



Transfluent for Apps White Paper

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Apple's App Store and Mac App Store are available in over 150 countries and support 40 languages. Google has stated that the Android App Store is accessed from 190 countries every day. Given that most users tend to favor applications in their own language, localizing an app is the most effective way to increase sales.

This white paper describes a sophisticated application language translation solution called Transfluent for Apps. This discussion focuses on the applications use to translate iOS apps, but Transfluent may also be used to translate Android applications.

Executive Summary

Transfluent for Apps provides a comprehensive application programming interface (API) to generate language translations for iOS (iPhone, iPad, iPod Touch) and Android applications. The API has been designed from the ground up to be both powerful and easy to use. It is the world's first translation solution designed specifically for translating mobile applications.

Translating mobile applications to multiple languages directly increases the target market size and gives a competitive edge over titles that have not been translated. As many as 60% of mobile users say they prefer downloading and purchasing apps in their native language.

Translating apps is not easy, and there are a lot of pitfalls. A poorly executed translation can seriously hurt an application's sales and the developer's reputation. Transfluent has a great deal of expertise in translating applications and social media feeds. The Transfluent API offers the most advanced translation solution for creating versions of mobile applications in multiple languages.

It should be noted that even though the process of using the Transfluent API is fully automated, the actual translations are always performed by real humans. Transfluent is backed by a network of over 15,000 professional translators with expertise in more than 60 languages.

Background

Translating applications has traditionally been quite tedious work. Collecting all of the resources, sending them to translators, and placing the translated resources in the app requires quite a lot of work if it is done manually, and these steps have to be repeated every time the app is updated or any of the text is changed.

The challenges are not limited to the administrative process of managing translations. Translators often have a hard time with application translations. With limited context, it is very easy to misunderstand the meaning of a specific word or use a long form when the developer requires a compact expression to accommodate space limitations.

The Transfluent team has translated quite a few applications. We have, unfortunately, also made mistakes. It's safe to say we've been around the block a few times, and we know what the issues are and how to overcome them. Transfluent for Apps is our ultimate solution to the problem of translating an app and keeping it up to date across multiple language versions through new releases and updates.

Common Issues

Quality

Needless to say, machine translation is out of the question for your application. So, should you use loyal fans of your app to provide translations—potentially free of charge—or should you pay for a professional translator to do the work?

There is no clear answer. The problem with using volunteers is that you really have no idea of the writing skills of the person doing the work. Ideally, you would have several people proofreading the translator's work, which could result in arguments about the best way to express a particular concept. The upside, of course, is that a fan will know and love your app and is likely to understand the context in a way a professional translator may not.

On the other hand, a professional translator will produce grammatically correct text that will likely be 99% fine. But the 1% of the time that the translator misses the point may be critical. It may be, for example, that the app already has a following in the target language, and the target audience is already using a set of user-generated terms based on their experience with the app. They will feel alienated if the translated version of the app uses different terms than those they're already used to.

Transfluent offers a two-fold solution. First, we use a two-pass translation process to guarantee the quality of the translated text. One professional translates the text and another independently proofreads it to ensure fluency, appropriateness, and correctness.

All translators in the Transfluent network are native speakers of the target language and fluent in the source. They live in an area where the target language is commonly spoken. If translators with specific domain expertise are required, the Transfluent team can assist in finding them and the platform also allows you to suggest your own translators.

Second, the Transfluent API allows you to begin translating the app during development phase and easily reiterate as often as you want. This allows you to show the app to speakers of your target languages before public release. If you already have loyal fans, they will be happy to test the game for you and will surely give excellent feedback on the quality and appropriateness of the translation. They'll be able to point out problems in terminology that would be impossible for a translator to detect. Since Transfluent allows you to update translations as often as you want, you can easily fix detected issues.

Transfluent ensures consistency through multiple translation iterations by maintaining a project-specific glossary where you can update domain-specific translations, branded words, user-generated terms, and other items. You can release the app knowing that all of the localized versions are professionally created but still fan-approved. In this way, you can access the benefits of fan translation with the quality and rigor of a professional translation

Context

Sometimes a translation falls short because of lack of context. If you ask a translator to translate the word "menu," without providing any further guidance, he or she will not know if you mean a restaurant menu or a computer menu. Other terms may have less obvious multiple meanings. If you don't provide a hint to the context, translators might not realize the ambiguity and end up using a wrong translation.

Giving a little context makes translation much easier. Given the information that the text is for a mobile game, the translator will assume that "menu" relates to user interface. Of course, if your mobile game is about restaurant management and the menu refers to choices of food, he will still get it wrong.

For this reason, it's a good idea to make a habit of writing a short description for every piece of text used in the app. Sometimes even this is not enough, so Transfluent API allows you to supply screenshots of the application along with the text. The translator will then be able to view your app description, the description of each text item, and screenshots of the app as he or she translates, producing a more precise result.

Process

The real secret of Transfluent is the way it manages the translation process. Transfluent automates everything except for the actual translation, and it completely eliminates the need to spend resources managing translations.

In recent surveys, current and potential clients told us that one of the main reasons they don't translate content into multiple languages is that managing the translation

process absorbs too many internal resources. The cost of translation itself is rarely a deciding factor. For an application that doesn't have a lot of text, the translation process can cost more than the actual translation. Dealing with multiple translators, converting text resources to the format that each translator requires, making sure the correct version of each translation ends up in the application, and then repeating these steps every time the app gets updates is simply not cost-effective. In the worst case, the developer doesn't have time to update all localized versions at the same time with the main language version, resulting in a situation that is confusing for the developer and customers.

