FDD Project Management Application

Internationalization Guide

1. Abstract

As of version 1.4.3 FDDPMA supports internationalization (i18n). A user may choose the language for application's user interface. The version 1.4.3 supports the two languages: English and Russian. This document is intended for the developers who need to translate FDDPMA to the different language. It is also useful for those who have the earlier version installed, and needs to upgrade to the latest version.

2. Introduction

FDDPMA is an open source application. Anyone can download the source code, compile it and deploy to their hardware. In order to translate the one needs to download the source code and perform the several steps, described in this document. Once the required artifacts for the target language have been created, one needs to recompile and redeploy the FDDPMA.

While the translator may keep his/her work private, the FDDPMA development team encourages you to share your efforts with others. FDDPMA itself is an open source project. If you believe that this software is useful for you, then please contribute to the project by donating your work back to the open source community.

We also suggest that you contact us before starting translation. It may happen that someone is already in the process of translating FDDPMA to your language of choice. This will allow for not duplicating the translation efforts.

3. Translation steps

The translation process consists of several steps:
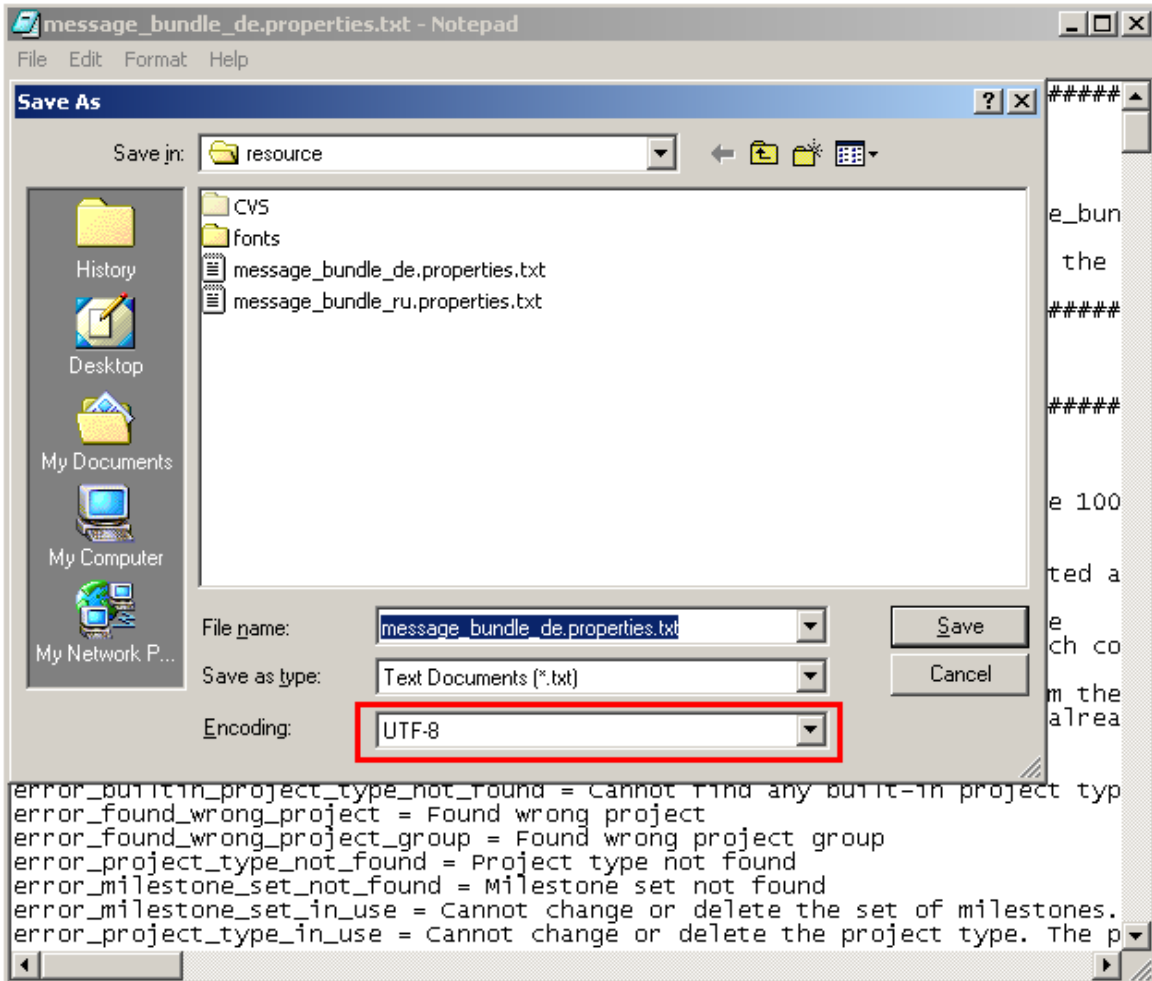
1. Create the translated version of message_bundle.properties file

2. Modify "translate" task within build.xml file

3. Modify <locale-config> element within fddpma-faces-config.xml file

4. Modify selectOneLanguag tag within settingsLocaleView.jsp file

5. Modify application.properties file to set the default language

6. Modify the FDDPMA database to support UTF-8 encoding

7. Modify the server.xml file to modify connection properties

8. Compile the app and check your changes into the CVS repository

The rest of this section describes each step in details. The steps 6 and 7 are required when migrating form the previous version of FDDPMA. They are not required when installing version 1.4.3 as a brand new version.

