

GOOGLE I/O - SESSION #1208

EXECUTIVE SUMMARY

Name of presentation: Developing for a Global Audience: Tools for Internationalization & Localization

Track: Tech Talk

Speakers: Manish Bhargava (@mbhargava), C Andrew Warren (@cawarren)

PCounsel status: none

Disclosures: none

Third-party content: proper source listed

Potential legal red flags: none

Summary: This tech talk will explore some of the tips, tricks, and tools that can make internationalization (i18n) and localization (L10n) simpler for web and mobile app developers (with a focus on Chrome/Android apps, websites and docs)





Google
Developers



Developing for a Global Audience: Tools for Internationalization & Localization

June 29th, 2012

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Product Manager, Google Inc



Agenda

Developing for a global audience: is it worth it?

Huge opportunity to get worldwide customers

The *What & How* of internationalization & localization

Get in the know – in-depth look at tools for i18n & l10n

How will global customers find me and how will I find them?

Tips for successful marketing to a global audiences

Q&A

What else can we tell you?



Is it worth developing for a global audience?

To have a successful business, you need:



Users



Revenue

Where are these users located?

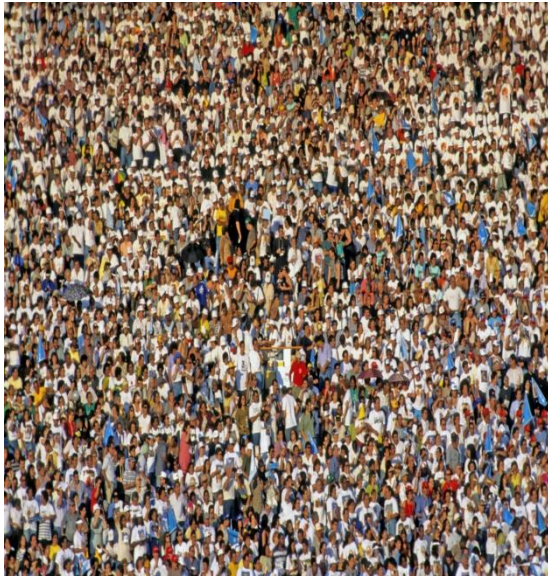




Demo - Where are the users located?

Is it worth developing for a global audience?

To have a successful business, you need:

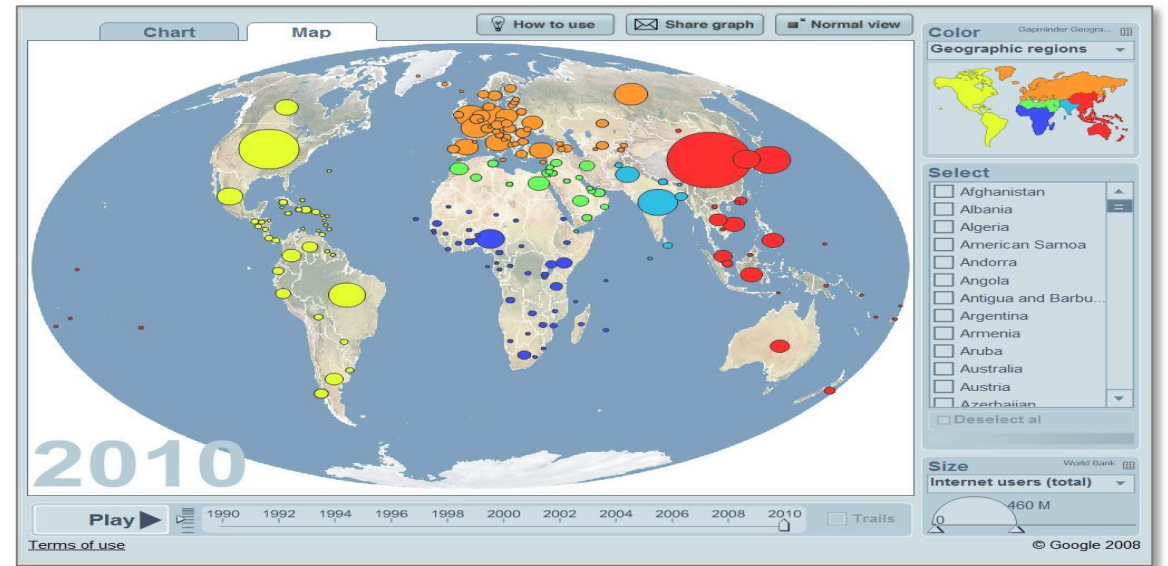


Users



Revenue

Where are the users located?





