

BlackBerry 10

Enterprise Grade Development

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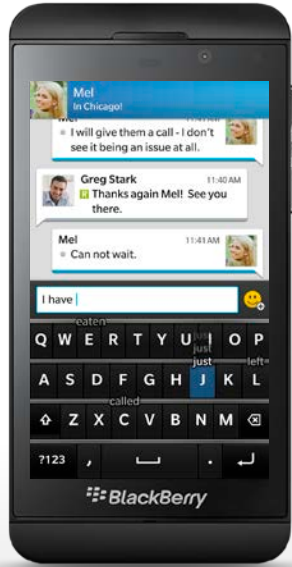
Agenda

- BlackBerry Z10 Overview
- BlackBerry Architecture
- BlackBerry Development
 - Overview of Options
 - APIs
 - Porting Paths
- Resources



BlackBerry Z10

End to end
Performance



16GB Internal Storage
4.2" Touch Display
8MP Rear Camera
Dual Core 1.5 GHz

BlackBerry®
Hub



“Always one thumb
swipe away”

BlackBerry®
Keyboard



“Flick Typing”

BBM™ Video with
Screen Share



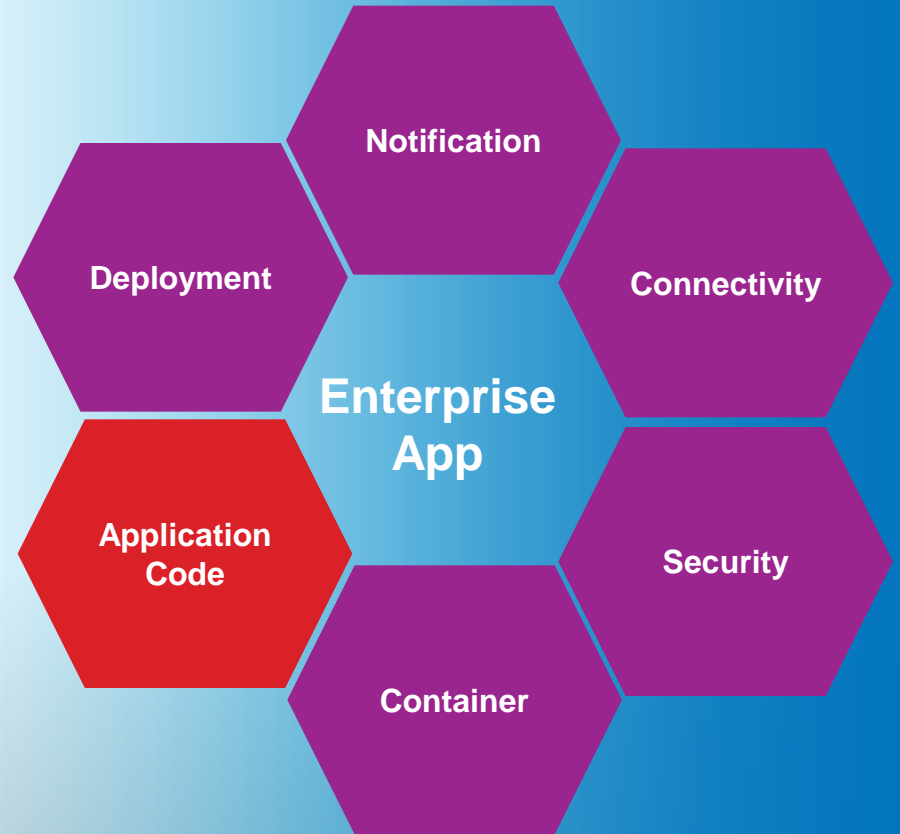
“Share anything
in an instant”

BlackBerry Architecture

For Developers

BlackBerry Enterprise Platform Services

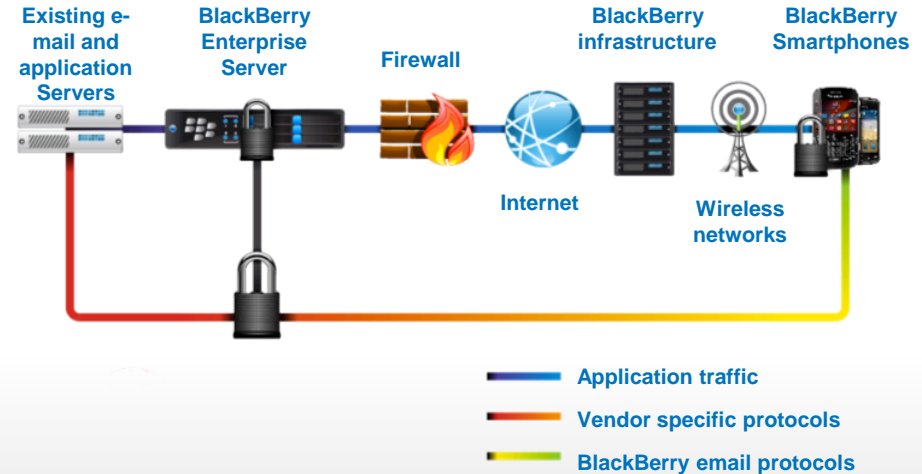
- Building an Enterprise App is more than just application logic
- BlackBerry provides infrastructure to support the enterprise
- Security is built in from the ground up not bolted onto the platform
- Create secure reliable enterprise application



