- Defined as a set of layered extensions to the base SOAP v1.1 and SOAP with Attachments standards.
 - Foundation for current W3C XML Protocol (SOAP 1.2)
 - Does not override any SOAP semantics
- Underlying transport based on MIME/multipart message standard.
 - Allows binary content

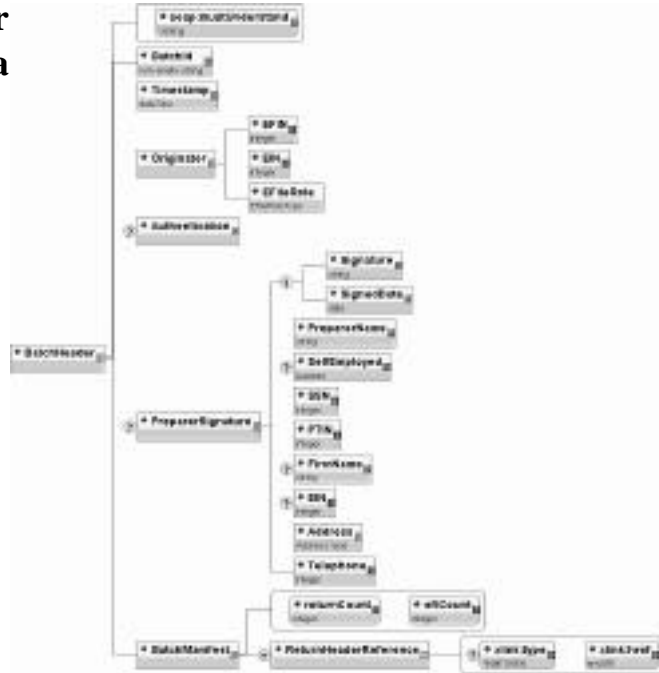
eFile Transport and Packaging



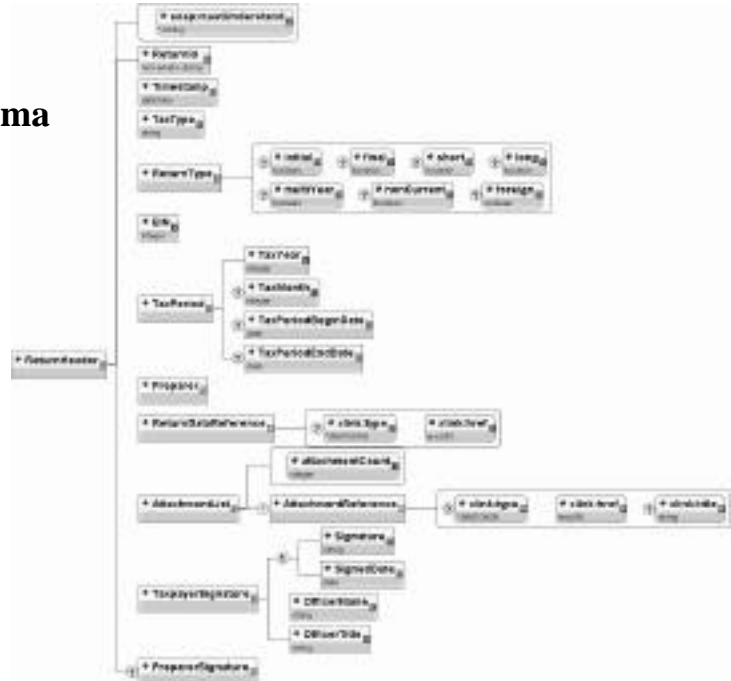
Transmission Header - XML Schema



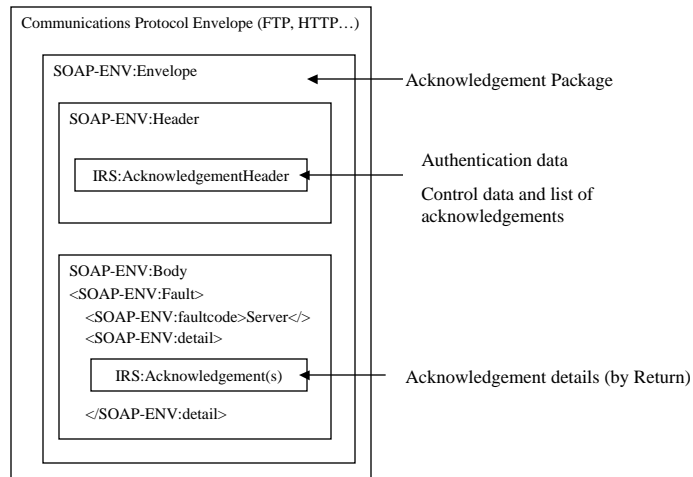
Batch Header XML Schema



Return Header XML Schema



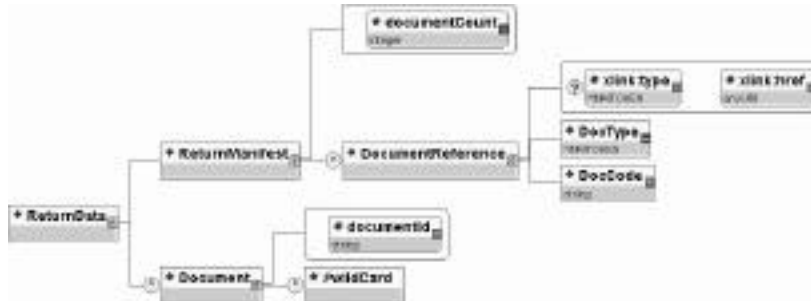
Acknowledgement Packaging (SOAP)



