

Avoka SmartForm Composer Multi-Language Support – White Paper.

The Multi-language Problem

Many organizations find it necessary to produce forms in multiple languages, either due to regulatory compliance, or in order to make their products and services available to a wider range of users. This is particularly important with the unification of Europe, as well as the growth of multi-national companies. Up till now, the process of building forms in multiple languages has been extremely tedious. In most cases, the forms are built in one base language, and then multiple copies of the form are made, and each copy is translated into a different language. This is further complicated because as part of the translation process, subtle (and sometimes not so subtle) changes need to be made to the form itself – and these changes need to be propagated to all the other copies of the form.

This causes maintenance issues, where the same form has to be maintained in several languages – if you want to add a field or change something in a form - you now need to do it identically in several places. This in turn results in extra costs and complexity for the organization. It also results in possible divergence of the form functionality between language versions, unless you're extremely disciplined and very careful to make the same changes to each form every time. Some attempts have been made to automate the translation process using scripts that manipulate the form XML, although these solutions can be difficult to use and manage.

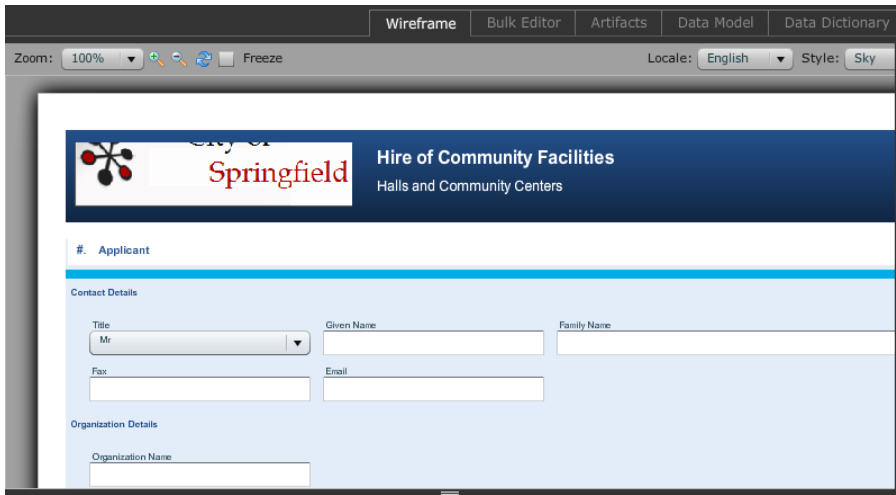
Multiple Languages in Avoka SmartForm Composer

Avoka SmartForm Composer now has multi-language support as a key capability. A single copy of the form is maintained, with multiple versions of the text stored separately, and linked into the form. The same form can then be easily output in many different languages. Sophisticated tooling is also provided to help manage the translations.

The benefits to anyone needing to produce forms in multiple languages are fantastic. These include:

- Automatic translation of your form into a large number of languages.
- A single form definition file – there is just one form to maintain – but it can be generated in different languages.
- All business rules, formatting and other form features remain intact across languages.
- Side-by-side display and editing of text in different languages.
- Support for more traditional translations by third-parties in the form of resource-bundle property files.
- Special support in Composer to identify which properties of a field are suitable for translation.
- Dramatically reduced time and costs associated with maintaining forms in multiple languages.

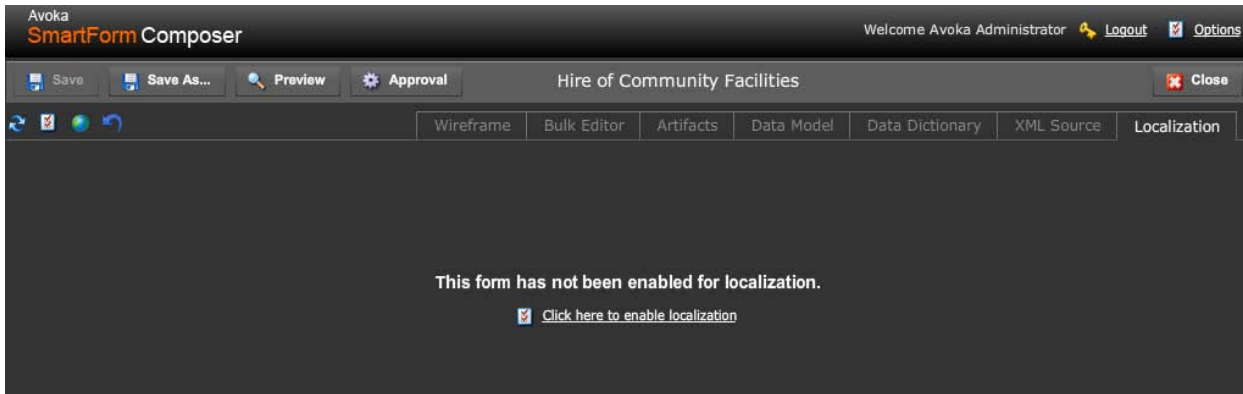
Here is a form in English, for example – although you can start in any supported language.



