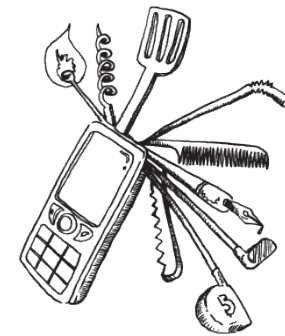# Tools for Mobile Web
Eclipse Day 2010
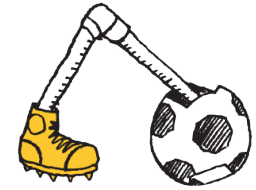
Paul Beusterien

Symbian Foundation

August 26, 2010
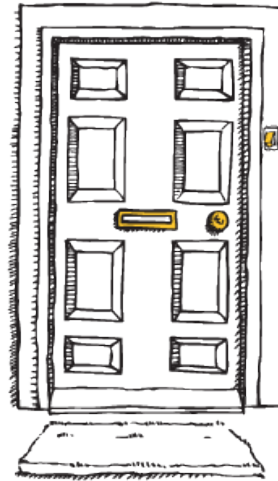
Tools for Mobile Web Agenda

❑ Why TMW?

❑ What does TMW do?

❑ How is TMW made?

❑ Demo

❑ Future Directions

Web Development Trends

- There are an order or two of magnitude more web developers (using JavaScript, HTML and CSS) than C++ developers

- Increasingly more powerful and complex Web applications :
  - JavaScript evolution
    - More powerful (and complex) libraries : JQuery, YUI, Dojo, etc.
    - More robust with tools like jslint

  - HTML5
    - Offline storage, canvas, media, etc.

Mobile Development and cross-platform

❑ Major mobile platforms creating differentiated programming environments – Objective C, Java, C++, etc.

❑ Tension between device creators and developers
  ❑ Walled gardens versus standards

  ❑ But - all platforms are using WebKit and moving to HTML5

❑ Web is likely to be the first place where cross-platform application development emerges

❑ Convergence – mobile, web, desktop
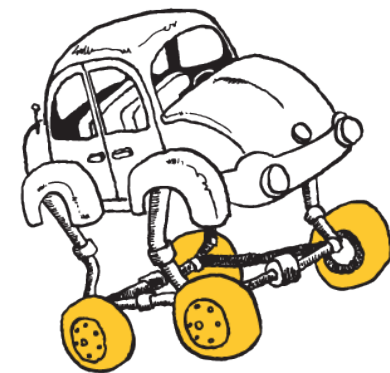 ❑ Advertising, analytics, payments easiest
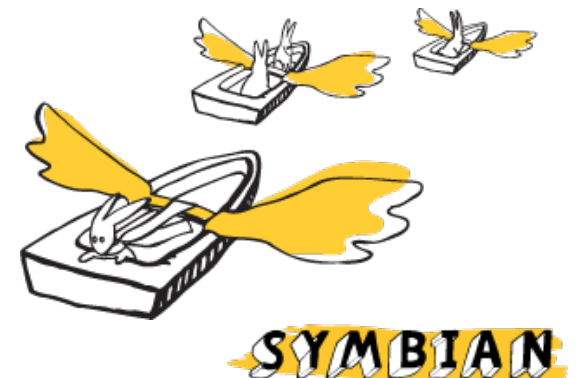
Mobile Web Development Challenges

- Accessing mobile features
  - Geo Location
  - Vibration
  - Accelerometer
  - Contacts
  - SMS
  - Telephony

- Deployment

- Distribution

- Security

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Tools for Mobile Web Feature Summary

- Address the needs for:
    - Scaling web apps
    - Particular requirements of mobile device programming
    - Accessibility and usability
    - Open source solution