source: gapminder.org



Yes!! You can triple your users and thereby increase your revenue



Global Android Apps Opportunity

	May 2011	June 2012
Android activations 4x	100M 	400M 
App installs 4x	5B	20B

Apps availability:

- Free Apps: **190** countries, Paid Apps: **132** countries
- 92% of users have access to paid apps
- 67% of Google Play revenue from outside US

Revenue infrastructure:

- Carrier Billing in 7 countries and growing
 - All monetization methods available

Dev infrastructure:

- App can be listed in 22 languages using the Dev Console
- Country and Language dimensions for analytics



Huge upside for global revenue and usership

source: Android Apps in Google Play – Google IO talk by Chris Yerga



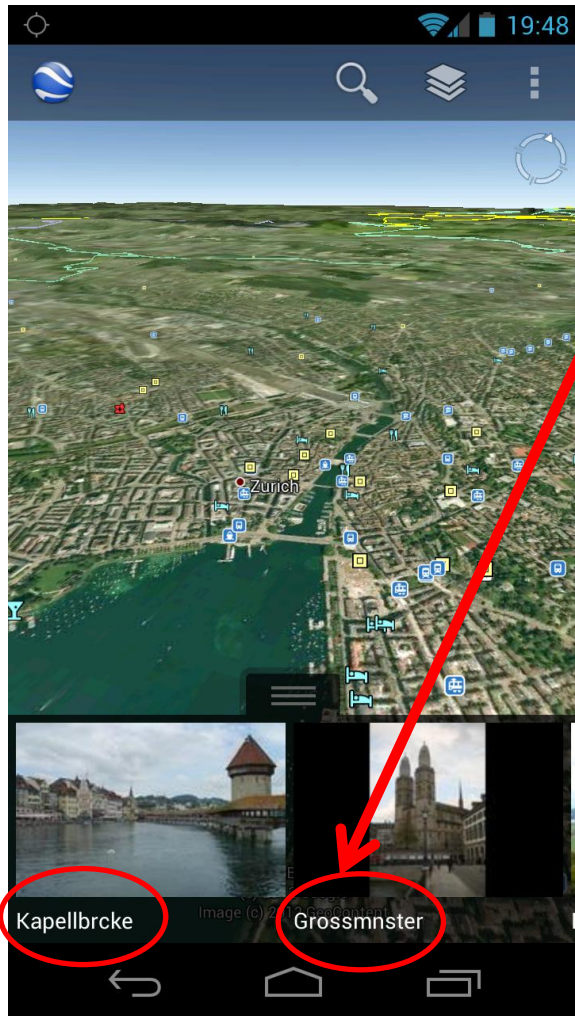
What does developing for a global audience entail?

Internationalization (i18n)	Design and code to enable support for language and regional differences <ul style="list-style-type: none">• Localizable resources, Unicode-based, text/data formatting & parsing, sorting, input/output, etc
Localization (L10n)	Adapt look & feel for languages, regions and culture <ul style="list-style-type: none">• Translation (UI & docs), local defaults, custom features

