

# 2007-07-11

## Meeting Information

<b>Date:</b>	July 11, 2007
<b>Time:</b>	2 PM EDT

Attending: Skip Bartolanzo, Mary Berg, Ray Everngam, Peter Greene, Monica Hanks, Jeanette Harmon, Lorena Hitchens, Ed Kennedy, Laura Martin, Christine Morales, Spencer Moore, Rob Oberbauer, Carl Singer, Kelly Smith, Valerie Smothers, Toby Vandemark.

Guest: Ed Chase from Adobe systems

## Agenda Items

### 1 Review minutes of last meeting

### 2 Review of PDF CME certificate creation with Ed Chase of Adobe

Ed Chase created a Web conference to show the group the process he went through in creating a CME certificate. The PDF document was designed with Live cycle designer. It lets you create a dual sided document - one side is human readable, one side is XML. The PDF is both a container and rendering mechanism. Ed works with different vertical industries talking about XML standards and how they can be used with PDF documents. CME is a nice example. The document has a complete CME certificate. He used layout tools to create the document. Under object library, there are visual layout tools that let you draw the document. He did the CME certification from scratch. You can also import from word, html, other formats. Depending on the type of document, it may not preserve form elements. With infopath, you get some form logic; with html, you may not.

Traditional pdf is created by printing. This is different. What's underneath is another XML document. PDF is defined by XML, so it's easy to plug in the Activity Report XML. The data view shows the XML schema for the CME certificate. XML elements may have a corresponding visual element on the form. You can just drag it out onto the form. That creates a binding. You can bind to an xsd or xml file; it also works with wsdl. When you bind to an xsd, more information is available. Designer can enforce restrictions on the form (validation). The document can then import and export valid xml. You can have the elements in line with the text. In the pdf, the text flows around the XML elements.

With the server tool, you can have data extracted from pdf.

Valerie asked if it was possible to translate data from the data layer to the presentation layer. For example, in the XML document that they originally sent Ed, the accrediting body was listed as ACCME, but the certificate needed to say Accreditation Council for Medical Education. Ed answered that it is possible to translate from a code set to the human readable translation. It tends to be common to have drop down list. In instance data it can be a code. You can have a display value and data value. He could have done it internally or externally. You can also have masking - where phone number or social security number is the data, use dashes for the presentation.

Peter asked to see the data section. XFA is the data language - it corresponds to the XML template for pdf. It contains a binary image. Peter asked about the relationship between XFA XML and MedBiquitous XML. Ed commented that XFA is used by adobe live cycle designer. That XML is not in the final pdf. It's used to render.

Spencer asked how he would automatically generate a pdf cme certificate from cold fusion. The latest Cold Fusion has a built in tag to do this. At a conceptual level, there is an xml data source being tapped for this document. Live cycle forms is the higher volume tool. If it is one at a time, you could use cold fusion.

Peter commented that there might be a need for a CME portfolio collection, is that doable in CF8? Ed answered it could be done in Live cycle forms, the enterprise component. Livecycle designer comes with acrobat professional 7 & 8. That's the tool he's using.

Peter asked if certain features of 8 were desirable. Ed answered that schema and form support is much better in 8. Our activity report imports other schemas. That could be the issue. 8.1 has the ability to switch between flash and pdf-based interface. Peter asked if one could create pdf certificates with the template? Ed answered yes. You could do it just with acrobat, one by one.

The group then asked if I am creating a server script, what do I do? Ed answered the steps vary. For the Cold Fusion approach, you would create the document in designer, save in pdf, and cold fusion would be used to merge with a data source. You would have to build logic in Cold Fusion. In livecycle, you have different components. A workshop can set up workflows, there's another component for data merging. It would be very different with live cycle.

If you don't want to use Cold Fusion, what options are there? There are several libraries. Adobe offers libraries, which are expensive. There are many non-Adobe tools for pdf, too. There are also open source tools. Carl asked about ASP options. Ed answered that iText has something that's java. Peter asked if Ed knew of anyone that has used open source. He commented it depends on functionality. The PDF healthcare workgroup would be good to ask. They have an implementation guide. Ed offered to look into that.

Ed created the pdf so that the seal is an interactive digital signature. This made the certificate tamper evident. You can also track the certificate back to the owner.

There is a 30-day trial of acrobat with the designer trial as well. Carl asked what the pricing was to deploy server side. Ed answered he is not the one to ask. Acrobat professional pricing ranges. Acrobat professional, cold fusion, or live cycle. Lorena has Acrobat Professional 7. With an XML instance, she could make the pdf manually and also load the schema. Ed answered yes. Certain schemas with external references may not be automatically imported. But if you are working with an instance, it shouldn't be an issue.

Cold Fusion is medium scale.. High performance is live cycle. There's a lot more built in for high volume. Peter commented that you are still going to use live cycle designer for any scale. It costs \$383 on Amazon right now. If you are doing one or two by hand, you are using professional. If you are doing online cme, you could create a cold fusion script. HighWire creates thousands a day. Peter asked if learners are getting certificates one by one. Cold Fusion could serve up certificates one by one. But there are hundreds online at a time. Lorena commented they would be more interested in the enterprise side. Carl commented there may be options clustering cold fusion.

Peter asked what one sample customer had to pay for lifecycle. To create 2,000 cme certs a day, with no signatures, merging with data, if users are not working with the forms, it's about 50,000 US he thinks. It could be different. Peter asked if there is a cold fusion expert we can speak to. He offered to get us in touch with someone. Lorena asked why digital signatures would make a difference. Ed explained there are other component for digitally signing large numbers of documents. Peter asked what the first library he thought - iText. Type in iText and pdf in google. That's a java library. Peter noted an example from iText on merging XDF with PDF; that is similar to what we would be doing, but we could use our own xml, not xdf. There are many ways to do this.

Lorena asked how this would be used. Peter commented it would have an advantage to the learner. They could download it and upload elsewhere. The portfolio could read the data. It would be great if industry found a way to ship certificates around. Lorena commented that it wouldn't substitute for reporting to providers. If they did provide pdfs to learners, they would want to have it digitally signed. Peter commented that there is a unique identifier stamp to prevent duplication. Signatures could always be optional, but we wouldn't want to require it. Lorena commented that it remains to be seen how many customers will want it. She will try it out before the next call.

### **3 Review of [Sample CME certificates](#) and [proposed structure](#) for state requirements (time permitting)**

#### **4 Open discussion**

## **Decisions**

## **Action Items**