BlackBerry Secure Infrastructure

Delivering simplicity and security

- Secure connectivity to back-end services and corporate applications without the requirement and associated expenses of separate VPN service
- Secure end-to-end encryption and only one outbound initiated connection through the firewall
- FIPS 140-2 Validated, Government and Enterprise Trusted



BlackBerry Balance

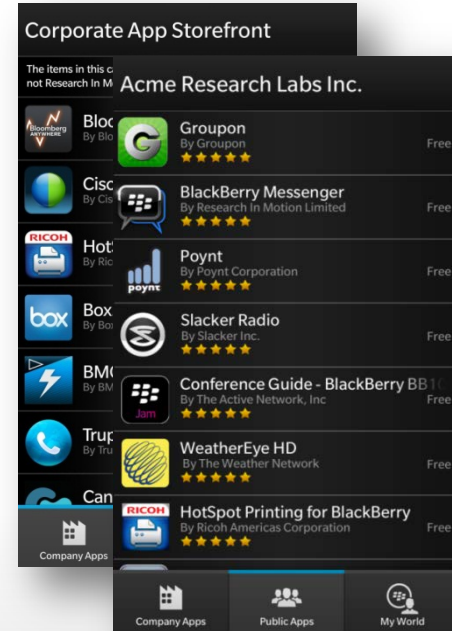
Trusted BlackBerry security simplified

- Like a virtual firewall around your corporate apps on the BlackBerry Device
- Secures corporate data without restricting a user's personal experience
- Corporate Data-only Wipe
- Block copy/paste from work to personal
- Control work data and file access for Apps
- Block forwarding of corporate email/meetings via personal channels



BlackBerry World For Work

- Only accessible from the “Work” perimeter
- Provides end user access to company sanctioned optional applications
- Differentiates BlackBerry World hosted content from BlackBerry Enterprise Service 10 hosted content
- Once installed, applications will appear in ‘Work’ perimeter and will be available in My World for application management



BlackBerry Development

BlackBerry 10

Development Options

BlackBerry Promotes Choice!

HTML



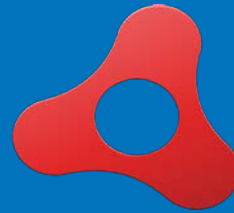
HTML5 BlackBerry®
WebWorks™



C/C++
Native SDK



C++/Qt
Cascades



ActionScript
Adobe® AIR®



Java
Android™
Runtime

BlackBerry Messenger Social Platform (BBMSP)

- Add **social interaction**
- Gain access to BlackBerry Messenger (BBM) contact lists and user profiles
- Initiate BBM chats from within your application
- Share content from within your application



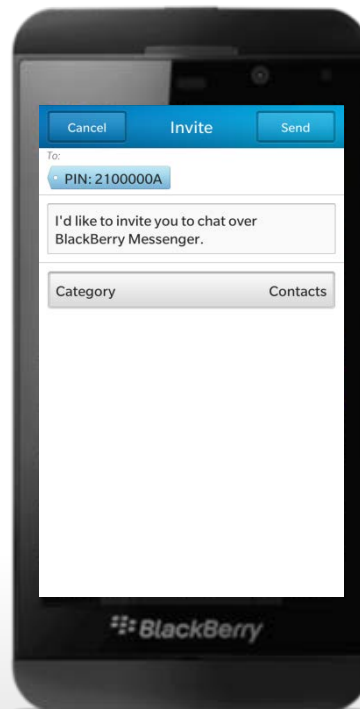
BlackBerry Messenger Social Platform (BBMSP)

Invite BBM contacts to chat through your app

```
//Invoke a chat programmatically
blackberry.invoke.invoke({
    action: 'bb.action.BBMCHAT',
    uri: 'pin:' + pin
});
```

