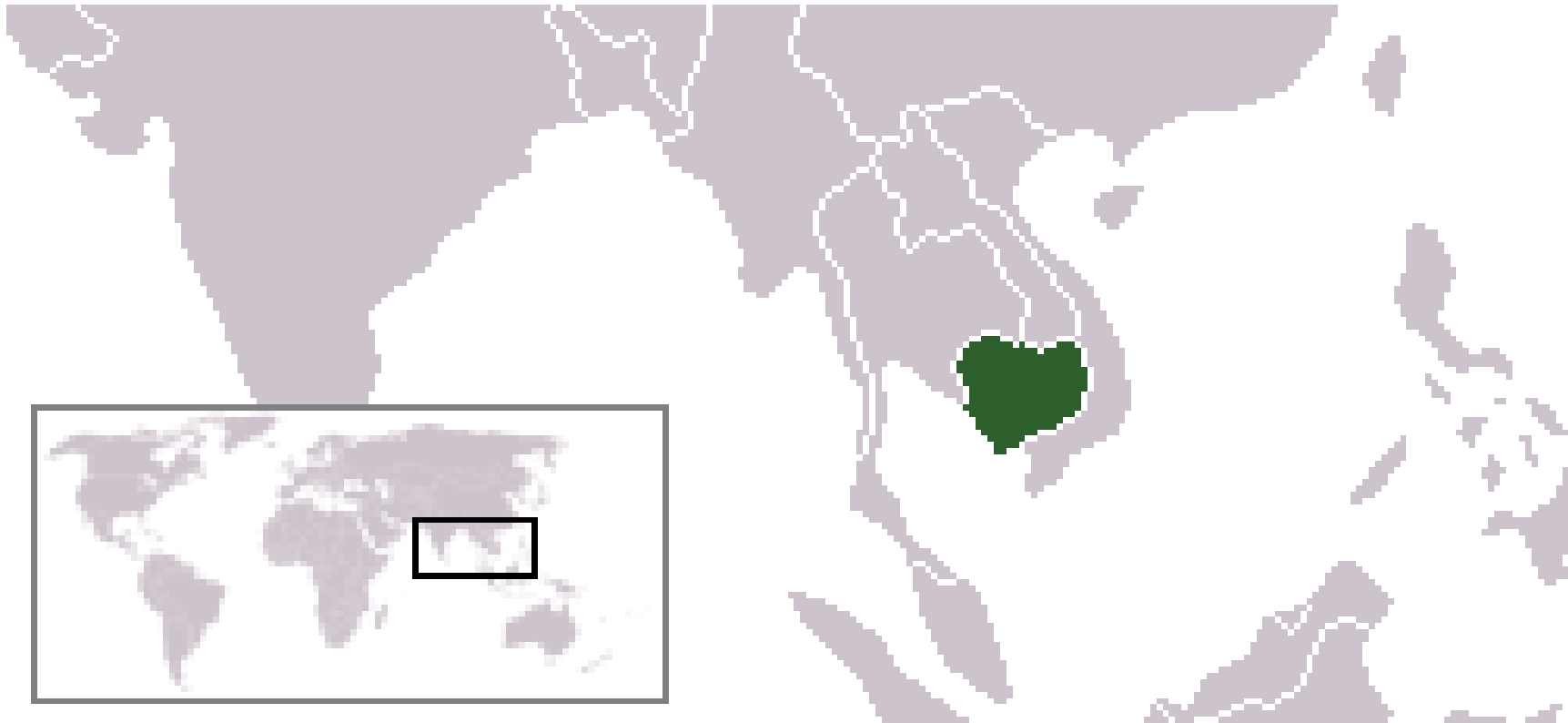




# KDE Cross Cultural



## Experiences from the KDE localization process in Cambodia



បទពិសោធន៍ក្នុងការបកប្រែ KDE នៅក្នុងប្រទេសកម្ពុជា



# Khmer Script



- Part of Unicode standard.
- Complex script rooted in Indic scripts.
- Written from left to right but it is not linear!
- Open Type tables in fonts are needed.
- Support in render engine (QT, Pango, ICU) is also needed.