Example: Google Sites Menu translated in Arabic



Examples of i18n and L10n issues

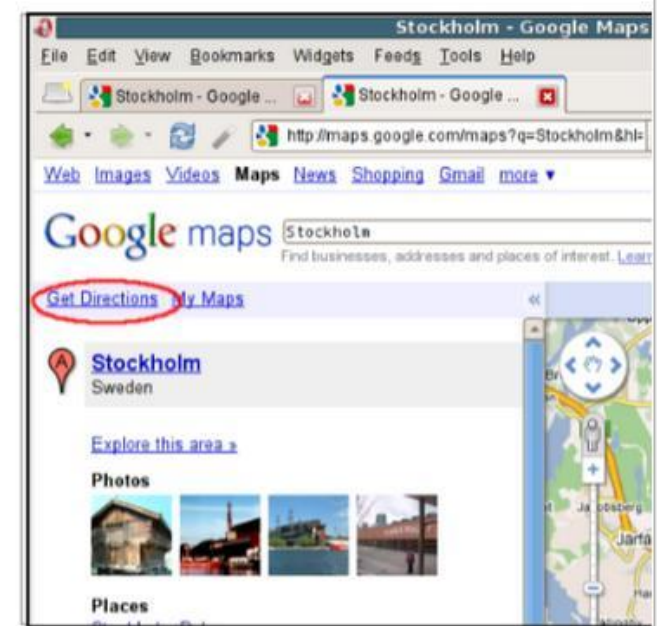
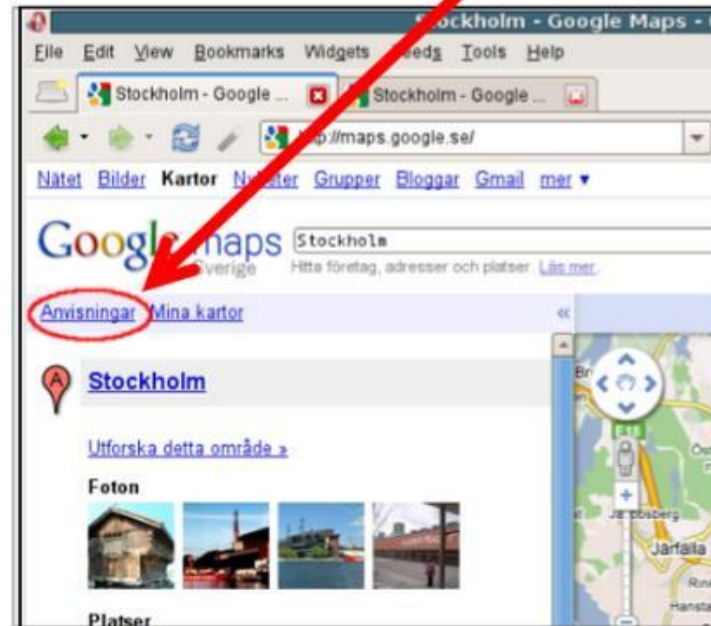


