

# Hildon 2.2: new GTK+ widgets for mobile devices

Alberto Garcia

[agarcia@igalia.com](mailto:agarcia@igalia.com)

Claudio Saavedra

[cсаavedra@igalia.com](mailto:cсаavedra@igalia.com)





# Introduction

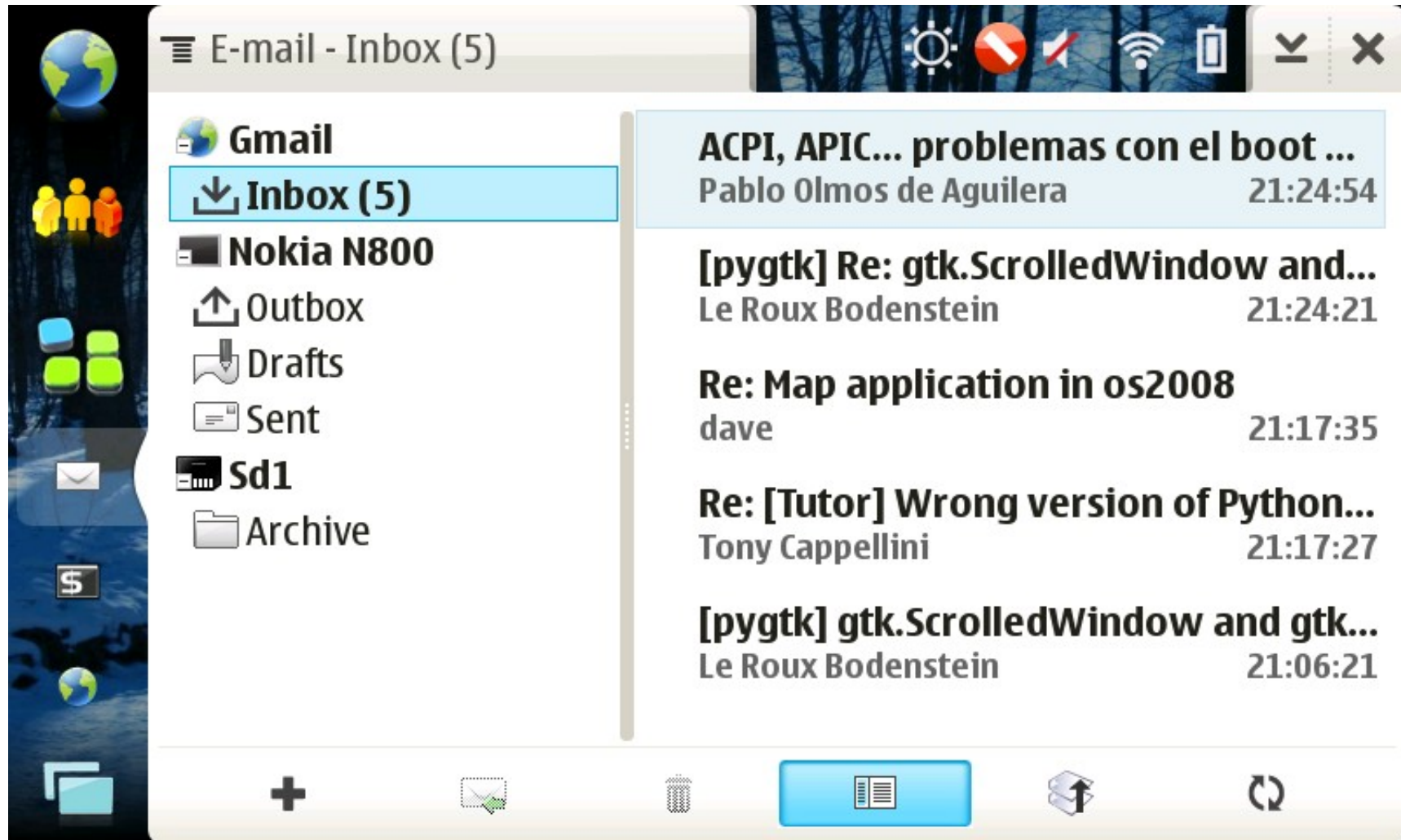