- Enable Web programmers to create mobile apps

- Access to sensor/device capabilities

- Streamlined Eclipse-based tooling

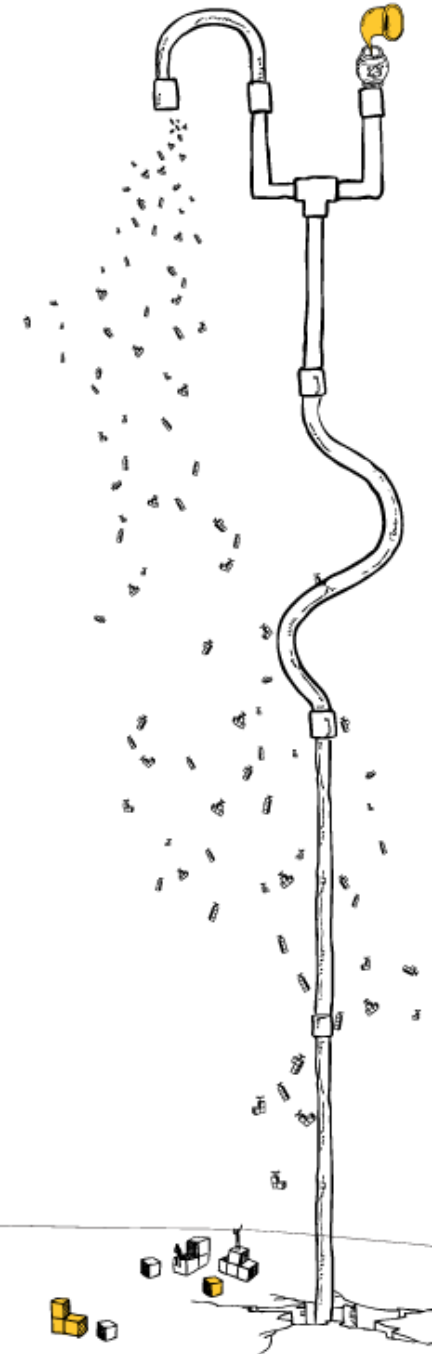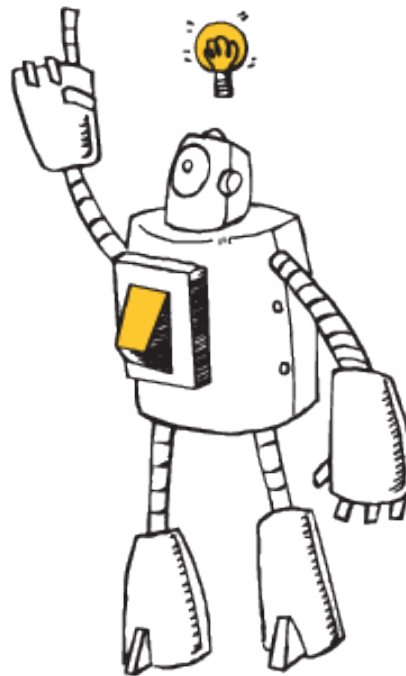- Provide common grounds for cooperation and innovation

Tools for Mobile Web

- Eclipse project to provide tools for web developers creating applications for mobile devices

- Initial contributors from Symbian Foundation and Aplix (BONDI SDK)