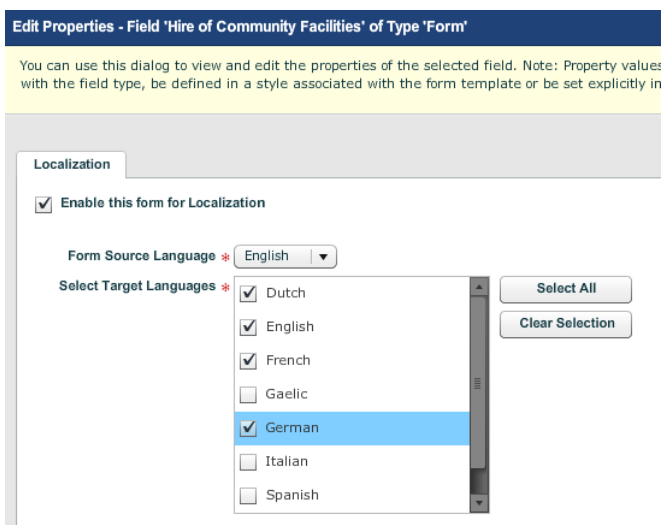
Let's step briefly through the process of translating a form to several different languages.

Step 1 –Enable the form for Localization

Simply click on the Localization tab, and click the link.



Step 2 – Select your target languages

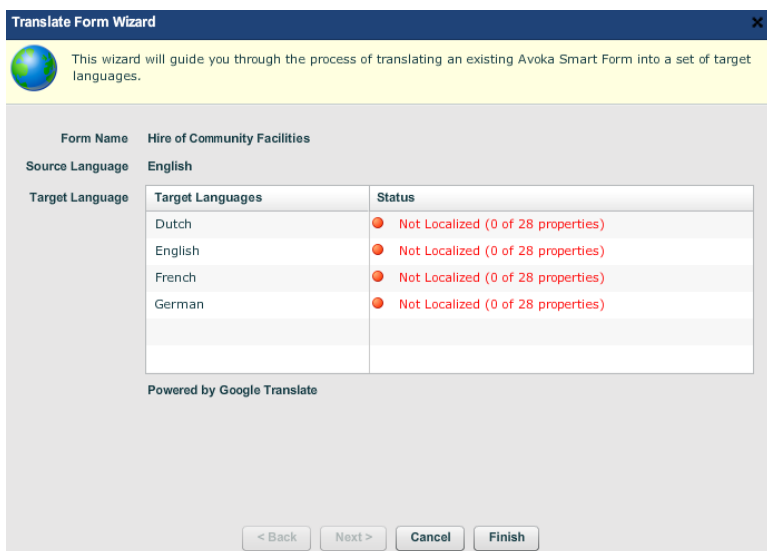


The number of languages supported will grow over time. Please contact Avoka if you have a requirement in a specific language that isn't currently supported.

Step 3 – Click on the Auto-Generate Translations button



Step 4 – Review the proposed automated translations, and click Finish



Composer will **automatically** translate all the required text, for all the selected languages. It will also extract the original language text used to build the form (in this case, English) out of the form definition, and store in exactly the same way as any of the other language files.

Composer has special internal tags that identify which aspects of a form should be translated, and which shouldn't. For example, the visible values in a drop-down list should be translated. But the internal values (which end up being stored in the XML and often the database) should remain un-translated.

Step 5 – review and correct the automated translations

You may need to correct the automated translations, but they will generally give you an excellent starting point. A special side-by-side editor provides an easy way of comparing the translations for two or more languages, and correcting the translations as required.