# Khmer Script II



- Khmer is written in clusters which can contain up to three consonants, one vowel and some extra characters:

ស + ◌ + តី + ◌ + វ + ◌ = ស្រី

You can not render only parts of a cluster.  
Kate tries to be smart with rendering of  
selected text but fails for Khmer.





# Script – Word Break



- Khmer has no word separation! But in some places spaces are used.
- Zero-Width-Spaces can be typed to allow the computer to break words/lines.
- Dictionary based algorithms can search for breaks but they are neither 100% reliable nor integrated in any way.

If your application searches for word breaks you should consider Zero-Width-Spaces too! Better look for whitespace characters using `QChar::isSpace()`



# Script – Line Height



The line height of Khmer fonts is bigger than usual:

ខ្ញុំទៅ | go

Your carefully designed dialog that just fits 800x600 pixel will not work in Khmer!



# Khmer Numerals



- Khmer numerals: ០ ១ ២ ៣ ៤ ៥ ៦ ៧ ៨ ៩
- Latin numerals are also used in Cambodia, basically they are interchangeable.
- KDE does not support localized numerals for displaying of variables yet.

Input of numbers/dates can be either in Khmer or Latin numerals. Use the QLocale class for conversion to and from strings.



# Keyboard Layout



- A keyboard layout for Khmer is available.
- Almost none of the Latin characters are present in the Khmer keyboard.
- You need Khmer and a Latin layout and the ability to switch.

Do not assume the availability of Latin characters or numerals on the keyboard. (e.g. KCalc is not working)

The Khmer keyboard layout is not a good default when you need to be able to type English.



# Keyboard Shortcuts



- For a few Khmer characters shortcuts are possible. But for most of them the GUI creates garbage when it tries to underline them.
- Using additional Latin characters is not a solution because they are not in the keyboard layout.
- Basically keyboard shortcuts are not available in Khmer.

Workaround: you can assign two shortcuts to one action in KDE. The first in English, the second in Khmer for the same key combination.



# Buddhist Calender



- Khmer New Year is in the middle of April, depending on the moon.
- Day and month are coming from the Gregorian calender but the year is from the Buddhist calender.
- 1.1.2550 is after 31.12.2550 !
- The Gregorian calender predominates in daily life but is not the official one.

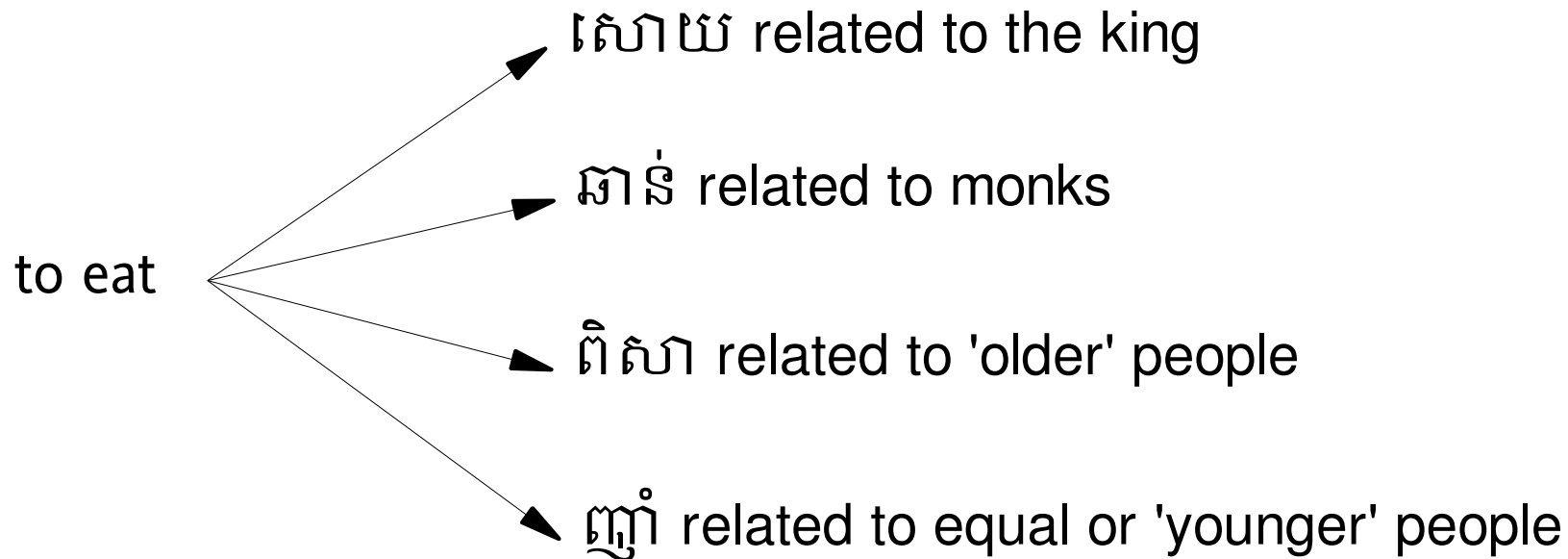
I am not aware of a computer implementation of this calender system yet.