# Hildon widgets library

- 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

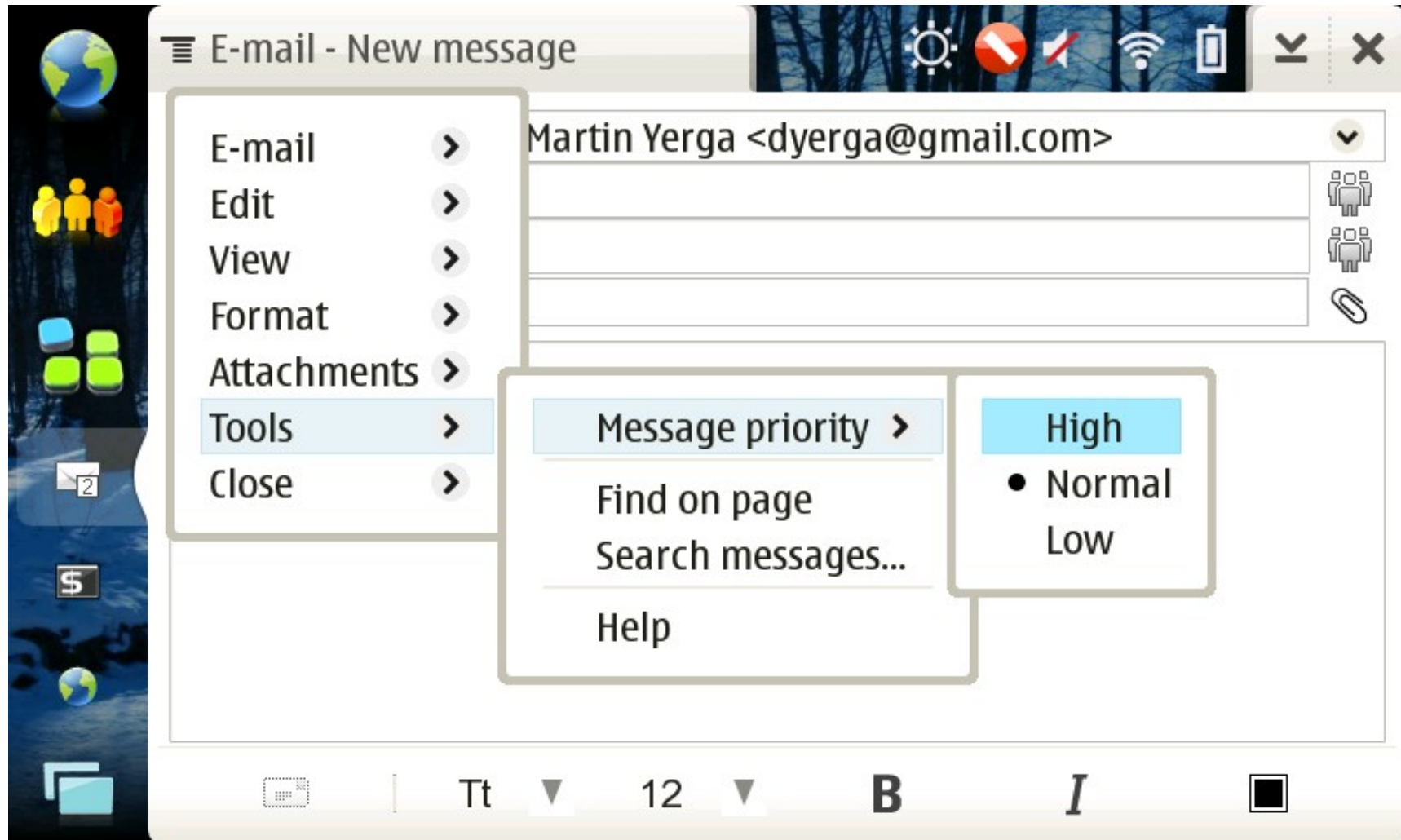
- Maemo release for the upcoming Nokia device
- Modern, usable and finger-friendly UI
- Completely revamped user interface, very different from all previous versions
- In beta stage currently