Key	Dutch	English	French
FORMNAME	Huur van de communautaire voorzieningen	Hire of Community Facilities	Location de salles communautaires
key0000	Huur van de communautaire voorzieningen	Hire of Community Facilities	Location de salles communautaires
key0001	Zalen en buurthuizen	Halls and Community Centers	Salles de réception et les centres communautair
key0002	Verzoekster	Applicant	Demandeur
key0003	Verberg rubriek	Hide section	Masquer l'article

Step 6 – Optionally, use third-party translators

The raw translation files are in a common format well-accepted by third-party translators. Simply send the files to the translators, and then re-import the finished results. (Alternately, simply give them a login to Composer, where a role can be set up to limit their visibility to only the Translation tab.)

Artifact Name	Description
Hire of Community Facilities-prepopdata.xml	Generated pre pop data file
Hire of Community Facilities-seed.xml	Generated xml data schema file
Hire of Community Facilities.log	Generated form log file
Hire of Community Facilities.xdp	Generated xdp form
Hire of Community Facilities.xml	Form definition file
Hire of Community Facilities.xsd	Generated data model schema
Hire of Community Facilities_cy.properties	Hire of Community Facilities_cy.properties
Hire of Community Facilities_de.properties	Hire of Community Facilities_de.properties
Hire of Community Facilities_en.properties	Hire of Community Facilities_en.properties
Hire of Community Facilities_fr.properties	Hire of Community Facilities_fr.properties
Hire of Community Facilities_nl.properties	Hire of Community Facilities_nl.properties

Here is an extract from one of the resource bundle files.

#Fri Oct 15 13:50:10 EST 2010

FORMNAME=Vermietung von gemeinschaftlichen Einrichtungen
key0000=Vermietung von gemeinschaftlichen Einrichtungen
key0001=Hallen-und Gemeinschaftszentren
key0002=Antragsteller
key0003=Verstecken Abschnitt
key0004=Ein-oder Ausblenden Abschnitt helfen
key0005=Impressum
key0006=Titel
key0007=Bitte geben Sie Ihre \u00FCbliche Titel oder Anrede
key0008=Herr | Frau | Frau | Dr



Note the values for the dropdown list shown for “key0008” – only the labels that are shown to the end-user are translated,

Step 7 – Review and Preview the translated forms

Preview the finished form in the Wireframe, in the original language, or any of the translated languages, using the Locale drop-down as shown.

Or, of course, preview and save as a finished PDF.

Step 7 – make minor adjustments to the form design

In some cases, it may be necessary to make minor adjustments to the form design itself. For example, the German equivalent of an English phrase is often 20-30% longer in length. This may mean that you need to increase the reserved width on your captions in order to accommodate longer text. Often this can be accomplished by modifying the style sheet, rather than making individual changes to specific fields.

Step 8 – repeat the process when the form changes

If you add a new field to your form, Composer will intelligently prompt you to translate just the new text, without overwriting your custom changes to any existing text.

The screen-shot below shows the effect of adding a field with just a caption – only a single extra piece of text is translated.

Limitations

There are some limitations to the current implementation of multi-language support in Composer. Some of these include:

- The same phrase in two different languages may be different lengths. The base form may need to be adjusted in order to accommodate the longest language.
- Different language fonts may require fields or captions of different heights. This can often be accommodated by an accompanying style-sheet adjustment.

- Automated translation may make errors based on either cultural or contextual issues. For example, both “Mrs” and “Ms” are translated to “Frau” in German. Similarly “Miss” can be translated as either “Vermissen” (as in “I miss you”) or “Mädchen” (as in “young girl”).
- Composer uses flowed layouts, so if the height of a block of text changes, this is automatically accommodated. However, this may push other fields on the forms further down (or up). This in turn might result in the overall layout of the form changing, or even extending to a new page.
- Only the Roman character set languages are currently supported. These limitations are currently imposed by font-related issues in both Flash and Reader.
- Right to left languages, such as Hebrew and Arabic, are not supported. This is more to do with general right to left layout issues than anything specifically to do with these fonts.
- Certain aspects of your form are not translated. These include pop-up messages, and error messages, and certain other areas. These areas will be addressed over time.
- Pop-up messages, toolbar and other aspects of Reader or Acrobat will appear in the native language you installed.
- Imported blocks need to be translated separately to the main form.
- Rich Text (including formatting such as bolding, italics, etc) is not yet translated.
- Composer does not yet fully support locales. This means that date, numeric and currency display formats are unchanged when you change languages, and also that certain programmatic functions (such as converting a date to a string) will return results in the base language.

