

Extending Localization Framework - Supporting Other Localizable Resources

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Introduction

Software localization is the process of converting or preparing a computer program to be suited for a particular region. Localization can sometimes be simply a matter of language translation, but it can also prove to be a much more complex process when it comes to issues such as formatting, currency, date and time, sorting patterns, imperial versus metric standards and so on. Sometimes it can even involve cultural aspects, e.g. when different colors have different meanings for different peoples.

Software localization must be taken into account throughout the entire development cycle and depends on several actors, including developers, translators, quality assurance (QA) specialists, projects managers and other stakeholders. Localization can be made easier by using special tools.

Since Sequoyah already provides a localization framework for strings, and with the goal of providing a more complete and easy to use framework, Sequoyah now intends to deal with other localizable resources besides strings. This document is a proposal of such effort, where we list some user stories describing how we intend to extend the current framework to deal with images, sounds and video in a first moment. In a later moment, the framework will also be capable of treating even other localizable resources, such as formatting, currency, date and time.

User Stories

+ As a mobile developer, I want to **localize other resources** from my application besides strings, such as images, sounds and videos so my application can be delivered to other countries. By localizing elements, I want to choose which image file, sound or video will be used for a certain element in my application either by typing the file name or choosing files in the file system. Note: those resources will not be edited inside the framework, just linked.

+ As a mobile developer, I want to see resources of the same type for different locales **side by side in an editor**, so I can see the differences between them.

+ As a mobile developer, I want to have a view or **tab separated for each type of localizable resource**, such as string, image, sound and video.

+ As a mobile developer, I want a view gathering all of the localizable resources in my application, so I can have an **overview** of them.

+ As a mobile developer, I want to have a **preview of the resources** I'm working with for a specific locale in the same tab listing them. If the resource is a text, the translation will be displayed. If it is an image, a scaled version will be displayed. If it is a sound or a video, I want to play it.

+ As a mobile developer, I want a **mechanism to select** if resources like images, sounds and videos will be displayed in the Localization Editor only as text representing their path in the file

system, their graphical representation (image being rendered, for instance), or both.

+ As a mobile developer, I want to have **tool tips or hints** about which operation can be performed as preview for each localizable resource, such as “a video can be played” or “an image can be previewed”.

+ As a mobile developer, I want to **add support to other languages** by just creating clones of already localized resources.

+ As a mobile developer, I want to **rename** all resources from my application following a certain pattern in a single operation, instead of renaming one by one.

+ As a mobile developer, I want to **automatically generate names** for all resources from my application following a certain pattern in a single operation.

+ As a mobile developer, I want to select which **scope** to work in localization operations. For instance, for eclipse localization, I want to select if I want to localize either plug-in properties or java code.

+ As a mobile developer, I want to specify which **words or other localizable resources I don't want to translate** (terms that are product-specific, for instance).

+ As a mobile developer, I want to be warned if there are **too long or too short translations**, so I can analyze any impacts in my application's UI.

+ As a mobile developer, I want to be able to **identify new or updated localizable resources**, so I can focus the localization process only on those resources, and not in already localized ones. If possible, I want to choose which languages those new or updated resources will be translated to. This idea could be extended to report which files/resources/strings were translated, which ones were reviewed and which translations are missing, for instance.

+ As a mobile developer I would like a mechanism to help me manage the translation workflow. For instance, I could have some feature such as “Generate me a zip with all resources that weren't translated yet”. And the way back: **insert this just translated content into my project**.

+ As a mobile developer, I want to externalize strings from an **Android** project (strings.xml and R.java). I also want to externalize Strings from my layout and even from my plugin.properties.

+ As a mobile developer I would like to have two **options when exporting my** application that has several languages: to export all languages into one only package and also to export separate packages for each language. This would be useful if I want smaller packages for each single language.

+ As a mobile developer, I would like a way to localize my **shortcuts and hot-keys** and check for inconsistencies. After all, when translating, the letter I use as mnemonic may change and become duplicated (two menu items with the same mnemonic, for instance).