# Hildon 2.0: Modest



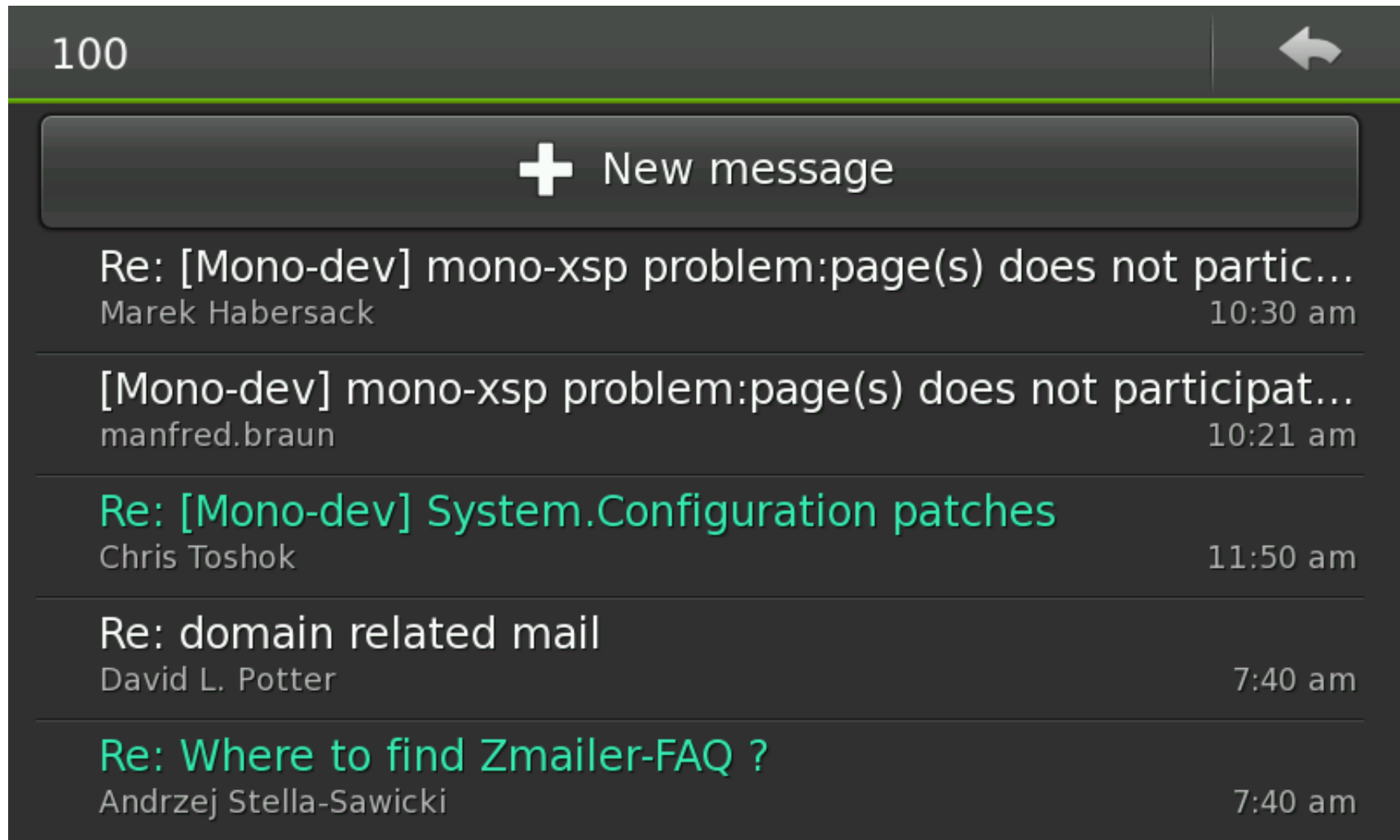
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# Hildon 2.0: Modest





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# Hildon 2.2: Modest



# Hildon 2.2: Modest

New message 

From: **Tinymail <tnytest@tinymail.org>** 

To:

Subject:

Tt ▼ 12 ▼ **B** *I*



# 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

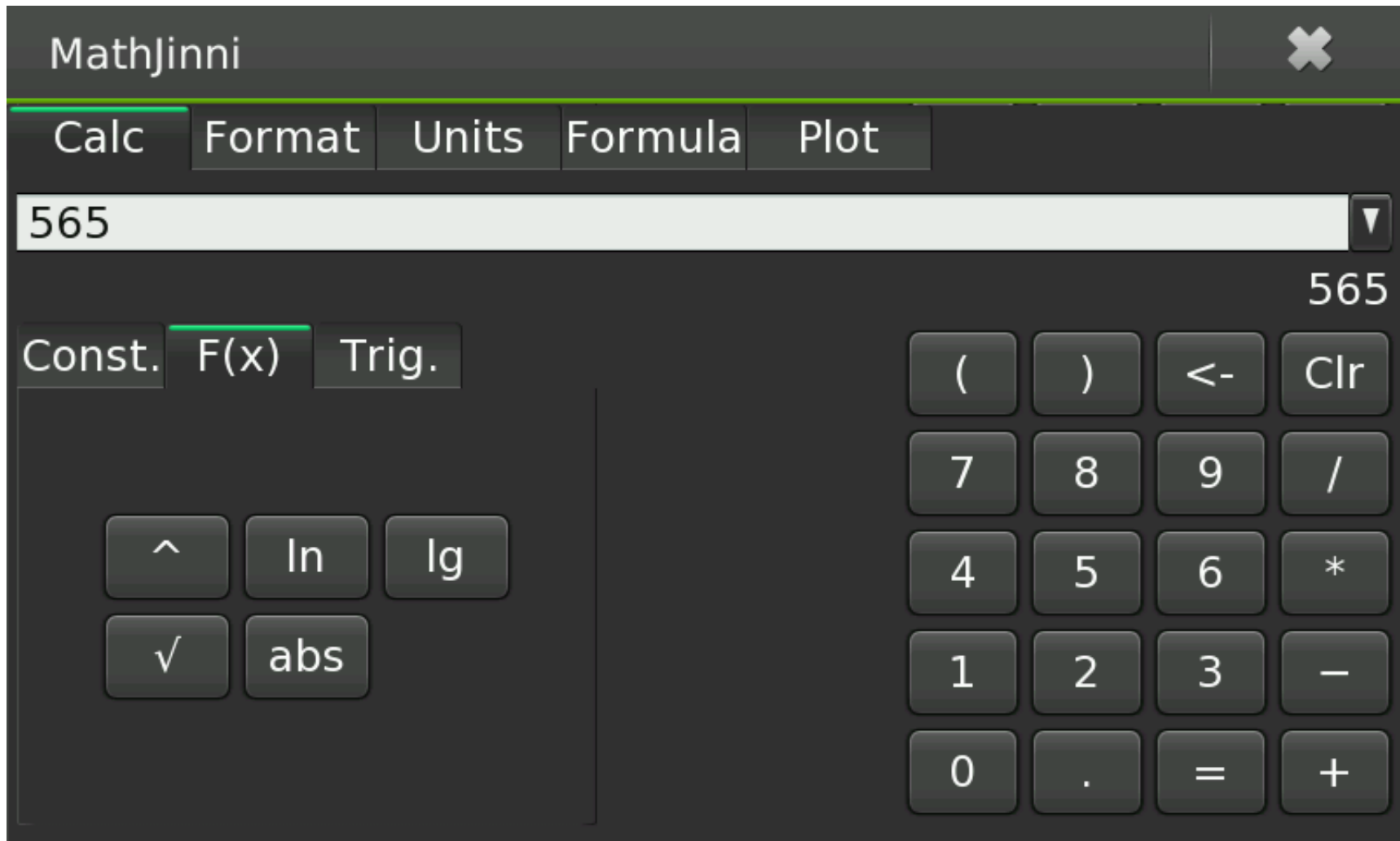
# Hildon 2.2: the Fremantle release

- 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



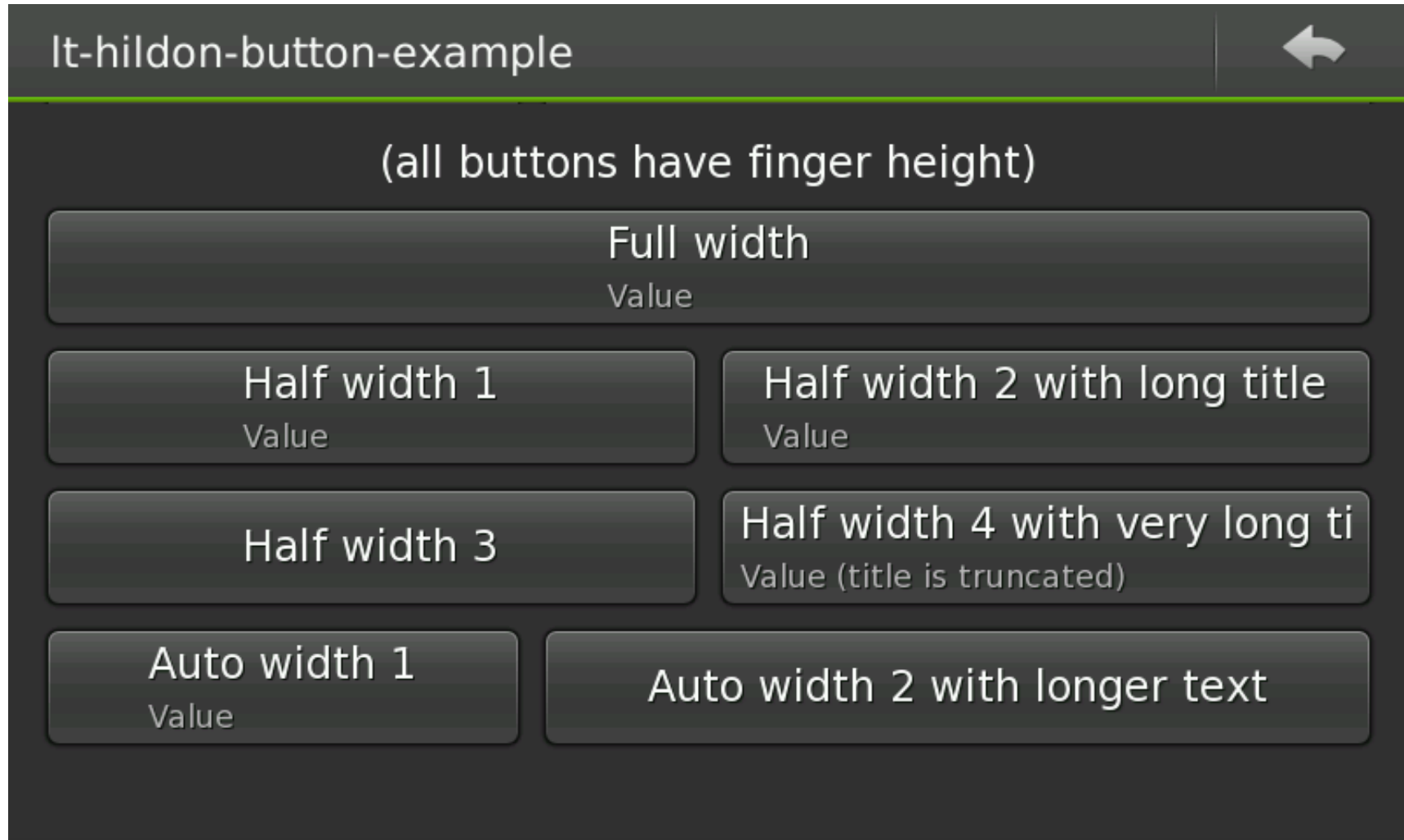
# New UI concepts

# 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`

# Demo

# HildonButton: title/value button





# 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 and GtkComboBoxEntry

# Demo

# 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