Google Earth App – Zurich view

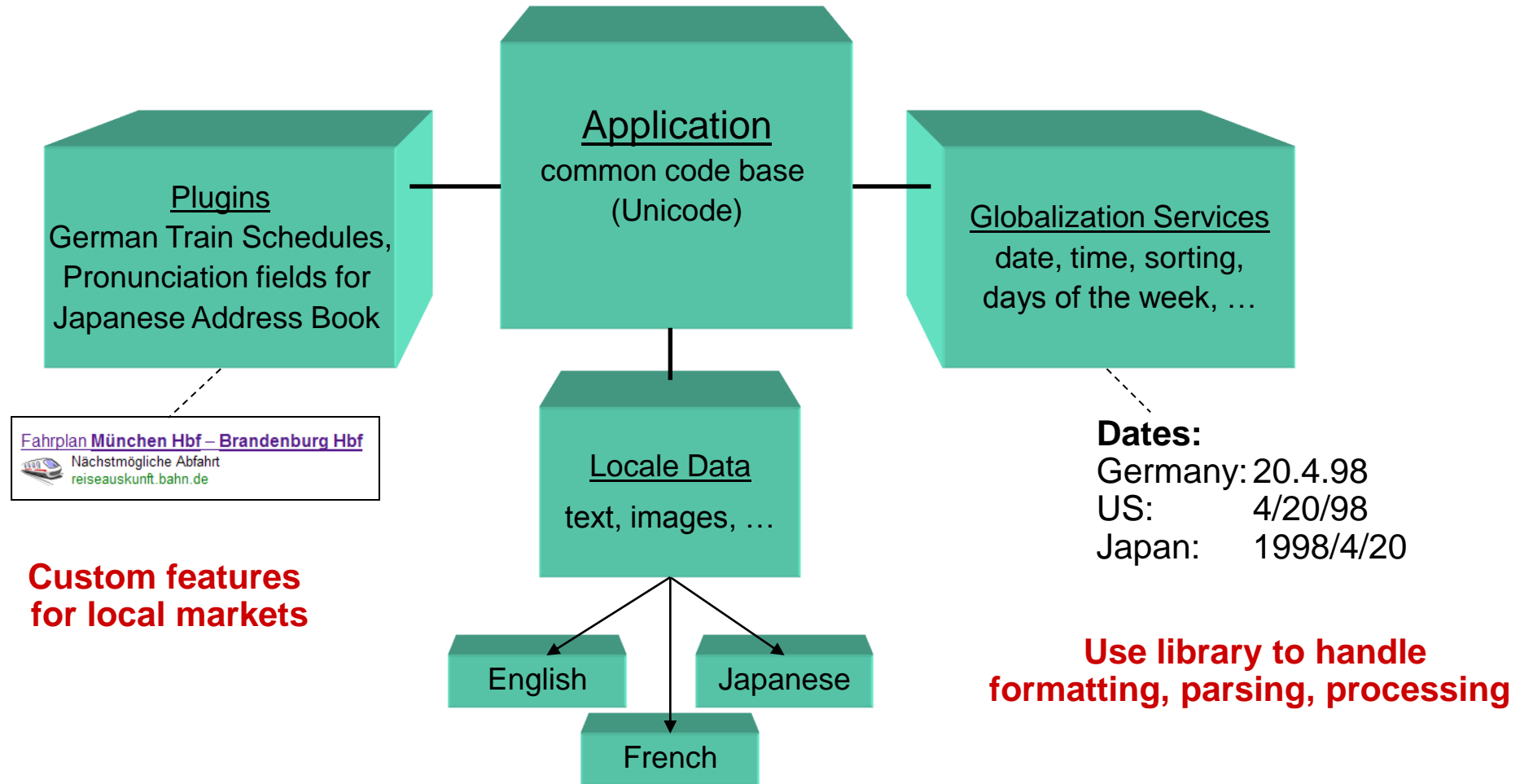
Kapellbrücke & Grossmünster
garbled to
Kapellbrcke & Grossmnster

