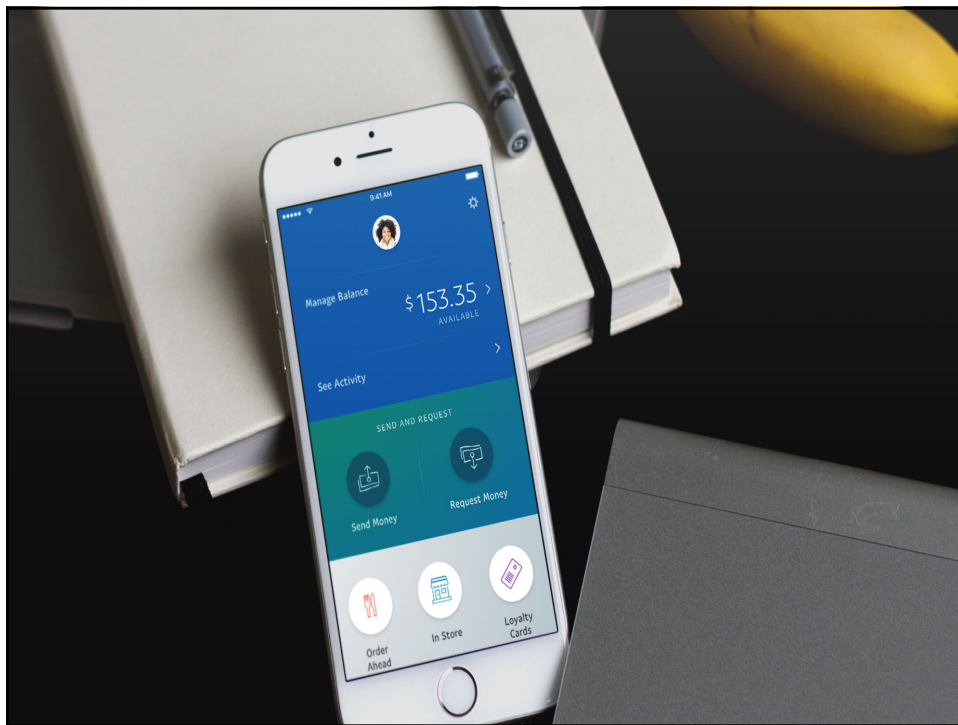


How PayPal launched a global app in 140+ countries simultaneously

IMUG

Sept 15th, 2016

Lucas Welti

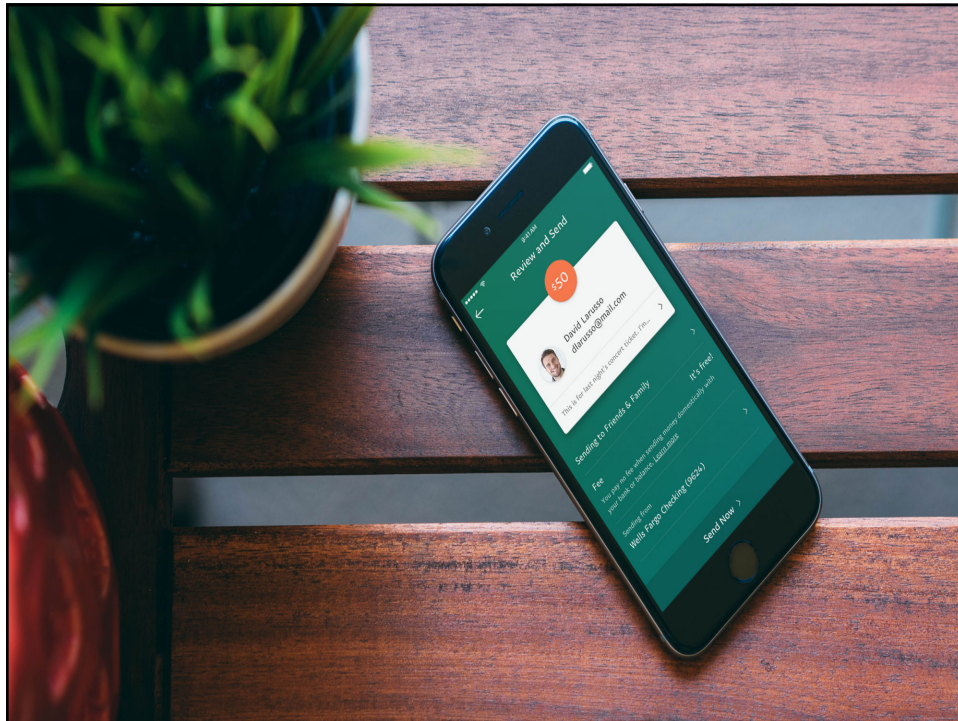


Agenda

- Introduction
- Goals
- Challenges
- G11n i18n Enablement

Introduction

- The new PayPal App was introduced the week of Feb 17th.
- Available in more than 25 markets and 17 different languages since Day 1!



Question

- How many of you have the PayPal app installed?
- How many of you have a US PayPal account?
- How many of you have a PayPal account outside US?
- How many of you have your device language settings in your native language?

Goals

- Make it available not only in the US market.
- Provide good quality content, from the Linguistic perspective and Internationalization Formatting.
- Same User Experience: Desktop, Web Mobile, iOS & Android

Technical Challenges

- Integrate with more than one mobile platform:
 - **Android (Java)**
 - **iOS (Objective-C, Swift)**
- Collaborating across many teams ensuring **internationalization** of all product features is ready for launch.

