

Hybrid Desktop/Web applications with WebKitGTK+

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G N O M E

TM





What this talk is not about

Transformative effect of the
Web in apps

Facebook, Twitter, Google...

The Cloud

It's about...

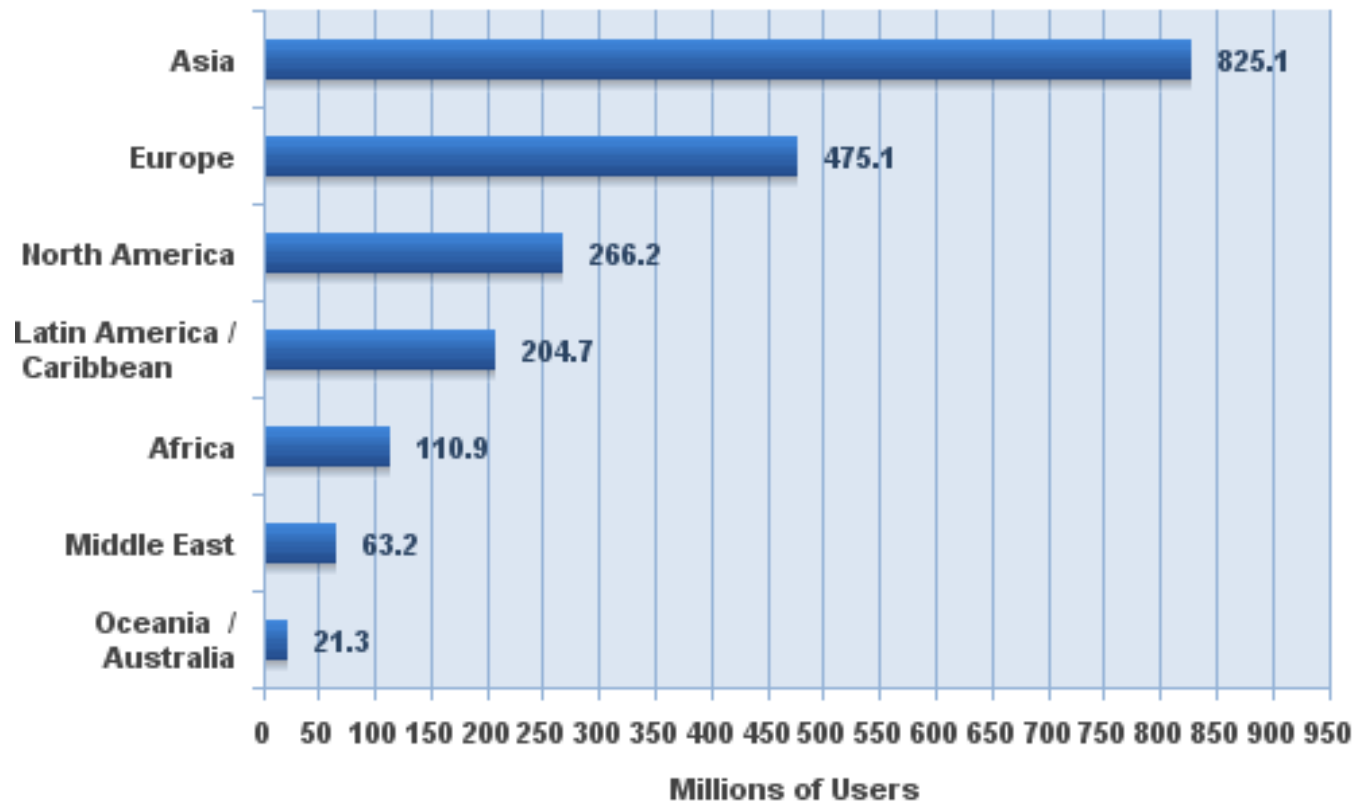
Web as a platform is winning

Why?

It's everywhere

Reach a massive audience

Internet Users in the World by Geographic Regions - 2010



Source: Internet World Stats - www.internetworldstats.com/stats.htm

Estimated Internet users are 1,966,514,816 on June 31, 2010

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Reasonable learning curve

If the trend continues...

The Web will be the dominant platform in the future

Not GNOME

You might say

Not very different from now

You'd be right!

We can try to do something
about it

Step 1

WebKit

WebKit + GNOME

WebKitGTK+

Use the platform

Native widgets

WebKitWebView

Browsers, IM clients, Email
clients, Help display, ...

Problem

No easy way to access and
modify web content

Step 2

DOM

JavaScript bindings

```
var e = document.getElementById("foo");  
    e.style.color = "red";
```

Actually...

“The DOM is designed to be used with any programming language. In order to provide a precise, language-independent specification to the DOM interfaces, we have chosen to define the specification in OMG IDL”

DOM Level 1 Specification

OMG IDL!



Object Management Group Interface Definition Language

```
module core {

  interface [
    CustomToJS,
    GenerateNativeConverter,
    CustomMarkFunction,
    InlineGetOwnPropertySlot
  ] Document : Node {

    // DOM Level 1 Core
    readonly attribute DocumentType doctype;
    readonly attribute [V8Custom] DOMImplementation implementation;
    readonly attribute Element documentElement;

    [ReturnsNew] Element createElement(in [ConvertNullToNullString] DOMString tagName)
      raises (DOMException);
    DocumentFragment createDocumentFragment();
    [ReturnsNew] Text createTextNode(in DOMString data);
    [ReturnsNew] Comment createComment(in DOMString data);
    [ReturnsNew] CDATASection createCDATASection(in DOMString data)
      raises (DOMException);
    [OldStyleObjC, ReturnsNew] ProcessingInstruction createProcessingInstruction(in DOMString target,
      in DOMString data)
      raises (DOMException);
    [ReturnsNew] Attr createAttribute(in DOMString name)
      raises (DOMException);
    [ReturnsNew] EntityReference createEntityReference(in DOMString name)
      raises (DOMException);
    NodeList getElementsByTagName(in DOMString tagname);

    // Introduced in DOM Level 2:

    [OldStyleObjC, ReturnsNew] Node importNode(in Node importedNode,
      in boolean deep)
      raises (DOMException);
    [OldStyleObjC, ReturnsNew] Element createElementNS(in [ConvertNullToNullString] DOMString namespaceURI,
      in [ConvertNullToNullString] DOMString qualifiedName)
      raises (DOMException);
    [OldStyleObjC, ReturnsNew] Attr createAttributeNS(in [ConvertNullToNullString] DOMString namespaceURI,
      in [ConvertNullToNullString] DOMString qualifiedName)
      raises (DOMException);
  }
}

--:---Document.idl 6% L31 (IDL/l ICY)----13:52 0.19-----
```

Access the DOM from
Gobject/C (and other
languages)

DEMO

Work in progress

Unstable releases already
available with GObject DOM
bindings (since 1.3.0)

Next stable release 1.4.0
(around March next year with
GNOME 3.0)

Join us!

#webkit & #webkit-gtk at

Freenode IRC

webkit.org and webkitgtk.org

That's it!