- + As a mobile developer, I would like to **export a package** containing all resources that can be localized, so I can send such package to an outsourced localization/translation company.
- + As a mobile developer, I would like to **import a package** containing localized resources and then integrate them to my application.
- + As a mobile developer, I would like ways to localize other resources, such as **date** and **time** formats, **currency**, sorting patterns, imperial versus metric standards, and even cultural differences (different colors have different meanings for different peoples).
- + As a mobile developer, I would like to see, in an easy way, the “**hierarchy**” of localized resources. For instance: this value will come from the file “XXX-rYY-portrait” if applicable, otherwise will come from the “XXX-rYY”.
- + As a mobile developer, I would like to **test the translated application**. Not only test, but may be a static analysis tool: find and mark broken strings, replicated strings, strings that did not change when translating.

GUI Prototype

The user interactions of the screen prototypes below reflect the content of the “User Stories” section of this document.

Figure 1 below demonstrates the selection of image and video files for some localizable resources, other than strings.

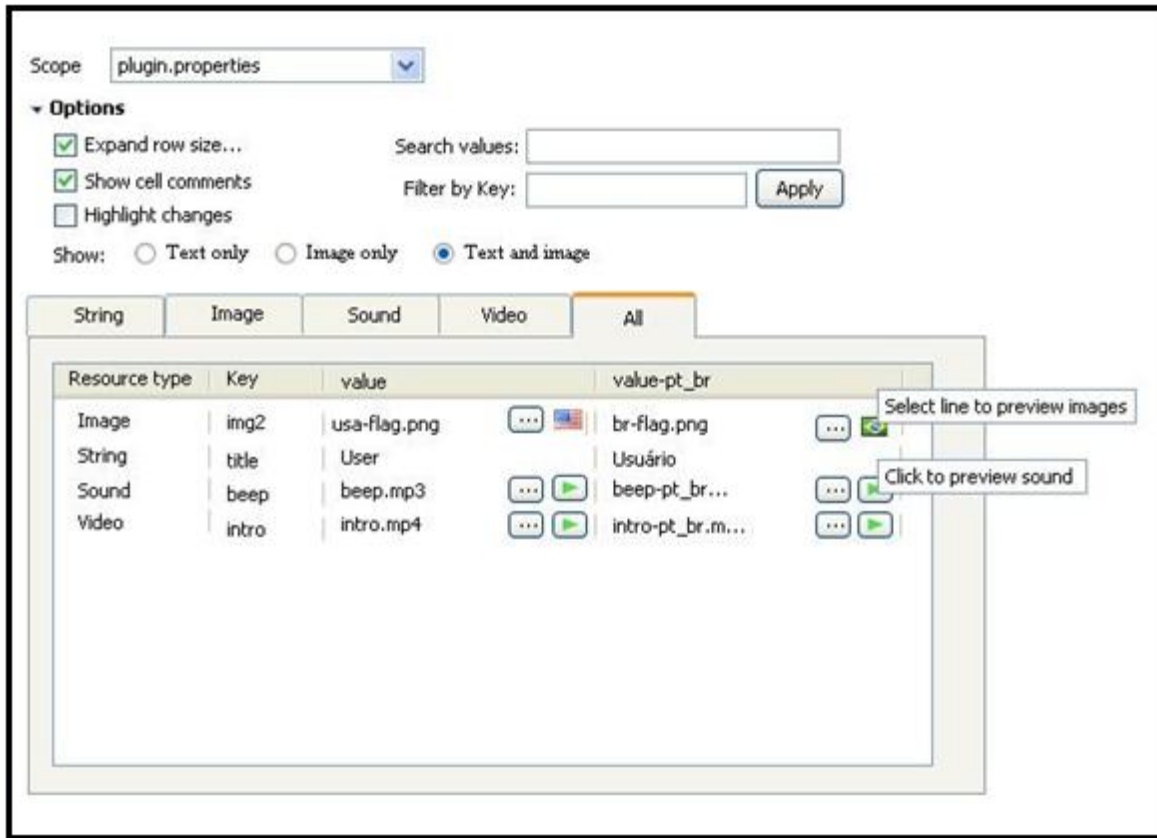


Figure 2 below displays a resource selected in the Localization editor.