3.1.   Translate the property file.

This step is the main translation task. If involves the translation of message_bundle.properties file, located in the directory src/com/fddtool/resource. For the example sake, let's assume that the application needs to be translated in German. The recommended steps for translation are:

- copy file message_bundle.properties to message_bundle_de.properties.txt

- Open the new file using the text editor that supports UTF-8. The notepad will do. You may also download the free application notepad++.

- Save the file using the UTF-8 encoding:

- Translate each line of the file. Make sure that you only modify the text located on the right hand side of the equality sign.

- Save your work.

## 3.2.	*Modify "translate" task.*

Open the build.xml file using the text editor and find the "translate" target. This target contains one or more exec elements that look like this:

```
<exec executable="native2ascii" failonerror="true">
 <arg line="-encoding UTF-8" />
 <arg line="${src.dir}/com/fddtool/resource/message_bundle_ru.properties.txt" />
 <arg line="${build.classes}/com/fddtool/resource/message_bundle_ru.properties" />
</exec>
```

Duplicate this element and modify names of the property files for your language. For example, for German the <exec> element should look like this:

```
<exec executable="native2ascii" failonerror="true">
 <arg line="-encoding UTF-8" />
 <arg line="${src.dir}/com/fddtool/resource/message_bundle_de.properties.txt" />
 <arg line="${build.classes}/com/fddtool/resource/message_bundle_de.properties" />
</exec>
```

The exec element here executes the native2ascii utility that comes with JDK. The utility converts the file in UTF-8 encoding to the ASCII encoding, as java property files must be in ASCII. The result of the native2ascii is such that the destination property file may become unreadable. Here is the example of native2ascii utility transforming one line of message_bundle_ru.properties.txt file in Russian:

```
Before:
tab_project = Проект

After:
tab_project = \u041f\u0440\u043e\u0435\u043a\u0442
```

As you can see, the international symbols are encoded are not readable anymore. Do not worry about it; this is exactly how it should look like. Consider the message_bundle_*.properties.txt as your source code, and the resulting message_bundle_*.properties as a compiled code.

3.3.   Modify fddpma-faces-config.xml file

This file is located in webroot/WEB-INF folder. Open this file in text editor and locate the <locale-config> element. Add one more <supported-locale> element into it. For example, if you are translating the FDDPMA into German, the resulting <locale-config> element may look like this, the bold font highlights newly inserted element:

```
<locale-config>
  <default-locale>en</default-locale>
  <supported-locale>en</supported-locale>
  <supported-locale>ru</supported-locale>
  <supported-locale>de</supported-locale>
</locale-config>
```

3.4.   Modify settingsLocaleView.jsp file

This file is located in webroot folder. Open this file in text editor and locate the <x:selectOneLanguage> element. Add one more <f:selectItem> element into it. For example, if you are translating the FDDPMA into German, the resulting <x:selectOneLanguage> element may look like this, the bold font highlights newly inserted element:

```
<x:selectOneLanguage id="language" … >
  <f:selectItem itemLabel="English" itemValue="en"/>
  <f:selectItem itemLabel="Russian" itemValue="ru"/>
  <f:selectItem itemLabel="German" itemValue="de"/>
</x:selectOneLanguage>
```

3.5.   Modify application.properties file

This file is located in src folder. Open this file in he text editor and locate the fddpma.locale.ui_language property. Modify the property value to specify your language of choice. For example, if you are translating the FDDPMA into German, the resulting property will look like this:

```
fddpma.locale.ui_language = de
```

You may also modify various date formats in this file to correspond to the default date formatting preferences of your region.

3.6.   Modify the FDDPMA database

This step is required when migrating from the previous version of FDDPMA. It will ensure that the database can hold the UTF-8 characters. You need to execute the 9.sql script, located in sql/migrate directory.

If creating a brand new FDDPMA installation, then this step is not needed as the FDDPMA database will be created with right encoding. See FDDPMA_Installation_Guide.doc for more information on installing FDDPMA.

3.7.   Modify the server.xml file to modify connection properties

This step is required if migrating from the previous version of FDDPMA. It will ensure that the server does not convert UTF-8 to ASCII characters when serving strings over

JDBC connection. The server.xml file is located in the Tomcat installation directory.

Open this file in text editor and locate the resource with name jdbc/fddpma. Add the

connection properties to the URL attribute, so that the resulting <resource> element may

look like this. The bold font highlights the required changes:

```
  <Resource name="jdbc/fddpma"
        auth="Container"
        type="javax.sql.DataSource"
        username="fddpma"
        password="fddpma"
        driverClassName="org.gjt.mm.mysql.Driver"
        url="jdbc:mysql:///fddpma?useUnicode=true&amp;characterEncoding=utf8"
        factory="com.fddtool.si.database.JndiDatasourceFactory"
        min="2"
        max="9"
        lifeTime="1000000"
        sleepTime="10000"
        validationQuery="select 1+1"
        validationLevel="2" />
```

3.8.   Compile the app and check in the changes.

Recompile the project using the Ant build file. The resulting binary file fddpma.war now

supports one more language!

If you decided to share your translation with FDD community, please check you changes

in the CVS repository at sourceforge.net. If you do not have permissions to do it, you

may either request the permissions from FDDPMA project manager here

http://www.sourceforge.net/projects/fddpma, or simply email your changes, or post them

as attachments in the project's forum.