The Transfluent API solution is simple; everything is automated. The developer only needs to set up the API calls so that Transfluent receives the material to be translated and knows which languages to translate to. From that point on, everything just works.

Speed

Traditionally, application translation has not been speed critical in the way that social media translation is (for example, Transfluent for Facebook has an average turnaround time of less than 15 minutes). Usually it has been sufficient to get the application translated within days, rather than minutes. This is mainly because applications are usually localized only after the project has been completed in the main language.

Transfluent's automated process makes it possible to update translations during development, at any point. For example, the build process can be configured to call the Transfluent API so that the translations are updated every time the application is built. Obviously, if the update happens multiple times per day, the speed of the translation update becomes important.

When Transfluent API receives a request to update translations, the backend process immediately compares the new resource file to earlier versions and detects changes and additions. A translation request is prepared for these modifications and the task is allocated to the next available translators in the desired languages. Within seconds, the translators are alerted and within minutes the work is under way. If the changes are minor, the results are returned to the developer within minutes of the request.

Please note that since the translation is always performed by a real human being, it is not actually returned in real time. The translation is done as fast as humanly possible, but still, there is a small wait. Because of this, translation requests are always asynchronous, meaning that they will return a success code to indicate that the request was accepted, but the actual results will only be available later.

The result is returned with a callback when finished, so there is no need to keep checking for it. The time required for the translation depends mostly on the length of the text. A professional translator processes an average of 200 words per hour, so if the amount of text to be translated is very large, the results may require several days. While technically it would be possible to split a large task to multiple translators to speed up the process, we prioritize quality, which can be achieved when a single translator processes the entire task. Please contact us if there ever is a need to process large amounts of text on an urgent basis.

iTunes App Store Description

iTunes App Store allows for the application description to be translated to multiple languages. Translating the description to all major languages is highly recommended, as many users prefer to download applications with descriptions in their own language.

The App Store description language has one important limitation: the length of the text is limited to 2,000 bytes. Yes, bytes, not characters. The text in iTunes is stored as UTF-8, which means that each character takes between one and four bytes. Characters in the ASCII range (Latin letters, numbers, etc.) take up one byte, but most other characters take up two or three.

The length limitation is not usually an issue with languages such as Chinese, where one character may represent a word, and the text ends up more compact. Even if each character takes up multiple bytes, this is compensated for by the shorter text. Bigger issues arise with languages such as Russian or Hebrew, where words are long and each character takes up at least two bytes. English text translated to Russian may easily take up twice as many bytes as the English original.

Transfluent API offers a convenient solution to this problem—you can use an API call to estimate the length of the translated text in bytes. We use machine translation to translate the text to the target language and sum up the byte count in UTF-8. This is just an estimate, as the final language translation is performed by a professional translator, but it gives you a pretty good idea of the final length.

When our system detects that the translation exceeded the limit, it automatically instructs a proofreader to compact the text a little. Obviously, only minor adjustments are possible without altering the content, so it is your responsibility to make sure the text is not overly long.

A-B-Cs of Mobile App Translation

1. Keep your string resources separate from the code. Transfluent API supports **Localizable.strings** (recommended by Apple for iOS and OSX development), **Excel**, **Doc**, **XML** and **JSON** formats.
2. Use a script to send the text resource file to translation using the Transfluent API. You can send the file as often as you like, even every time you build the app.
3. Detect the user language and use the correct resource file for each user. Congratulations—your app now works in multiple languages!

Remember to translate the app store description to all target languages, as well. You can do this via the API as well.

Once your app is translated, you should also look into other aspects of localization, such as using correct measurement units and accepting all possible input methods, but translating the visible text is the most crucial step. Without it, the target audience may not even open your app.

Implementation: It's All Fun and Games

Our goal is to provide top-notch quality language translations with ease. We don't want you to worry about file formats, conversion issues, and all that unnecessary technical detail. You can upload your files to our API in their native format, and we will bulldoze all the borders between highly specified file formats and professional translators.

First, you need a Transfluent account. You can create one at Transfluent.com. Just click "Get started" and skip the setup wizard. On the My Account page, click "Other services." Then, choose the Backend (API) tab. Accept the terms of service and generate your password. This will allow you to access our backend API. Documentation can be found at <http://www.transfluent.com/backend-api/>.

Next, you'll need to retrieve an authentication token. If you are running PHP, get started by fetching our API client from GitHub (<https://github.com/Transfluent/Transfluent-Backend-API-client>). For everyone else, it's really simple. You can even run the commands using your browser; just specify method-parameter to "fake" a POST-request (e.g., <https://transfluent.com/v2/authenticate/?method=post&email=example@example.com&password=my-secret-password>).

An example of how to retrieve the token using cURL:

```
curl -d 'email=boss@customer.com&password=123NOT'  
https://transfluent.com/v2/authenticate/
```

Example response:

```
{"status": "OK", "response": {"token": "abc123456...", "expires": "On  
password change"}}
```

All the other methods are just as straightforward as the authentication process. Implementing the methods to translate iOS resource files usually takes couple of hours from start to finish.