Hildon 2.2: new GTK+ widgets for mobile devices

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Introduction
Hildon widgets library

- Set of widgets built on top of GTK+
- Created for Nokia devices based on the Maemo platform:
  - Nokia 770
  - Nokia N800
  - Nokia N810
- Released under the GNU LGPL
- Used also in other projects (e.g. Ubuntu Mobile)
Maemo 5, codenamed Fremantle

- Maemo release for the upcoming Nokia device
- Modern, usable and finger-friendly UI
- Completely revamped user interface, very different from all previous versions
- In beta stage currently
Hildon 2.0: Modest

http://www.flickr.com/photos/y erga/ / CC BY-NC 2.0
Hildon 2.0: Modest

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Re: [Mono-dev] mono-xsp problem: page(s) does not participate
Marek Habersack
10:30 am

[ Mono-dev] mono-xsp problem: page(s) does not participate
manfred.braun
10:21 am

Re: [Mono-dev] System.Configuration patches
Chris Toshok
11:50 am

Re: domain related mail
David L. Potter
7:40 am

Re: Where to find Zmailer-FAQ?
Andrzej Stella-Sawicki
7:40 am
Hildon 2.2: Modest
Hildon source lines of code

- Hildon 1.0 (16 Apr 2007): 23,026
- Hildon 2.0 (10 Oct 2007): 23,665
- Hildon 2.2 (as of 1 Jul 2009): 36,191
Hildon 2.2: the Fremantle release

- Applications as window stacked views
- Buttons as central UI part
- Scrollable widgets are touchable-friendly
- Kinetic scrolling (HildonPannableArea)
Other goals

- New and old-style applications can coexist
- Maintain backward compatibility
  - No API breakage
  - UI style preserved (where possible)
MathJinni in Fremantle
New UI concepts
Window stacks

- Hierarchical organization of windows
- Applications have a main view from which different subviews can be opened
- Views: implemented with HildonStackableWindow
- Stacks: implemented with HildonWindowStack
HildonButton: title/value button

(all buttons have finger height)

Full width
Value

Half width 1
Value

Half width 2 with long title
Value

Half width 3
Value (title is truncated)

Auto width 1
Value

Auto width 2 with longer text
HildonPannableArea

- Pannable scrollable window
- Configurable kinetic scrolling
- Gesture detection support
- Easy to port from GtkScrolledWindow
- Based on the OpenMoko finger-scroll widget
Demo
HildonTouchSelector and HildonPickerDialog

- Finger-friendly, pannable, multicolumn selector
- Allows single or multiple selections
- Uses GtkTreeView internally
- Exposes GtkTreeModel and GtkCellLayout for ease of use
- HildonTouchSelectorEntry: enter non predefined items
HildonPickerButton

- Standard picker button based on HildonTouchSelector
- Inspired by GtkFontButton, GtkFileChooserButton, ...
- Finger-friendly replacement for GtkComboBox andGtkComboBoxEntry
HildonDateButton and HildonTimeButton

- Buttons for time and date selection
- Derived from HildonPickerButton
- Specialized HildonTouchSelector (HildonDateSelector and HildonTimeSelector)
Demo
HildonAppMenu

- Simple and finger-friendly menu for applications
- Replacement for the unsuitable Diablo menu
- Standard UI for data filtering/organization through "filters"
Demo
Other important improvements

- HildonBanner and HildonNote theming improved
- New progress indicator as window manager decoration
- Text entries with hints
- Action area in GtkTreeView
Development
Massive clean up and deprecation

- There were many (highly) specialized widgets from Chinook and before
- Decided to deprecate them
- Examples:
  - Code dialog
  - Password dialogs
  - Login dialog
  - HildonVolumebar deprecated in favor of GtkScale
Problems using standard GTK+ widgets

- Theming limitations (e.g. HildonCheckButton)
- Hard to make changes work with legacy applications:
  - Maemo 4 and earlier: designed for stylus
  - Fremantle: designed for fingers, that is, bigger widgets
  - If we supersize all old widgets we can break legacy applications layout
- New API and helper functions to provide Fremantle style widgets
Maemo GTK+

- Maemo GTK+ is a branch with changes specific to the platform
- We try to keep Maemo GTK+ maintainable and close to upstream, having only
  - stuff that is on its way to be accepted upstream
  - stuff that can only be achieved by modifying GTK+ widgets internally
- Other widget changes are implemented by subclassing GTK+ widgets in Hildon
Developing for Fremantle

- Fremantle apps: *quite* different from traditional GNOME apps
- Compiling a GNOME app for Fremantle and getting a Fremantle style is just impossible
- Extra effort and knowledge is necessary to achieve the Fremantle style (but it's worth it ;-) )
- Go to the "Hands on the new Hildon" tutorial tomorrow!
Things to do

- Make the toolkit more independent from hildon-desktop/maemo
- Analyze which widgets could be moved/adapted to GTK+
- Provide frequent releases for the community to play with
- Work in new and interesting widgets together with the maemo developers community
- Color picker? Font picker? Circular touch selector? (hint: we take patches)
Contributing

- Mailing list:
  https://garage.maemo.org/mailman/listinfo/hildon-devel
- Code:
  https://git.maemo.org/projects/hildon/gitweb?p=hildon
- Bugzilla:
  http://bugs.maemo.org
Questions?
Thank You