- Feedback and interest from SonyEricsson, IBM, RIMM, Nokia and Nitobi

- Enable differentiation on runtimes or mobile devices versus putting resources on copying others inadequate tools
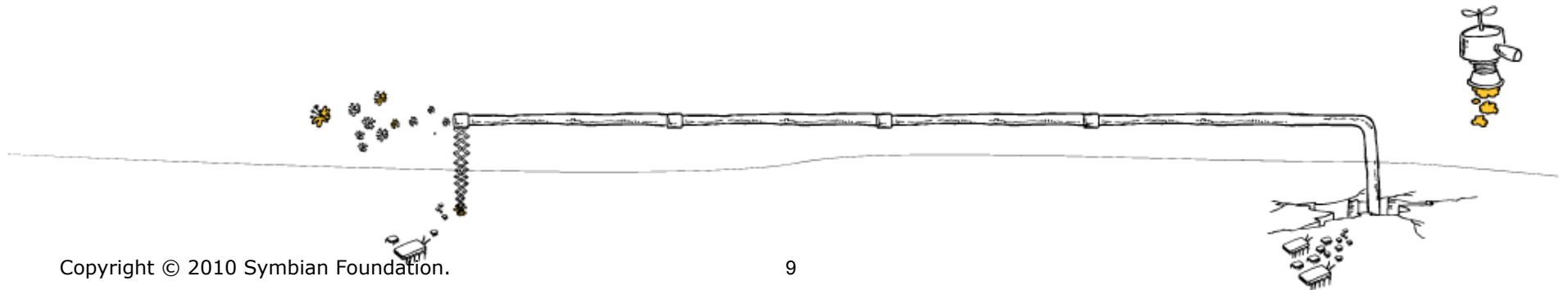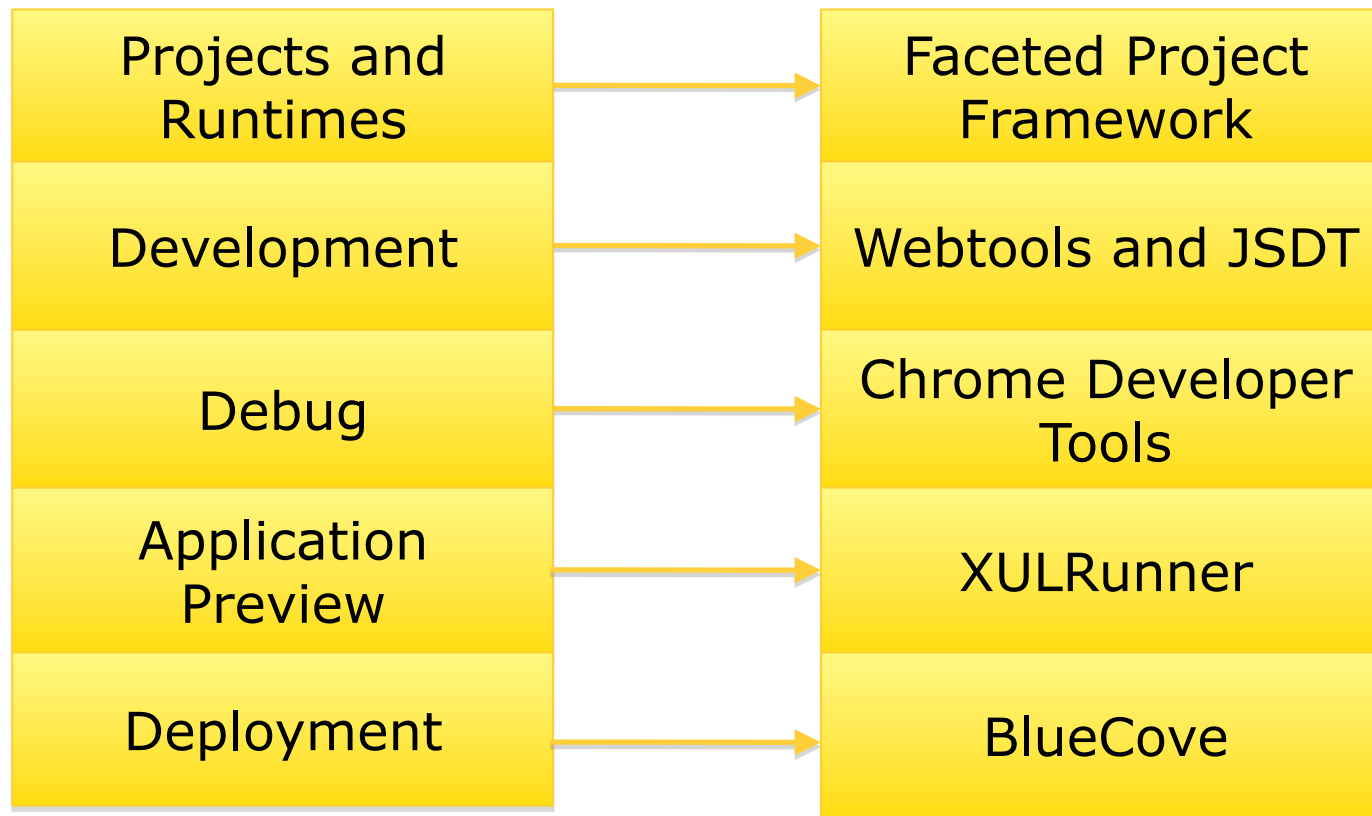
- See http://www.eclipse.org/proposals/tmw/

