

Open XAL Localization

Introduction

This document presents a plan for supporting localization for Open XAL applications.

Open XAL has participants around the world; however, the current implementation of XAL is written in English for English speaking end users. To better serve the needs of our collaborators, it is desirable to add support for localization.

XAL Localization Strategy

Candidate text for localization can reside in an application's source code or its resources (menu definition, bricks, online help, etc.), the application framework source code (e.g. warning messages, default text) or its resources (menu definition) and various packages throughout XAL.

To accommodate localization in applications and other XAL packages, we introduce resource subdirectories named in the form "local.{locale}" where "{locale}" is replaced by the locale code for the target language. For example, the "local.it" folder would hold Italian translated resources. This file will hold keyed strings along with translations in various languages. Strings files (e.g. localization.strings) in Java properties format will be used to hold keyed text for arbitrary use within an application. The keys in this file will follow the common key-path naming convention prepended with the resource scheme such as *strings:xal.apps.appviewer.warning* for example. The menu definition key-paths will be generated using the obvious tree structure such as *menundef:menubar.file.open.label*. Bricks will support localization with key-paths of the form *bricks:tag.property* where "tag" is the unique view tag and the property is its corresponding Java bean property. The developer will be responsible for making sure the naming is unique and is encouraged to use package paths in the naming scheme.

Localization files may be located in the application framework resources, an application's resources and resources in arbitrary XAL packages. A Localization Manager will be introduced to manage localization resources. It will provide methods to load a localization resource for a specified class and will merge all such localization resources into a lookup common table. The application framework will automatically load its localization resource as well as that of an application. The manager will have a method to get the localized version of a string given the string's unique identifier. All resources will be prepared in English and the Localization Manager's method to get the local string will provide the translation based on the user's default locale (optionally overridden with a XAL specific user preference) if a translation is available. If no

translation is available, then the corresponding English text will be used. The Localization Manager must be implemented for both memory and time efficiency.

All XAL documents will be saved in UTF-8 format [1] as it fully supports Unicode, is widely adopted for XML and is most widely supported among editors [2].

Tools

An application called “Localizer” will assist the developer to provide translations for localizable elements. This application loads localizable resources from a resource folder and displays all localizable strings. The developer can add languages and provide the translations for those languages.

Document Revision History

This table describes the changes to this Open XAL Localization document.

Date	Notes
June 3, 2010	Draft proposal that describes a plan to support localization for Open XAL applications.

References

[1] UTF-8 and Unicode Standards, Web. June 3, 2010, <<http://www.utf8.com/>>

[2] Elliotte Rusty Harold, Encode your XML documents in UTF-8, Web. June 3, 2010, <<http://www.ibm.com/developerworks/xml/library/x-utf8/>>