





Pladao Office
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- What is Pladao Office?
- History of Pladao Office
- What was done in PladaoOffice 1.0 and 2.0?
  - Thai features





### What is Pladao Office?

- Pladao Office is OpenOffice.org
- Plus the enabling of Thai features
- And full Thai UI localization





## Pladao Office Development Team

In OpenOffice.org Conference 2003





### **History of Pladao Office**

- Pladao Office was endorsed by Thailand's Ministry of Information and Communication Technology.
- Pladao Office was supported by Sun Microsystem (Thailand) Ltd.
- The project was kicked off on 1<sup>st</sup> June 2001
- Pladao Office 1.0 was released on 14 March 2002 (7 Months for development process)
  - Based on OpenOffice.org 638C
- Pladao Office 2.0 was released on 14 February 2003
  - Based on OpenOffice.org 1.0.2





### **Characteristic of Thai language**

- Single Directional of Input (not a BiDi behaviour)
- Input direction from Left to Rigth
- In multibyte mode, Thai character is the single byte
- But have special zero width character
- 1 Thai Character Block (TCB)
- Can't contain more than 3 characters
  - Example

$$\vec{\hat{\mu}} = \mu + \vec{\hat{\mu}} + \vec{\hat{\mu}}$$







- Thai was treated into CTL group
- Not yet implement for Thai
- Because of CTL not yet implement in OpenOffice.org 1.0.2
- We were create our own i18npool's CTL module for Solaris, Linux and Win32
- Also implement necessary function
  - In defaultnumberingprovider.cxx (Thai Numbering method)





## **Thai Breaking Iterator**

- Breaking Iterator (i18n)
  - Since Thai language not always have word boundary.
  - Thai Breaking Iterator engine need special implementation
    - Currently using TRIE algorithm with more than 20,000 of Thai word in compressed dictionary lexicon file.
    - Source code can be found in tools/source/intntl/thaifunc.cxx
  - For example
    - Thaibasicfeatures = Thai + basic + features

สวัสดีครับนี่เป็นการทดลอง



สวัสดี+ครับ+นี่+เป็น+การ+ทดลอง





# **Thai Collating Order**

- Thai collating order
  - Implemented follow OpenOffice.org standard
  - With provide Thai dictionary sorting method (Thai Royal Institute Dictionary 2525 B.E. Edition)
    - Sorting source code available in tools/source/intntl/intnlang.cxx





## **Thai Input Method**

- Thai IM (Input Method)
  - Thai language need provide input sequence checking
  - The method that Pladao Office use is "Replacement method"
  - The sequence check engine will replace the input character if the incoming character is the same level as previous character in buffer.
  - Implemented in tools/string/strimp.cxx
    - Example:





# **Caret movement (1)**

- Caret Movement
  - The sequence of caret movement left and right must skip TCB (Thai Character Block)







## Caret movement (2)

- Caret movement and its combination key
  - Ctrl + Left/Right = Skipping Word (pass through Breaking Iterator in i18n module)
  - Ctrl + Shift + Left/Right = Select Thai Word





### **Deletion method**

- Deletion Method
  - Single delete key = Deletion of Thai Character Block
  - Backspace = Deletion of Previous character of caret
- With Combination key
  - Ctrl + Delete key = Deletion of Thai Word (using Breaking Iterator in i18n)
  - Ctrl + Back Space = Deletion of Previous Thai Word of Caret





# Paragraph DropCap and Word Count

- Enable Drop in TCB (Thai Character Block) format
- And Also enable document properties to call word segmentation in i18n
  - Example (demo)





### **Thai Date/Time format**

#### Date/Time format

- Due to Thai people need to use both English and Thai calendar at the same time.
- New Thai Implementation of date/time token
  - For backward compatible with MS Office document.
  - Will be convert to standard format, with language identification, when save as OpenOffice. org format.
- The XML format after save Thai Date/Time format
  - <number:date-style style:name="N5106" style:family="data-style" number:language="th"</p> number:country="TH" number:title=" "> <number:day number:style="long" number:language="th" number:country="TH"/><number:text> </ number:text><number:month number:style="long" number:textual="true" number: language="th" number:country="TH"/><number:text> </number:text><number:year number: style="long" number:language="th" number:country="TH"/></number:date-style>
  - Implemented in xmloff\source\style\xmlnumfe.cxx and xmloff\source\style\xmlnumfi.cxx





# **Thai Date/Time Token list**

Symbol	Description
2	Day of the month in one or two numeric Thai digit5s, as needed
22	Day of the month in two numeric Thai digits
222	Thai abbreviation name of the weekday
2222	Thai full name of the weekday
22222	Same as the Thai Short Date predefine format
22222	Same as the Thai Long Date predefine format
ส	Day of week as a Thai digit
88	Week of the year as a Thai digits
Я	Month of the year in one or two numeric Thai digits, as needed
ଜନ	Month of the year in two numeric Thai digits
ନନନ	Thai abbreviation name of month
ନନନନ	Thai full name of the month
Я	Date displayed as the quarter of the year using Thai digits
ป	Display number of the day of the year using Thai digits
ปป	Display last two digits of the Thai year using Thai digits
ปปปป	Display full Thai year using Thai digits
AA	Display last two digits of the English year using Thai digits
RRRR	Display full English year using Thai digits
Bb	Displays last two digits of the Thai year using Arabic digits.
Bbbb	Display full Thai year using Arabic digits
g	Hour in one or two Thai digits
99	Hour in two Thai digits
u	Minute in one or two Thai digits.
นน	Minute in two Thai digits.
и	Second in one or two Thai digits
ии	Second in two Thai digits