# Language Feature I



## context related verbs:



Using the wrong form is very impolite!

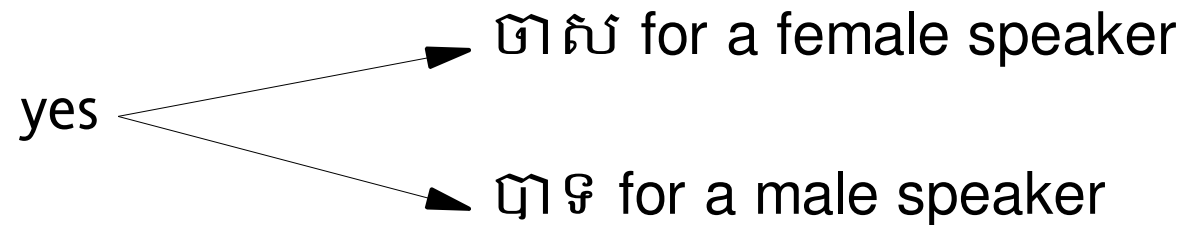
You can translate only one form! It is impossible to support this feature with the current technology.



# Language Feature II



speaker related form:



Used workaround for e.g. buttons: បាទ/ចាស៍

If your application parses user input a translated 'yes' is ambiguous!



# Cultural Observations



# Politeness



- Khmer people are very polite and friendly.
- They don't want to disappoint people so they have a difficult time saying “no” to somebody. Sometimes a “yes” is supposed to be understood as a “no”.
- People not used to this amount of politeness can develop a sense of distrust: “That can not be real, there must be something behind it!”



# No Reply



- Not to reply to a question is a normal and accepted communication pattern!
- It can mean:
  - a polite way to say “no”
  - “I do not like that you ask me this”
  - “I am busy”
- Usually you do not ask a second time.

This creates a dilemma in email communication because you can not be sure that the message has arrived.



# Losing Face I



- driving motorbike when you used a car before
- getting fired from your job
- going to a cheap restaurant if you have money
- to borrow money
- getting told that the posting is off topic on this mailing list
- getting a very simple answer to a question you asked