Update BBM profile pic with few lines of code

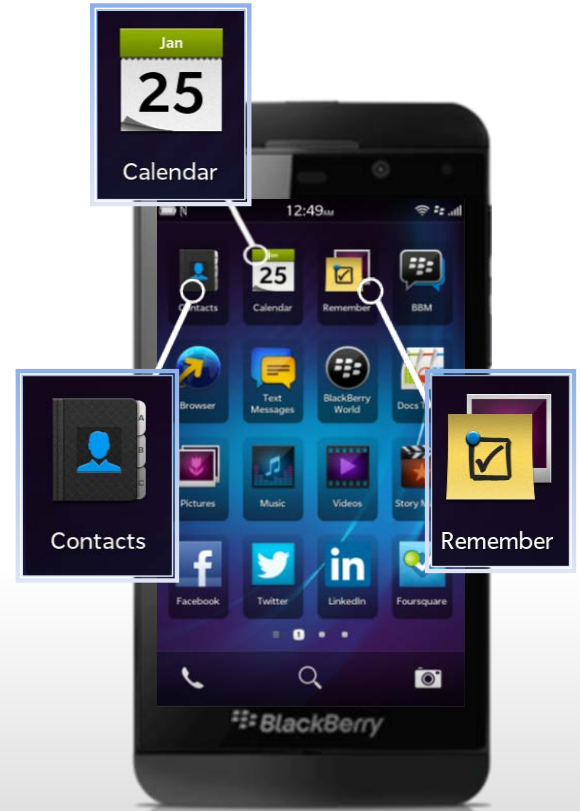
```
//Invokes the avatar selector on the specified local
image
setAvatarLocal: function () {
    blackberry.invoke.invoke({
        target: 'sys.bbm.imagehandler',
        action: 'bb.action.SET',
        uri: 'local:///img/avatar.png'
    });
}
```



Personal Information Management (PIM)

Ability to add, modify, and delete information that's specific to a particular user

- Calendar entries
 - Create new events (appointments/meetings)
 - Finding and return existing events
- Contacts
 - Create new contacts
 - Finding and return existing contacts
- Memos
 - Create new memos
 - Finding and return existing memos
- Tasks
 - Create new tasks
 - Finding and return existing tasks



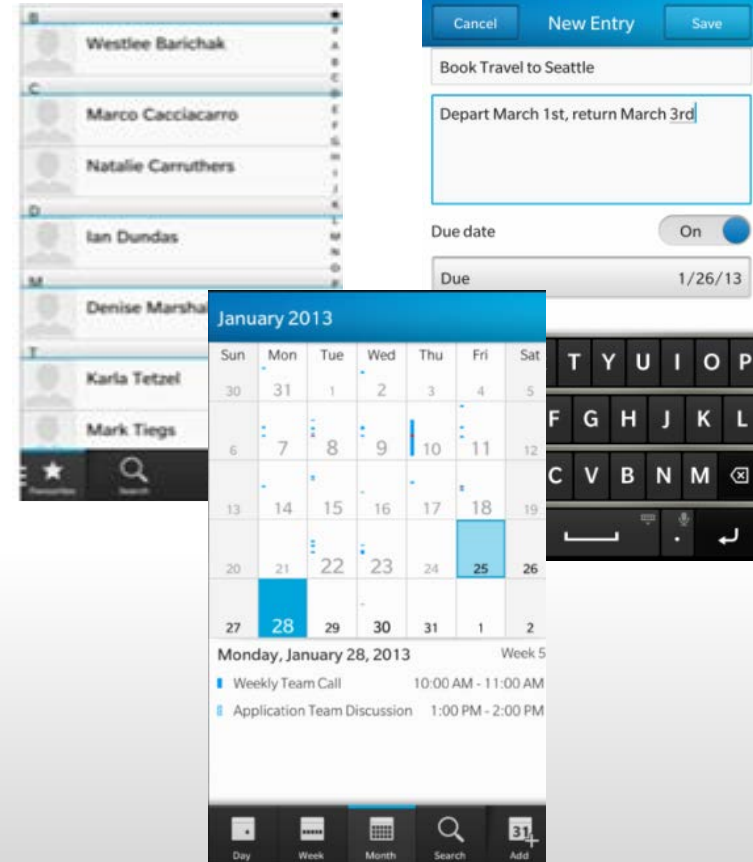
Personal Information Management (PIM)

Create a calendar event

```
//Creates a basic calendar event with passed in parms
function createCalEvent(summary, location) {
  evt = calendar.createEvent({
    "summary": summary,
    "location": location,
    "start": new Date("Jan 01, 2015, 12:00"),
    "end": new Date("Jan 01, 2015, 12:30"),
    timezone "timezone": "America/New_York"
  });
  evt.save(onSaveSuccess, onSaveError);
}
```

Create a simple memo

```
//Create a basic memo
var memo = new blackberry.pim.Memo();
memo.title = "Call Help Desk";
memo.note = "Make request for new laptop";
memo.save();
```



Data Storage (BlackBerry WebWorks)

- **Database:** Lightweight relational database on the BlackBerry device. SQLite queries are used to retrieve, add, modify, and delete data
 - The browser creates a database for an application in a domain-specific subfolder on the device
- **Session and Local Storage:** data stored in a collection of key/value pairs
 - sessionStorage - Data stored only for the duration of the current session. Once the session is closed the storage object and the data it contains is deleted
 - localStorage – Data persists across sessions



Data Storage WebWorks Sample

localStorage.setItem (key: String, value: Object)

```
// adding data with key of "cityName" and value of "Toronto"  
localStorage.setItem("cityName", "Toronto");
```

localStorage.getItem (key: String)

```
// retrieve data from storage key of "cityName"  
var cityName=localStorage.getItem("cityName");
```