### **Bullet and Numbering**

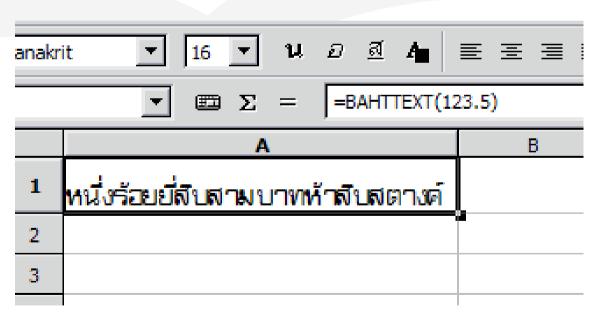
- 3 more Thai numbering were added
  - With IDL in OffAPI enabled "offapi\com\sun\star\style\NumberingType.
    idl"
  - And code enabling in i18npool
  - Options Included :-
    - Thai Number
    - Thai Letter
    - And Thai Letter N
      - Example :-





### **BahtText function**

- Created for backward/forward compatible
  - Since this function was created in Excel and widely used in Thai spread sheet.
  - This function available in every Excel version. (included European edition)
    - Try this on your excel cell format "=bahttext(123.50)"
  - Excel filter need to enable OpCode number 255
    - OcBahtText (the enum id number 255 in excel filter of sc module)
  - Example







### Thai number as native number

- Ability to input Thai number
- Ability to format number to Thai number
  - Example (demo)





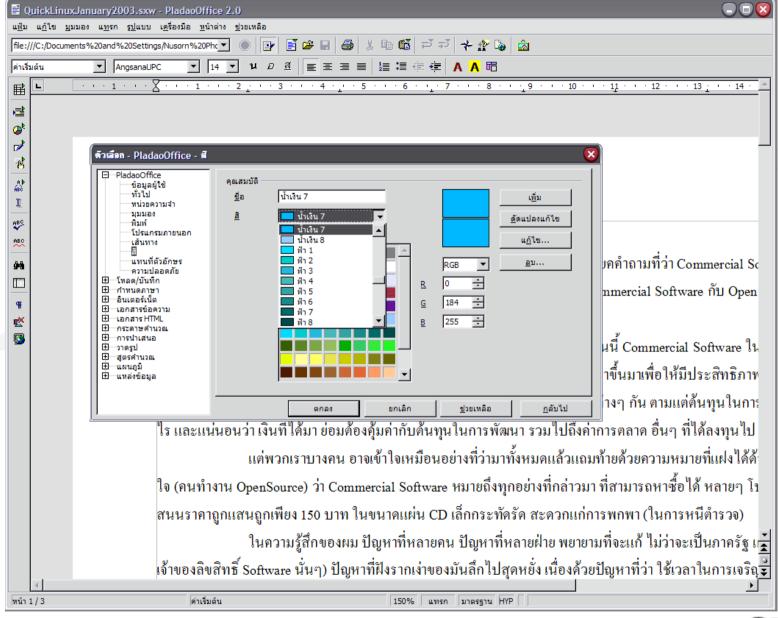
### **Full Thai localized User Interface**

- Need enable transex3 module to reconize Thai language
  - With Thai language code 66
  - LangID = 0x041e
- All Dialog Menu Messages are translated
- Also exports as GSI format for merge back to OpenOffice.org





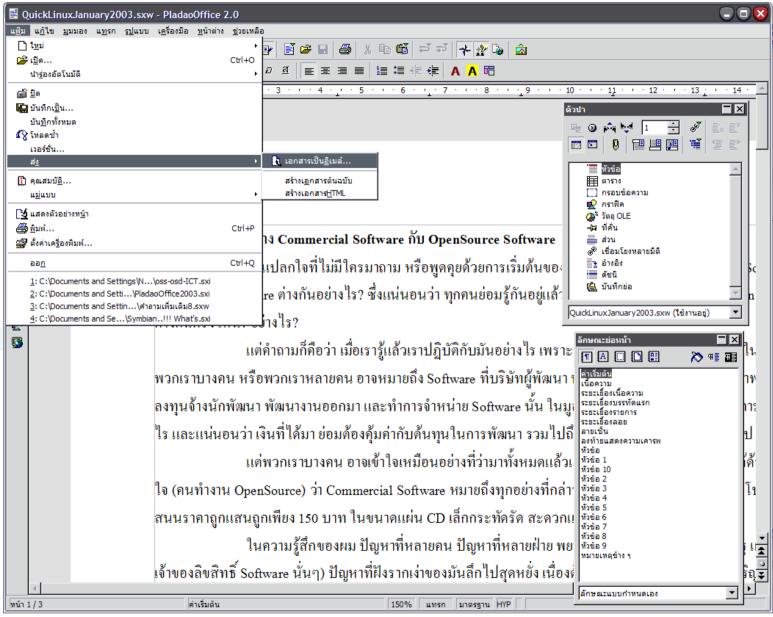
# Thai localized User Interface (2)







# Thai localized User Interface (3)







# RFE (Request For Enhancement)

- Enable OpenOffice.org to handle date/time with attachment of language Identification
  - XML file format extention request
- Check consistency of language Identification that refered by using international phone code.
  - Code 66 seem to be used by Hebrew
- More intelligent underline format
  - i.e. gjqypkς
  - This problem occurred in many characters in many languages





# RFE (Request For Enhancement)

- Native digits enabling
  - i.e. Thai digits:
- Lunar calendar, used by religious purpose in Thai (Bhuddist public holiday), China, Islam states, etc.





### **Links & questions**

- Pladao.org http://www.pladao.org
- IssueZilla http://www.pladao.org/issues
- Check out the live source code today at CVSROOT=: pserver:anoncvs@pladao.org:/cvs

Questions?