Technical Challenges...

- Supporting more than one language per Country
- Extending the standard: Global configuration limitations e.g country specific locales
- Extending Formatters
- Maintaining parity with desktop
- **G11n** data optimization (app data footprint)

More than one Language

- Supporting more than one language per Country
- Example:
 - Germany:
 - German
 - **English**
 - United States
 - English
 - Spanish
 - **French**
 - **Chinese**

Extending the standard

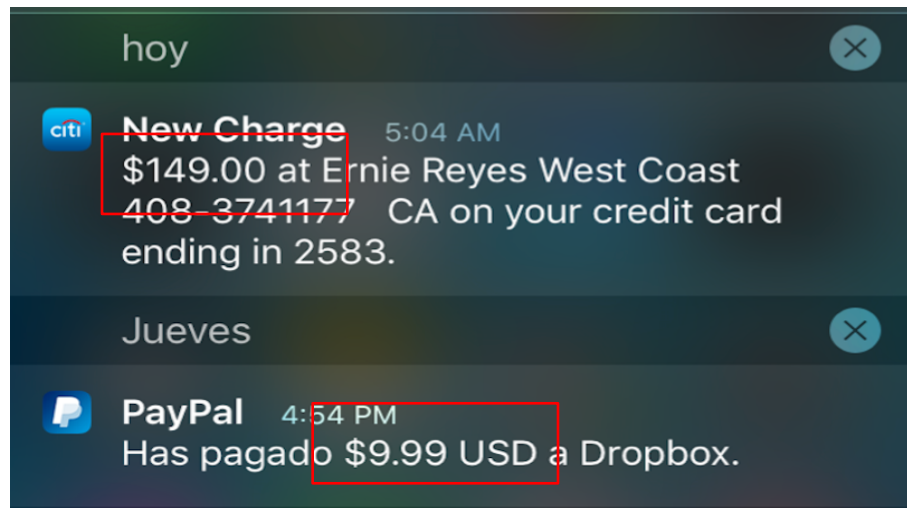
- Global configuration limitations e.g country specific locales
- Germany:
 - de
 - **en-DE** (not in CLDR)
- United States
 - en
 - es-US
 - **fr-US** (not in CLDR)
 - **zh-US** (not in CLDR)

Extending l18n Formatters Currency

\$ 1,234.56 USD



Extending l18n Formatters Currency



Extending l18n Formatters Date

(en-DE) 21/03/2016

(de) 21.03.2016

Adding 18n Formatters
Name

{GIVENNAME} {SURNAME}
or
{SURNAME}{GIVENNAME}

Adding 18n Formatters
Name

Oct 23 Aniruddha Dhamal Request received \$1.45 CAD
 This request is waiting. [Send payment](#) | [Cancel](#)

Adding 18n Formatters Address

{LINE1}, {LINE2}, {CITY},
{STATE} {POSTAL_CODE}

or

\overline{T} {POSTAL_CODE}
{STATE}{city}{line1}{line2}

Adding 18n Formatters Address

A screenshot of a mobile application's address form. At the top, a red error message "Dirección no válida" is displayed next to a close button (X). Below the error, the form fields are labeled in Spanish: "Domicilio", "Apartamento, suite, edificio", "Ciudad", "Estado", and "Código postal". The "Estado" field is filled with "California". The "Código postal" field is filled with "6544". A warning icon (triangle) is next to the postal code field with the text "Su código postal debe tener 5 o 9 caracteres."

I18n Architecture review

- Source Content (English)
- Design
- Code

Review Source Content

• **BAD**

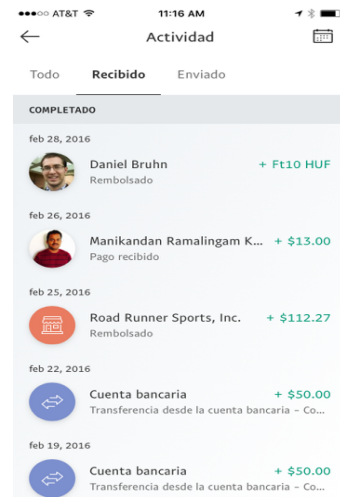
- KEY1 = "Help us understand the activity between";
- KEY2 = "through";
- KEY3 = ".";
- Composed message: KEY1 + **date** + KEY2 + **date** + KEY3
- Output (in *English*): "Help us understand the activity between 1/1/2016 through 3/15/2016."
- Output (in *Japanese*): "私たちは間の活動を理解するのに役立ち**2016年1月1日スルー2016年3月15日**"

• **GOOD**

- KEY1 = "Help us understand the activity between {start_date} through {end_date}.";
- Output (in *English*): "Help us understand the activity between 1/1/2016 through 3/15/2016."
- Output (in *Japanese*): "私たちは**2016年1月1日**と**2016年3月15日**の間に活動を理解するのに役立ちます。"

UX/UI Review

- Review UX/UI Designs in order to catch possible issues.



Code Review

- Set up Architecture reviews
- Share our 118n Best Practices with different teams, this was done during dedicated Brown
- Provide technical guidance
- Review Code Pull Requests
- Collect new requirements

G11n Data optimization

- Providing **Metadata** only for supported Markets
- Providing **Content** only for those supported Markets

QUESTIONS?