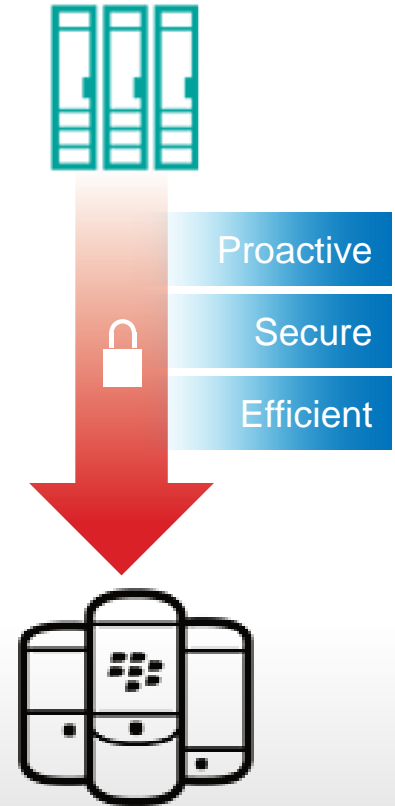
localStorage.removeItem (key: String)

```
// removing data from storage with key name of "cityName"  
localStorage.removeItem("cityName");
```

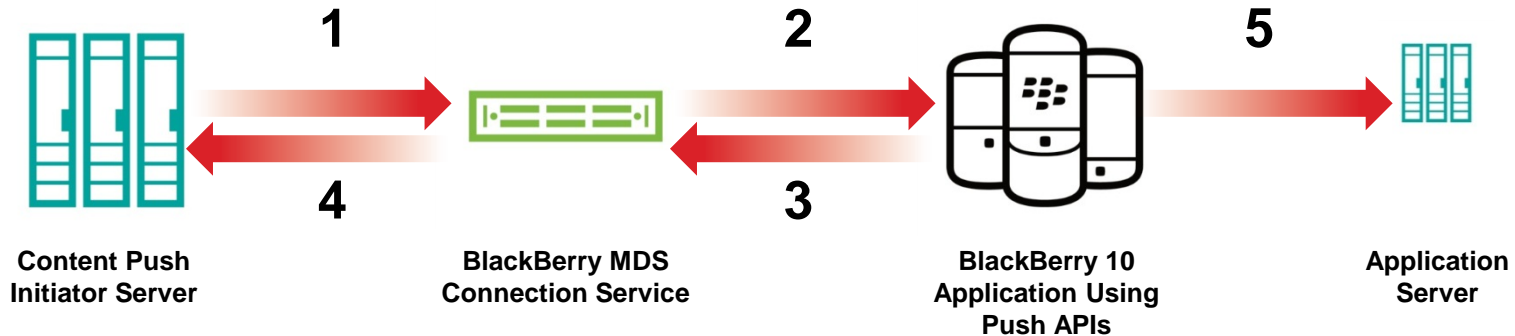


BlackBerry Push

- You can use the Push Service to develop a push-enabled application that runs on a BlackBerry device, and that receives push messages from a Push Initiator.
- Push Initiator can deliver up to 8 KB of content (images, text, or audio) through the BlackBerry Enterprise Service 10.
- Larger than 8KB – Poke and Pull
- The content is available to all users on their devices without waiting for downloads.



Push Architecture Diagram



1. Push Initiator sends push request (address using email address, device PIN or Group)
2. MDS-CS pushes data to BlackBerry 10 device(s). If user has multiple devices, push sent to each device
3. A response is returned to MDS-CS
4. Acknowledgment forwarded to Push Initiator. Push status is communicated via acknowledgement
5. If push is over 8K, a poke and pull model is recommended. Device application to download remaining content from provided URL

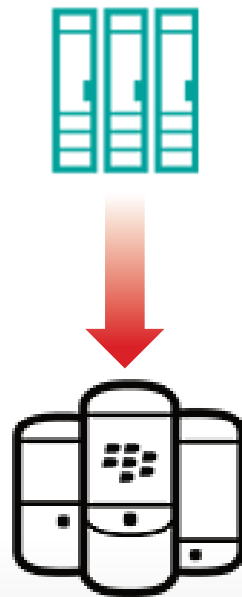
Developing Push Enabled Apps

Requirements:

- Server Side Push Initiator (Simple HTTP Post)
- Client that is registered with Push Service on device

