# Mining for Localization in Android MSR Mining Challenge 2012

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1/8

#### Motivation

- Different ways to carry out localization tasks
- Little research
- Opportunity to put in practice some concepts and tools
- And have fun!

#### Questions to answer

- To how many languages is Android localized?
- Who does the I10n tasks?
- How is the effort distribution?
- Compare I10n metrics with general development metrics

## Approach

- Discrimination criteria: filename
  - i18n: /value/strings.xml
  - I10n: /value-\_\_-\*/strings.xml
- To take into account:
  - Linux kernel development not related with l10n
  - Queries by 'author' (not 'committer')

#### Results

- High activity in I10n
  - Android 'only' localized to 40 languages
    - Many of them partially localized
- Very unequal distribution of work
  - We expected it more balanced than general development
- Core developers also carry out l10n tasks
  - People from Google, not volunteers



#### Conclusions

- It is possible (and 'easy') to mine for localization in Android
- Some results expected, some not
  - Credit to real translators missing?
  - Quite closed development model
- FLOSS open development tradition could improve results
  - Delegate I10n tasks, crowdtranslation
  - Specific platform for I10n (easier than issue tracker)



## Open research

- Libre software licensed scripts and data
  - http://gsyc.es/~grex/msr2012challenge/
- Do you want to continue? You're welcome!

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# Thanks!







8/8