eFile Return Packaging Proposal

- Defines the structure of any return
 - for use in transmission and storage
- Each return and all its components is defined as one complete XML document
- Return is defined as a set of “documents”, each with a standard type (e.g. form, schedule, statement, etc.)
- Return provides a “manifest” for listing included documents along with identifying information
- Individual documents may be prepared separately and then combined into return

eFile Return Packaging - XML Schema



Example Transmission File

2 Batches with 2 Returns each
Each Return has 1 Form and 2 Schedules

MIME header and SOAP envelope

```
Content-Type: multipart/related; type="text/xml";
boundary="efilePackageBoundary";
start=efilepackage-001@www.irs.gov

--efilePackageBoundary
Content-Type: text/xml
Content-ID: efilepackage-001@www.irs.gov

<?xml version="1.0" encoding="UTF-8"?>
<!-- edited with XML Spy v4.0 U beta 3.1 build Aug 27 2001
(http://www.xmlspy.com) by Thomas Guinan (IBM) -->
<soap:Envelope xmlns="http://www.irs.gov/efile/protocol"
-----
```

Transmission and Batch Headers (SOAP header)

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- edited with XML Spy v4.0 U beta 3.1 build Aug 27 2001
(http://www.xmlspy.com) by Thomas Guinan (IBM) -->
<soap:Envelope xmlns="http://www.irs.gov/efile/protocol"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:efile="http://www.irs.gov/efile/protocol"
xsi:schemaLocation="http://www.irs.gov/efile/protocol
Return.xsd http://schemas.xmlsoap.org/soap/envelope/ envelope.xsd">
  <soap:Header>
    <efile:TransmissionHeader soap:mustUnderstand="1">
      <TransmissionId>ETINxxx-2001-09-
26T10:05:00</TransmissionId>
      -----
      <Service type="PRODUCTION">CITEFile</Service>
      <Action>SubmitReturns</Action>
      <TransmissionManifest batchCount="2"/>
    </efile:TransmissionHeader>
    <efile:BatchHeader soap:mustUnderstand="1">
      <BatchId>bat001</BatchId>
      -----
      <BatchManifest returnCount="2" eftCount="0">
        <ReturnHeaderReference xlink:href="1001"/>
        <ReturnHeaderReference xlink:href="1002"/>
      </BatchManifest>
    </efile:BatchHeader>
    <efile:BatchHeader soap:mustUnderstand="1">
      <BatchId>bat002</BatchId>
      -----
      <BatchManifest returnCount="2" eftCount="0">
        <ReturnHeaderReference xlink:href="1003"/>
        <ReturnHeaderReference xlink:href="1004"/>
      </BatchManifest>
    </efile:BatchHeader>
  </soap:Header>
```

Return Headers (SOAP body)

```
<soap:Body>
  <processTransmission xmlns="urn:eFileService" />
  <efile:ReturnHeader soap:mustUnderstand="1">
    <ReturnId>1001</ReturnId>
    -----
    <ReturnDataReference xlink:href="cid:ret1001" />
    -----
  </efile:ReturnHeader>
  <efile:ReturnHeader soap:mustUnderstand="1">
    <ReturnId>1002</ReturnId>
    -----
    <ReturnDataReference xlink:href="cid:ret1002" />
    -----
  </efile:ReturnHeader>
  <efile:ReturnHeader soap:mustUnderstand="1">
    <ReturnId>1003</ReturnId>
    -----
    <ReturnDataReference xlink:href="cid:ret1003" />
    -----
  </efile:ReturnHeader>
  <efile:ReturnHeader soap:mustUnderstand="1">
    <ReturnId>1004</ReturnId>
    -----
    <ReturnDataReference xlink:href="cid:ret1004" />
    -----
  </efile:ReturnHeader>
</soap:Body>
</soap:Envelope>
```

Return Data (MIME parts)

```
--efilePackageBoundary
Content-Type: text/xml
Content-ID: ret1001

<?xml version="1.0" encoding="UTF-8"?>
<!-- edited with XML Spy v4.0 U beta 3.1 build Aug 27 2001
(http://www.xmlspy.com) by Tom Guinan (self) -->
<ReturnData xmlns="http://www.irs.gov/efile/protocol"
-----
Return.xsd">
  <ReturnManifest documentCount="3">
    <DocumentReference xlink:href="doc1">
      <DocType>FORM</DocType>
      <DocCode>IRS1120</DocCode>
    </DocumentReference>
    <DocumentReference xlink:href="doc2">
      <DocType>SCHEDULE</DocType>
      <DocCode>IRS1120SchA</DocCode>
    </DocumentReference>
    <DocumentReference xlink:href="doc3">
      <DocType>SCHEDULE</DocType>
      <DocCode>IRS1120SchC</DocCode>
    </DocumentReference>
  </ReturnManifest>
  <Document documentId="doc1">
    <IRS1120 xmlns="http://www.irs.gov/efile"
    -----
    </IRS1120>
  </Document>
  <Document documentId="doc2">
    <IRS1120ScheduleA xmlns="http://www.irs.gov/efile"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://www.irs.gov/efile IRS1120ScheduleA.xsd">
    -----
    </IRS1120ScheduleA>
  </Document>
  <Document documentId="doc3">
    <IRS1120ScheduleC xmlns="http://www.irs.gov/efile"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://www.irs.gov/efile IRS1120ScheduleC.xsd">
    -----
    </IRS1120ScheduleC>
  </Document>
</ReturnData>
```