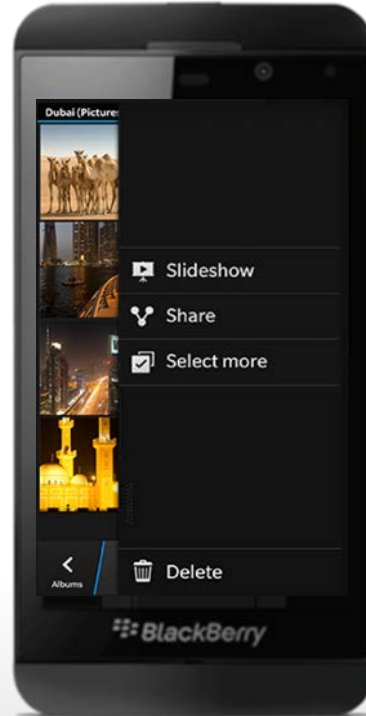
```
//Creates an http post to the MDS-CS push service
xmlhttp.open("POST", "http://" + bes + ":" + mdsPort + "/push?DESTINATION=" + email +
"&PORT=" + appPort + "&REQUESTURI=/", true);
xmlhttp.onreadystatechange=function() {
    if (xmlhttp.readyState==4) {
        document.getElementById("result").innerHTML = "Success";
    }
}

xmlhttp.setRequestHeader("Content-Type", "text/plain");
xmlhttp.send(content);
```

