Inspiring rich and intuitive Internet experiences

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Cross platform via Gnome: Case Firefox (tm)

- Introducing my self, who am I?
- What am I talking about here?
- The Use Case story
- What's was available today
- Gaps identified
- The out come of all this
- Road Map
- Lessons learned
- Questions

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Who am I

- Sampo Nurmentaus, A Linux geek from Finland
- Msc. from Helsinki University of Technology
- Have been trying to learn embedded Linux for last 6 years
- Currently working for Movial, an end-to-end Linux and Usability solution provider

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What am I talking about here

- Have been working together with ARM Inc. to improve cross ARM architecture portability and Internet experience on mobile
- Requirement #1: Have a platform with as good **cross-platform portability** for applications as feasible
- Requirement #2: Provide a **"desktop-like" internet experience** using Firefox on top of that platform

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The Use Case story (1)

Terhi picks up up the device and notices that the battery is still almost full despite few days on stand-by mode.

She enters gmail.com URL to browser to read her emails.

The device pops up a note listing available WLANs and Terhi pics up the Hotel hot spot and enters the encryption key the receptionist kindly gave her...

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The Use Case story (2)

... After login in she gots an email with a link to a "supposed-to-be-funny" video clip on YouTube (tm).

She clicks the link and the another browser window pops up connecting to youtube.com and playing the video clip.

She smiles a little and suspend the device and sticks it into the pocket of her jeans.

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What was available today?

- The Gnome Mobile stack
  - Glib
  - GTK+
  - Gstreamer
  - X
  - HAL
  - Cairo
- Firefox Brower Engine
  - Gecko browser engine
  - EAL

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Gaps Identified (1)

- There was no mobile connectivity manager available

  – We "embedded" Gnome Network Manager for mobile all-ways-on connectivity

- Device state management

  – HAL was there, but required integration effort to run on top of Mobile processors

  – OHM is avery active project we adopted

- Gstreamer plugins

  – Multimedia is very hardware specific

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Gaps Identified (2)

- Some performance issues with Firefox

  – Suprice, suprice..

- Lack of definitions for a good browser experience

  – Our Usability team is working on this currently..

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The out come of all this..

Etc.

Mozilla Firefox Browser Engine

Platform independent applications

CORE: ARM GENERIC DEVELOPMENT

GStreamer	HAL	SCIM	Network Manager	GTK+/x

SoC SPECIFIC DEVELOPMENT

GStreamer Plug-Ins	Battery mngt	Input Method Integration	Network Manager Integration	Display Driver Integration

BOARD SUPPORT PACKAGE

Multimedia Codecs	Interfaces / Linux Kernel Events	Hardware Keys	Drivers for WLAN, Bluetooth, WiMax, etc.	Hardware Drivers

Road Map

- Further optimize the browser user experience

- 1st Open Source release

- Graphics acceleration study on different HW platforms

- Web Bases UI frameworks

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Case NOKIA

- Movial provided Nokia software development services

- Movial competence areas
  Linux technology research
  User experience design
  SDK and development tools (e.g. Scratchbox)
  Embedded Linux platform
  GTK+
  Application development

"MOVIAL has been a very important partner for many years in development process of our platform" says Valtteri Halla, Nokia Multimedia.

"MOVIAL not only deliveres superb quality software, but also within budget and schedule". "Furthermore, MOVIAL has proven to be a very committed and skilled partner and I would highly recommend MOVIAL".

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Case BMW Group
Live Media Communications solution integrated in BMW car environment

- MOVIAL provided BMW Group with expertise on:

  User experience design

  Device creation services

  Embedded Linux technology

  Application development

- Solution is based on Intel® Ultra Mobile PC (UMPC) Platform

"Using an open Intel® architecture-based platform Movial has been able to implement a solution that offers a seamless digital in-vehicle user experience," said Staci Palmer of Intel Corporation.

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