Google Maps - Swedish

Get Direction → Instructions



How to do i18n – Globalized Application Architecture



Available tools for i18n

I18n support Libraries - ICU		ICU (International Components for Unicode) is a mature, open source, public, and widely-used set of C/C++ and Java libraries supporting Unicode and globalization. It provides handling of date, time, currencies and much more. It uses Unicode CLDR
Handle intl Phone Numbers – libphonenumber		Google's common Java, C++, Python and JavaScript library for parsing, formatting, storing, matching & validating international phone numbers
JavaScript i18n support		I18n libraries for JavaScript included in Google Web Toolkit (GWT), Closure Tools and ECMAScript
Input in 70+ languages – Chrome Extension		Google Input Tools, a Chrome Extension allows users to write in their language in any text box on any web page. Tools offered include transliteration, virtual keyboard, and IME.

<https://developers.google.com/international/i18n>





Input Tools Video & Demo

Input Tools – Implications for Developers

Two key takeaways:

- You never know how users are entering text into your site or application
 - Use and remain consistent with common web standards
 - In particular, be cautious around text areas and editable divs
- You never know what text is coming into your application
 - It could be in any language, in any script
 - Applications should be built using Unicode for all text and string handling.



How to prepare for L10n?

Focus your efforts in the following areas:

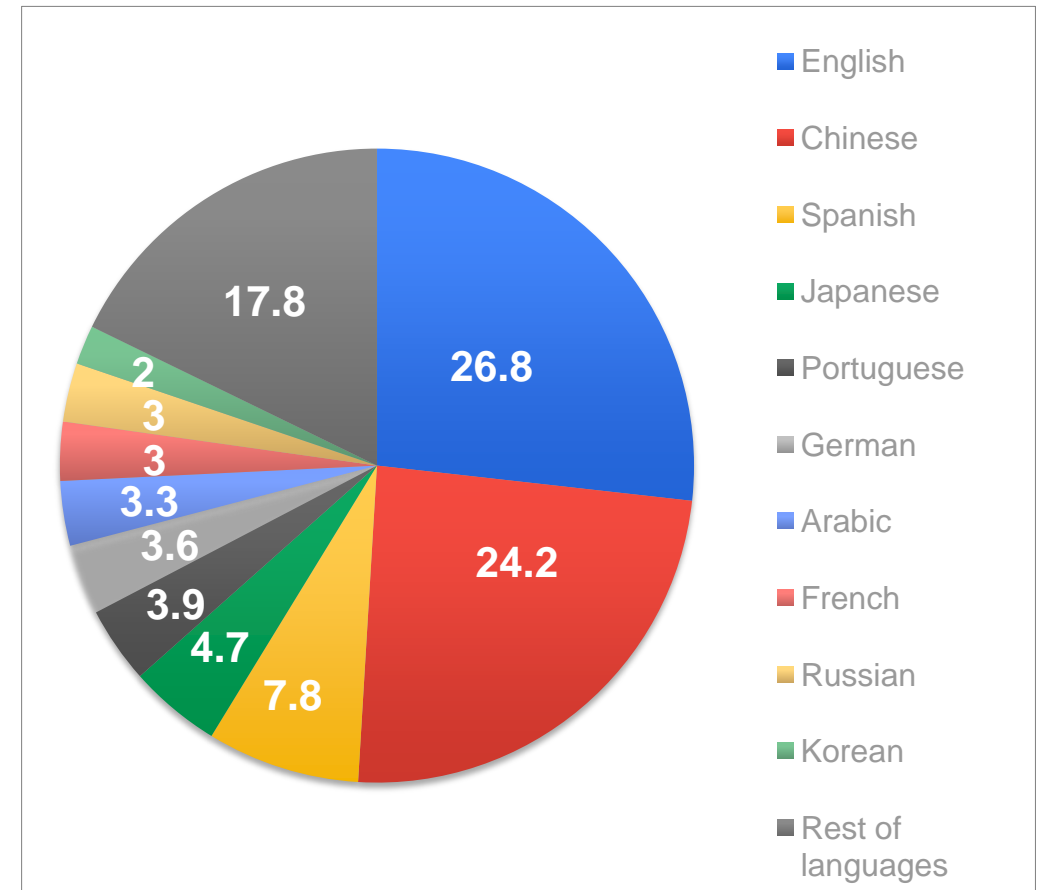
- Determine the target language set
- Separate localizable resources from source code
- Test application for localizability issues
- Find a localization vendor
- Determine the localization tool
 - Leverage translation memory, glossary etc



Considerations for choosing locales to support

- **Based on key metrics**
 - Top languages used on the web
 - Top countries by cell phone usage
 - Top countries by paid apps installs
 - Languages supported by competitor
 - App category specific metrics
- **Based on effort required (language grouping)**
 - Latin script
 - Non Latin European
 - CJK
 - SSEA (Thai, Hindi)
 - Bidi

Internet Users by Language as % of Total



source: Internet World Stats - www.internetworldstats.com/stats7.htm



Available tools for L10n

Lets review tools and resources available for each of the following:



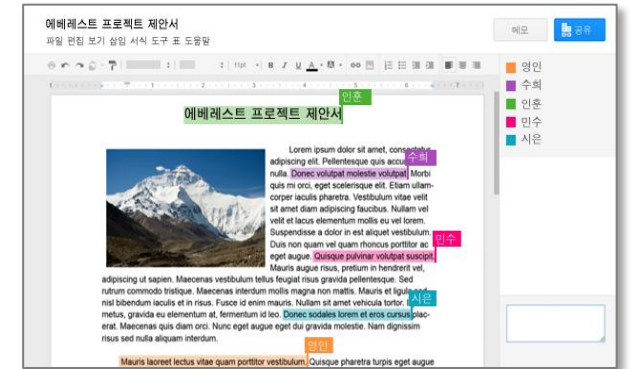
Android Apps



Chrome Web Store Apps



Websites



Static Files & Docs



Localization of Android Apps

Highlights:

- Create resource sets for each locale
- At run time, the resource set matching device's locale is loaded
- If locale-specific resources are not available, Android falls back to defaults

Android Localization Process

Plan & Design	Choose l10n strategy	Identify localizable resources	Externalize resources
Translate	Create default resources	Obtain translations	
Test & Publish	Test each locale	Test default resources	Upload .apk to Google Play