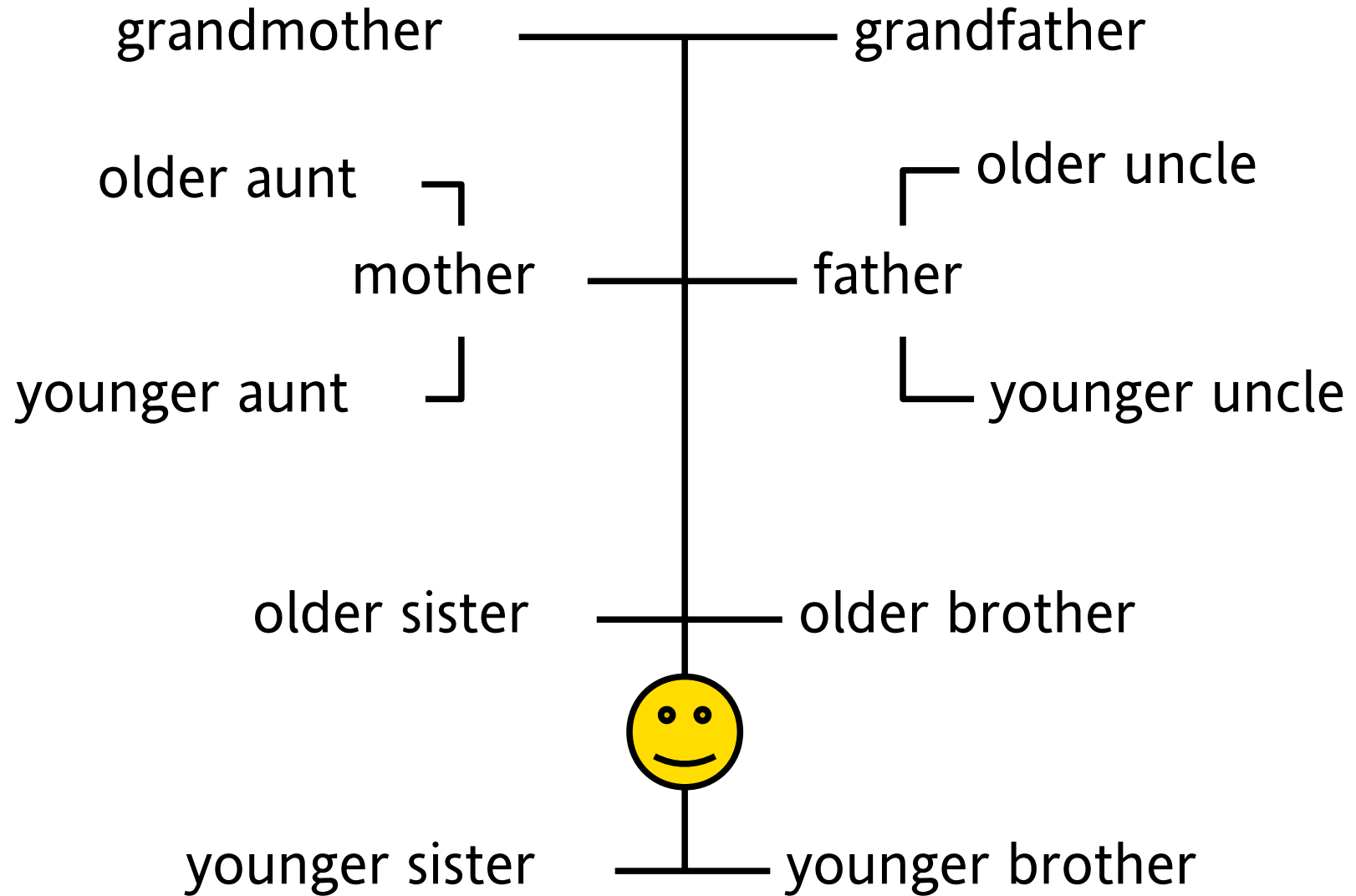
# Losing Face II



- It is important that I do not lose my face.
- It is equally important that I do not make someone else lose his/her face.
- Since the Western idea of losing face is different there is a high risk of unintentionally harming each other.



# Hierarchy I





# Hierarchy II



- You address a person by his/her position in the hierarchy.
- You need to know the age of a person in order to fit him/her into the system.
- It is polite to make a person older than he/she actually is.
- This system applies not only to the family but to all relations in the society!



# Hierarchy III



- The 'younger' person has to follow the 'older' person and the 'older' person has to care for the 'younger' person.
- You do not interrupt 'older' people when they are talking. (Foreigners are most of the times 'older')
- It is impolite to question a decision of an 'older' person even if it is obviously wrong.

In Open Source development hierarchies are mostly absent which increases the difficulties for Khmer contributors to join.



# Personal Names



- The family name comes first.
- You don't address people with the family name, it is impolite.
- e.g.: Sok Dara becomes Mr. Dara
- In many cases the name is not used at all but the identifier in the hierarchy.

Many Asian people know that the Western people do it the "wrong" way and reorder their names for them. You have to ask which one is the given name!



# Thank you!



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