Tools for Mobile Web Components

❑ A fully integrated experience to create Mobile Web **Applications**

    ❑ Project management

    ❑ Source editing

    ❑ Library support

        ❑ WRTKit

        ❑ PhoneGap

    ❑ Previewing
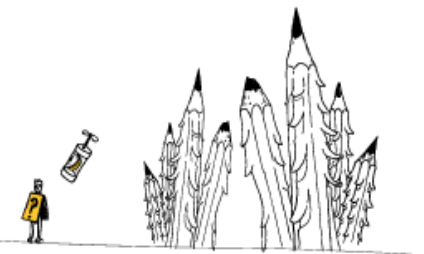
    ❑ Debugging

    ❑ Packaging

    ❑ Deployment

Tools for Mobile Web Components

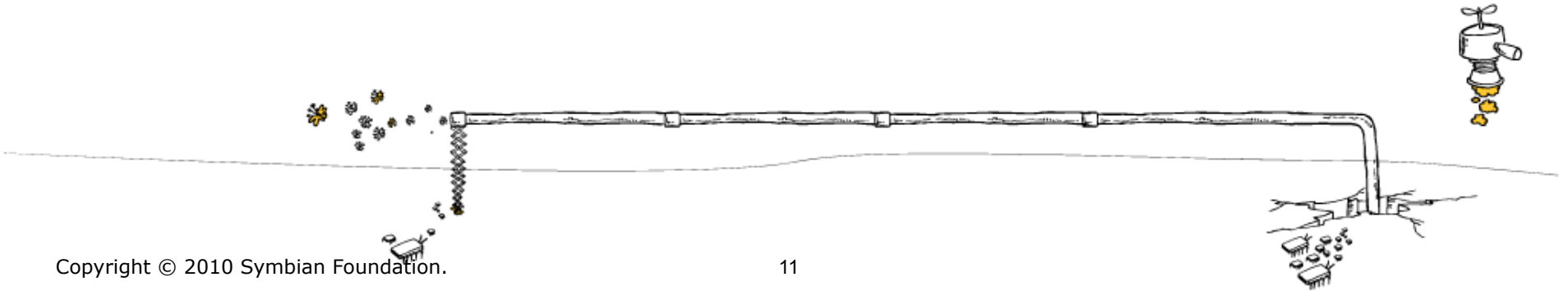|	
Projects and Runtimes	→	Faceted Project Framework
Development	→	Webtools and JSDT
Debug	→	Chrome Developer Tools
Application Preview	→	XULRunner
Deployment	→	BlueCove

Based on Eclipse Platform

- Unified project model fosters cross-IDE interoperability and community development

- Extends and leverages existing Eclipse projects
  - Eclipse UI for consistent user experience
  - Web Tools project as a basis for source editing support
  - JSDT editors with extensions for mobile API support

- **BUT, streamlined and focused on mobile web development!**

Chrome Debugger Protocol

❑ From http://code.google.com/p/chromedevtools/

❑ Will be in every WebKit-based browser (desktop or mobile)

❑ Becoming De-facto standard for cross-device debugging

    ❑ BONDI

    ❑ Nokia

    ❑ No browser plug-in needed

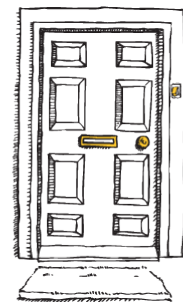   ❑ No native code needed for IDE support

Demo

Web Tools Future Directions

❏ On-device debugging

❏ More standardized web runtime API support
   ❏ BONDI
   ❏ JIL

❏ Grow the community
   ❏ More runtimes
   ❏ More web libraries like jQuery (with jQTouch), YUI, XUI
   ❏ More plug-ins

❏ Continue to lower the barrier to entry

❏ **Join us!**
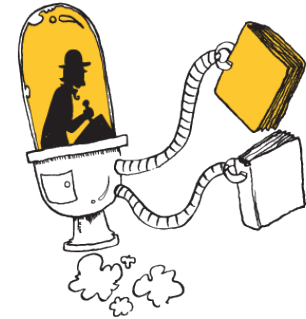
Tools for Mobile Web Useful Links

- Download from http://builds.symbian.org/sf_builds/wrt_ide/
- http://www.phonegap.com
- TMW proposal at http://www.eclipse.org/proposals/tmw/
- Sources at http://developer.symbian.org/main/source/packages/package/index.php?pk=263
- Paul's blog is at http://paulbsymbian.wordpress.com/
- Eugene's blog at http://eclipseblog.ostroukhovs.com/
- Follow me on twitter at paulbeusterien
- Email paulb@symbian.org

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Back-Up Slides

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Open-Source Stack

Eclipse Platform		Chromium	XULRunner
Webtools	Chrome Developer Tools		
Tools for Mobile Web			
Symbian WRT IDE	Symbian CWRT IDE	Bondi IDE	Another IDE

PhoneGap Integration

- Project template and code snippets for smoother learning curve
- Simulator with PhoneGap events support
- PhoneGap-aware JavaScript editor
- Package and deploy PhoneGap application to mobile device