Localized *Hello L10n* apps

Ref: <http://developer.android.com/guide/topics/resources/localization.html>



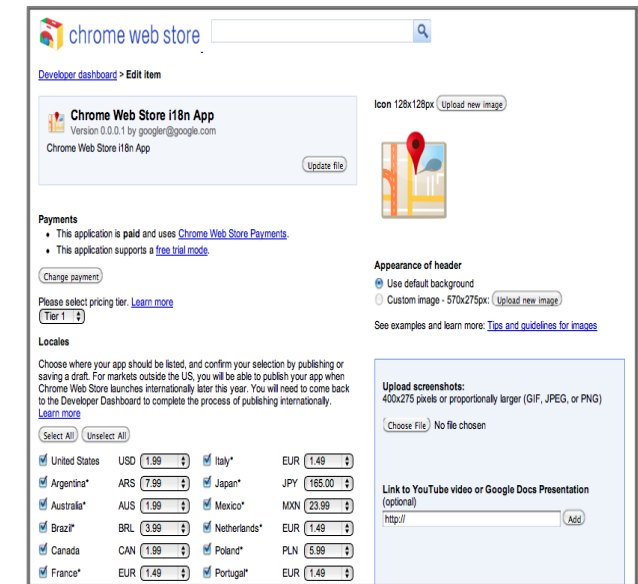
Localization of Chrome Web Store Apps

Highlights:

- Localized listing on Chrome Web Store (43 locales supported)
- Message extraction support for Extensions and Packaged apps

Chrome Apps Localization Process

Plan & Design	Choose I10n strategy	Identify localizable resources	Externalize resources
Translate	Localize UI & listing metadata	Obtain translations	
Test & Publish	Test each locale	Upload using Chrome Dev Dashboard	Provide localized description & screenshots



Creating localized *Chrome Web Store* listing

Ref: <http://code.google.com/chrome/extensions/i18n.html>



Localize your website: Google Website Translator

Highlights:

- Instantly translate websites into 60+ languages
- Customize & improve the website translation
- Collect & use translation suggestions from users
- Invite editors to manage translations



Ref: <https://translate.google.com/manager/>

The screenshot shows the 'Website Translator - Add Website' configuration interface. It includes a progress bar with 'Website Info', 'Plugin Settings', and 'Add Plugin' steps. The 'Plugin Settings' step is active. The interface contains the following sections:

- Translation languages:** Radio buttons for 'All languages' (selected) and 'Specific languages'.
- Display mode:** A dropdown menu set to 'Inline', and radio buttons for 'Vertical', 'Horizontal', and 'Dropdown only' (selected).
- Advanced:** Checkboxes for 'Automatically display translation banner to users speaking languages other than the language of the page' (checked), 'Your page contains content in multiple languages.', and 'Track translation traffic using Google Analytics. Learn more!'.

At the bottom, there are buttons for 'Cancel', '« Previous', and 'Get Code »'. A 'Select Language' dropdown menu is also visible on the right side.

Website Translator plug-in setup





Website Translator Demo

Localize your documents: Google Translator Toolkit (GTT)

Highlights:

- GTT is Google's localization platform for human translators
- Translate wide range of document types:
 - Word Documents, OpenOffice, RTF, HTML, Text, PO files, Android resources, Chrome Extensions, Adwords campaign and Wikipedia articles
- Supports over 300 source and target languages!!
- WYSIWYG editor

Ref: <https://translate.google.com/toolkit>

What is in works:

- Optimized Apps localization platform for Android & Chrome
- Optimized YouTube caption localization



Localization platform (GTT)





GTTA Demo (Sneak peek)

How will global customers find me and how will I find them

Tips for successful marketing to a global audience

- **Localize your marketplace metadata**
 - This by itself **significantly** increase your app's ranking in the locale
- **Maximize search potential:**
 - Search accounts for $\frac{2}{3}$ of all sales/installs
- **Steady effort works best:**
 - Invest in global efforts over a longer term rather than short bursts
- **Localize app screenshots:**
 - Reflect actual user experience in the locale

Reference: Getting found on Google Apps Play, Google IO talk by Dr Anna Patterson , Ankit Jain



Take home message

- **It is never too late to start**
- **Opportunity is too big to ignore**
- **It is really simple to get started!!**
 - Just remove any hard coded strings, externalize them, use a few libraries
 - Get your friends and family to help get translation in one language
- **Finally localize your market place metadata**



Thank You!

Please visit <https://developers.google.com/international/>

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