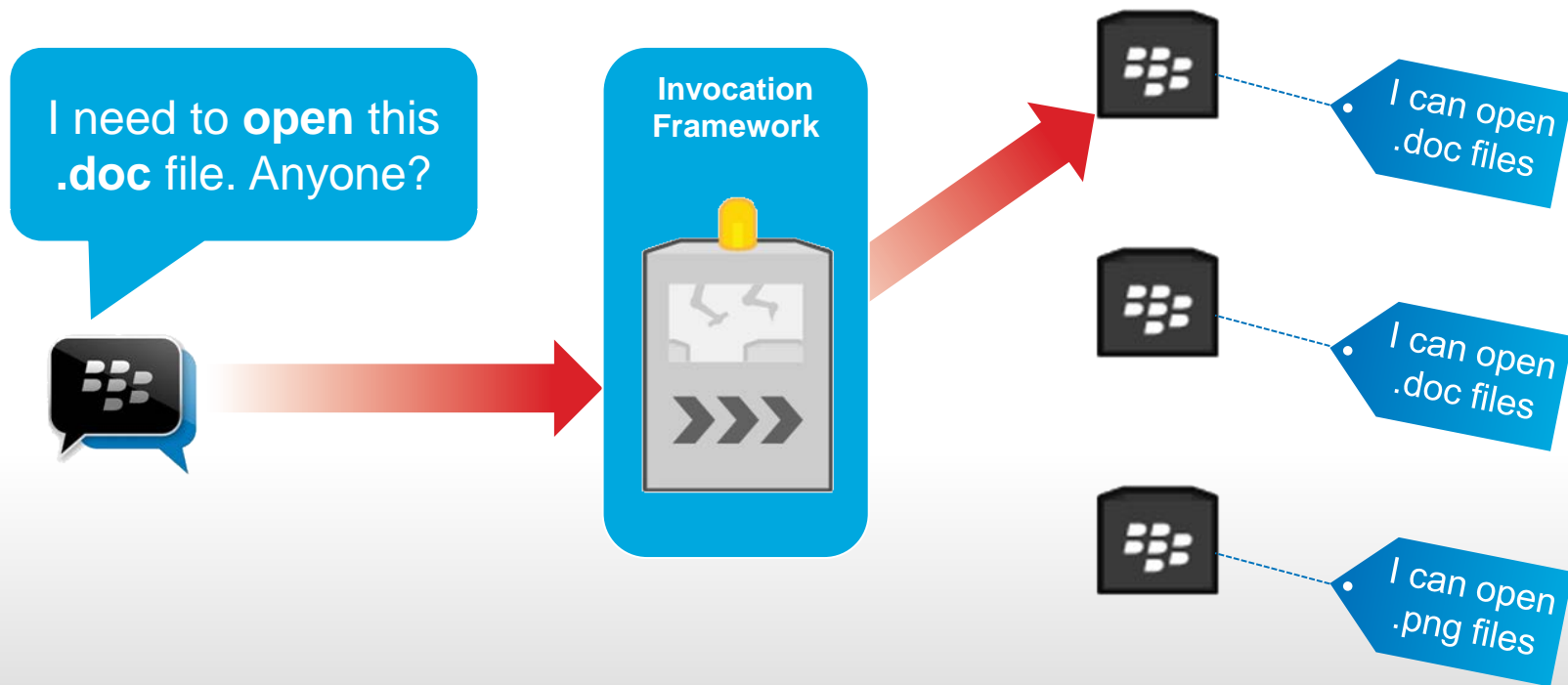


Invocation Framework

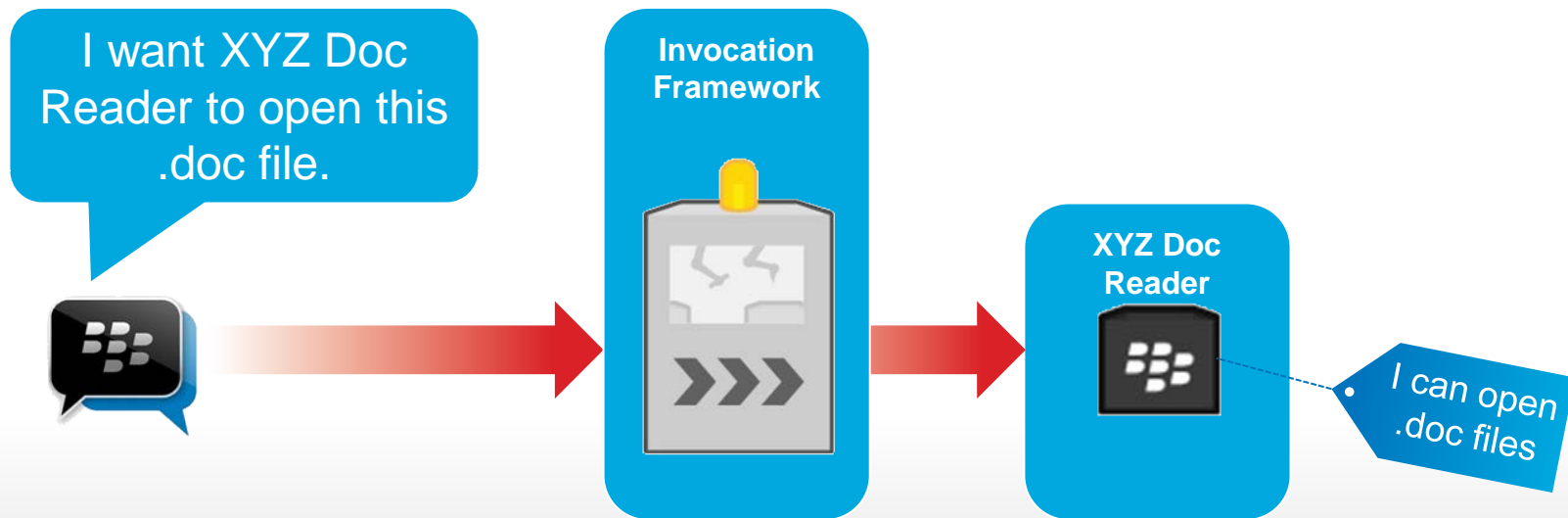
- The ability to invoke other applications (custom, core)
- The ability to have your application invoked
- A key component of Push
- Unbound Invocation
- Bound Invocation



Unbound Invocation



Bound Invocation



Porting Existing Apps Strategy Overview

BlackBerry OS

Mobilizing the Enterprise for YEARS!

- Developed with BlackBerry Java
- Tightly coupled application tiers
- No “Java to BlackBerry 10 Converter”

Strategies:

- The HTML5 Recipe
- Native leveraging cascades



Porting

Verb

7.Computers. to create a new version of (an application program) to run on a different hardware platform.

- Dictionary.com 2012

Why?

- Easier to port
- More code reuse across projects
- Easily identify platform dependent code

How?

- Avoid platform dependent functionality
- Use cross-platform libraries, frameworks or engines
- Isolate platform dependent code

Port in Action

Decouple the Application

User Interface

Business Logic

Device Integration

Web

Native

Leverage Web UI Framework

BlackBerry Cascades UI

Java Methods to JavaScript Functions

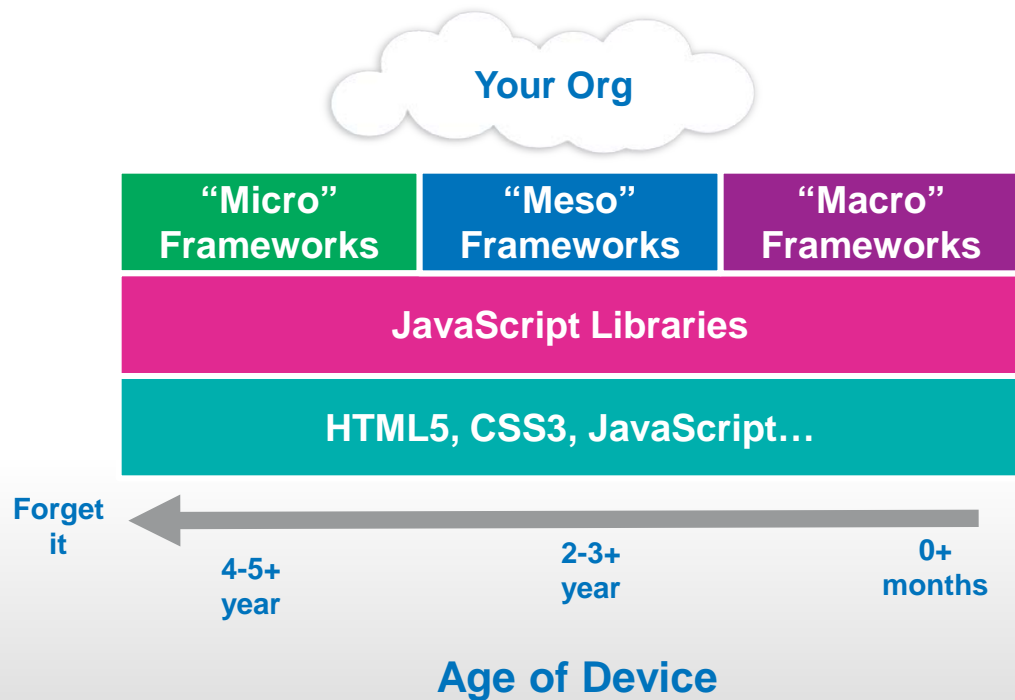
BlackBerry or Open-Source Libraries

BlackBerry WebWorks or Hybrid Container

BlackBerry 10 Core

The HTML5 Recipe

To create repeatable cross-platform:



Build towards Standards:

WebKit, HTML5, CSS3 + JavaScript

Frameworks:

Don't re-invent the wheel
 Research frameworks
(Macro) *jQuery, Sencha*
(Meso) *bbUI, Ember*
(Micro) *ZeptoJS, jQmobi*

JavaScript Libraries:

(External) Animations, Look and Feel, + Code

AliceJS, bbuiJS, ZeptoJS

BlackBerry 10 Resources

Bring Your Applications and Libraries

Porting Applications from the BlackBerry PlayBook

- http://developer.blackberry.com/native/documentation/bb10/porting_from_playbook.html

Porting Applications from iOS

- http://developer.blackberry.com/native/documentation/bb10/porting_ios_intro.html

Porting Applications from Android

- http://developer.blackberry.com/native/documentation/bb10/porting_from_android_ndk.html

Porting Applications from QT

- http://developer.blackberry.com/native/documentation/bb10/porting_qt_apps.html

Resources

BlackBerry Dev Resources Developer Sites

The collage features three main developer resource pages:

- Cascades SDK for BlackBerry 10 BETA:** A page with a navigation bar (Downloads, Sample apps, Documentation, API Reference) and a central graphic that says "Try out the new BlackBerry 10 framework for building astonishing UIs." Below the graphic are four icons: Download, Get Started, Get Inspired, and Publish (coming soon).
- HTML5 WebWorks:** A page with a navigation bar (Downloads, Sample apps, Documentation) and a sidebar menu listing categories like Advertising, BBM, Cache, Data Storage, Device Motion, GPS, Identity, Invoke, and IO.
- BlackBerry Support Community:** A forum page titled "Welcome" with a "Getting Started" link and a "Community Corner" link. It includes a "New Message" section with a table of forum posts and a "Top Liked Authors" list.

Subject	Replies	Author	Likes	Views	Last Post
Dev-centric video channel: let us know what you see...	0	malib	0	42	a week ago by malib
Developers Start here!	7	MSBain	0	39	Monday by jared32
Join us for the BlackBerry 10 Jam World Tour!	0	MSBain	0	13	yesterday by MSBain
Couple of questions coming from "june" GM, and Sym...	11	cornysat	0	136	8 hours ago by gerry
Using a soap webservice	2	simon_hain	0	68	12 hours ago by mpsuite
Using QPrinter on OS/10	0	jamejulus	0	23	17 hours ago by jamejulus

Author	Count
peter947	4
johnsonm	2
WarlockP	2
laurenic	2
simon_hain	1

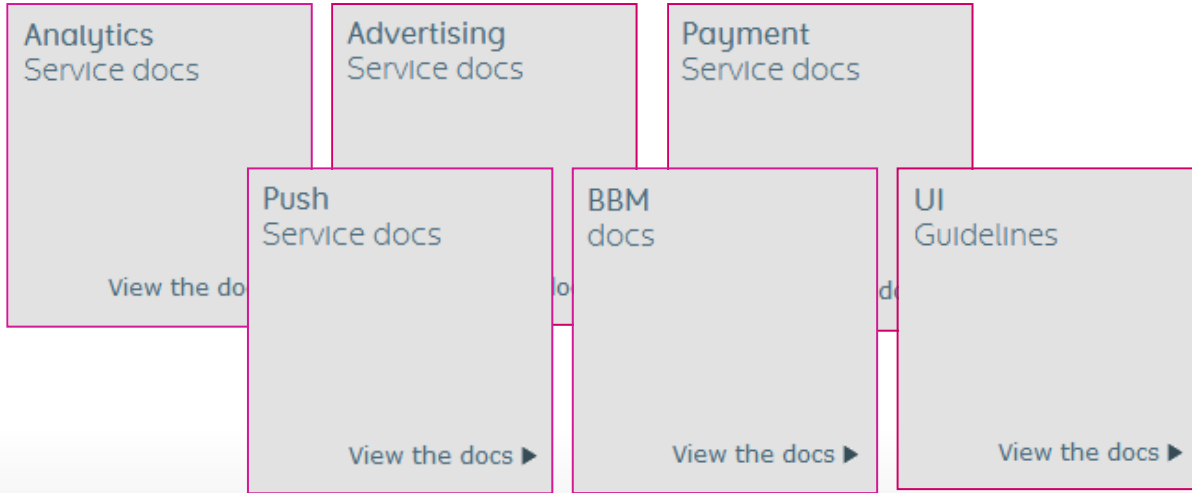
<https://developer.blackberry.com/>

API References

The image displays three overlapping screenshots of the BlackBerry developer website's API reference sections:

- BlackBerry Native SDK:** Shows a navigation menu with 'Downloads', 'Sample apps', and 'Documentation'. A sidebar lists various libraries such as 'BlackBerry Platform Services Library', 'Audio Library', and 'BBM Social Platform Library'. The main content area is titled 'API Reference' and includes a search bar and a 'Platform BlackBerry 10' dropdown.
- Cascades™ for BlackBerry 10:** Features a navigation menu with 'Downloads', 'Sample apps', 'Documentation', and 'API Reference'. It includes a search bar and a 'Show only Qt' filter. The main content area is titled 'API Reference' and contains a list of API categories like 'QtConnectivity', 'QtCore', and 'QtLocationSubset'.
- HTML5 WebWorks:** Shows a navigation menu with 'Downloads', 'Sample apps', 'Documentation', and 'API Reference'. It includes a search bar and a 'API Reference - Topics' section. The main content area is titled 'API Reference - Topics' and lists various topics such as 'Advertising', 'BBM', and 'Cache'.

BlackBerry Dev Resources Developer Documentation



- Docs for everything
- Best Practices and Guidelines
- Easy to navigate for each technology

<http://docs.blackberry.com/en/developers>

Join The Community!

WebKit

Ripple

BlackBerry WebWorks

Samples

Community API extensions


Toolkits (Alice.js, bbUI.js)

<http://blackberry.github.com>

github

Search or Type a Command

Explore Gist Blog Help

 **blackberry** (Open Source Projects)

URL <http://blackberry.github.com>

Member Since Sep 21, 2010

64
Public Repos



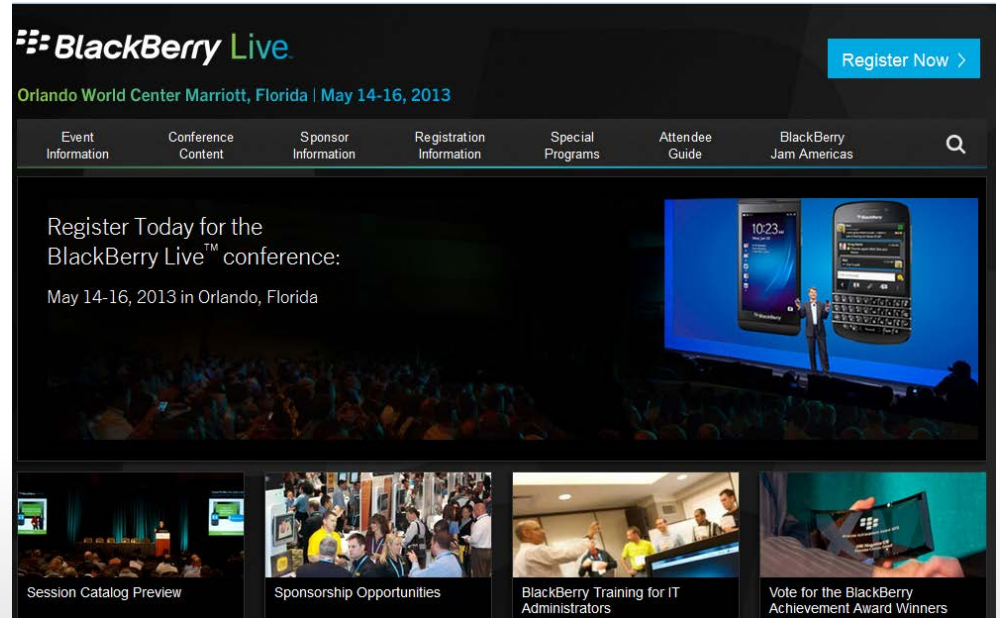
github
SOCIAL CODING

BlackBerry Live Orlando

May 14th to May 16th

- App Development Tracks
- BlackBerry Product & Deployment Tracks
- Case Studies & Solutions for your Business

www.blackberrylive.com



The screenshot shows the BlackBerry Live Orlando website. At the top left is the BlackBerry Live logo. To the right is a blue "Register Now" button with a right-pointing arrow. Below the logo is the event location and dates: "Orlando World Center Marriott, Florida | May 14-16, 2013". A navigation bar contains links for "Event Information", "Conference Content", "Sponsor Information", "Registration Information", "Special Programs", "Attendee Guide", and "BlackBerry Jam Americas", along with a search icon. The main content area features the text "Register Today for the BlackBerry Live™ conference: May 14-16, 2013 in Orlando, Florida" and a large image of a stage presentation with two BlackBerry smartphones displayed on a screen. Below this are four smaller images with captions: "Session Catalog Preview", "Sponsorship Opportunities", "BlackBerry Training for IT Administrators", and "Vote for the BlackBerry Achievement Award Winners".

Questions?

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