



BlackBerry Development for the Enterprise

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Agenda

- Overview of the BlackBerry Wireless Solution
- Developing for the BlackBerry Platform
- Top 5 Enterprise Development Tips



BlackBerry Wireless Solution

Smartphones

- Smartphone with JavaME OS
- Native Email, Calendar, Contact, and PIM integration
- Various Smartphones with various features including:
 - WiFi, Camera, GPS, 3G, and now... touch!



**BlackBerry
Bold**



**BlackBerry
Curve / Tour**



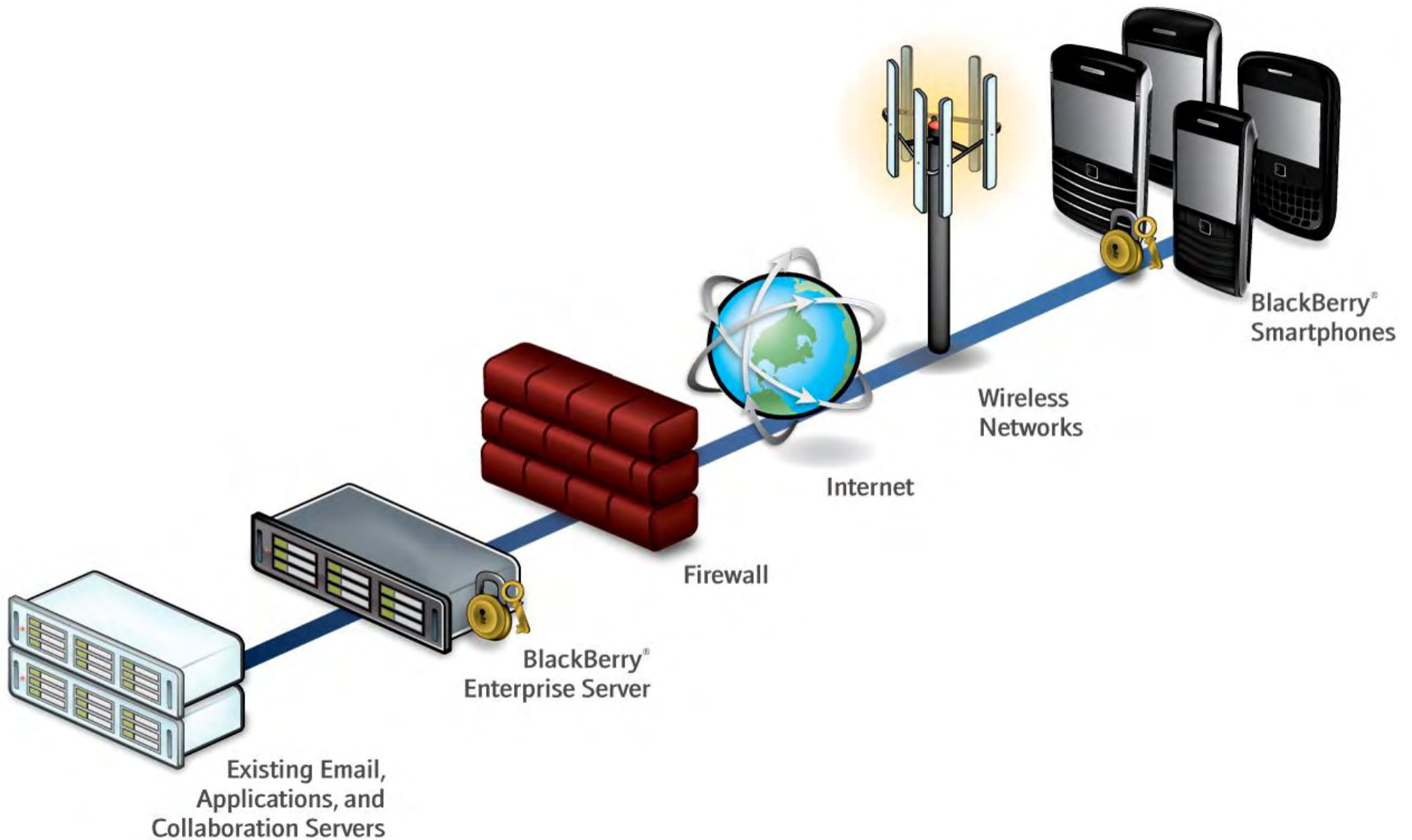
**BlackBerry
Style**



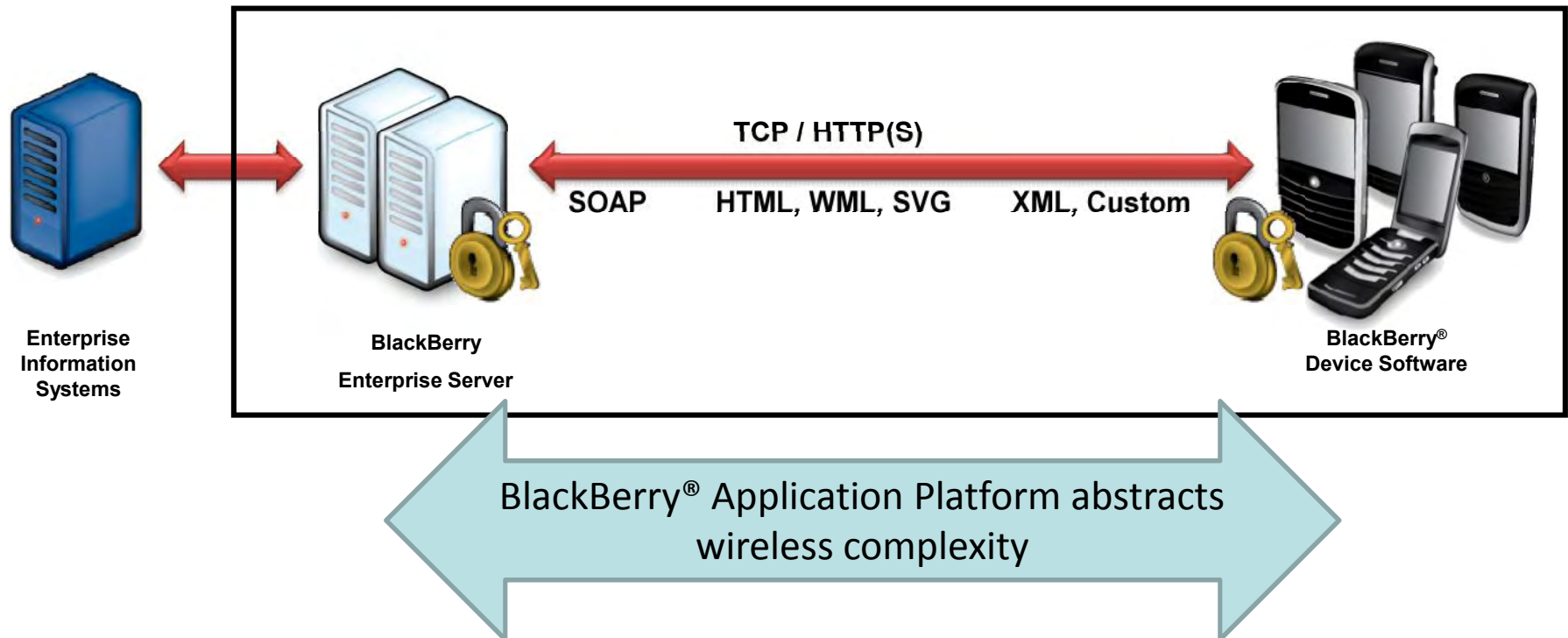
**BlackBerry
Torch**



Connectivity



Security





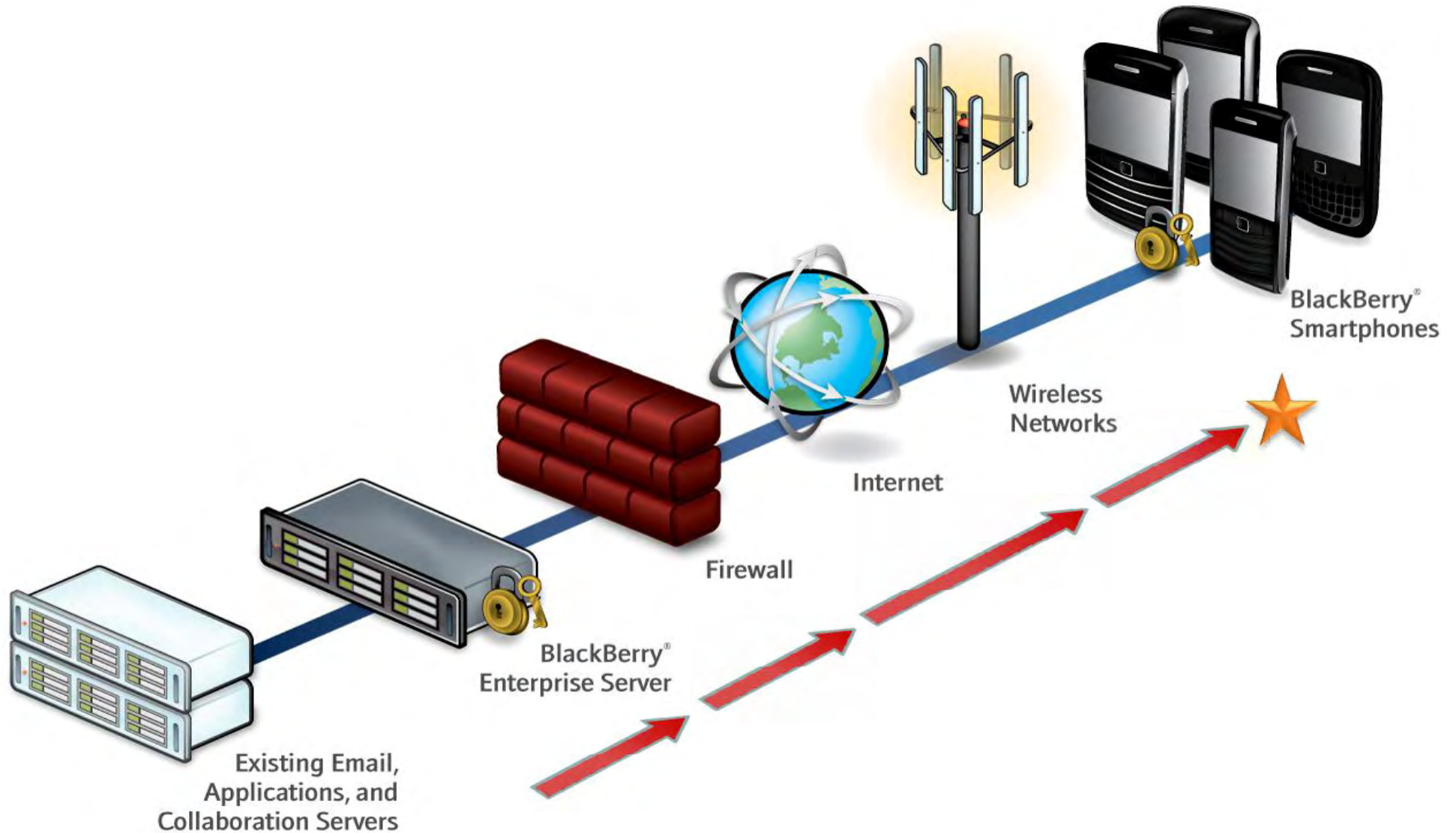
BlackBerry Push

- “Push” : a server-initiated connection where data is sent to a client *proactively*

- Key benefits over polling for new data:
 - Reduced processing requirements
 - Timeliness of data

- Can be used in many different ways:
 - Pushing notifications for business workflow
 - Just like BlackBerry Email!

BlackBerry Push





Developing For The BlackBerry Platform



BlackBerry WebWorks



BlackBerry WebWorks is an application platform that enables developers to create standalone applications using modern and standardized web technologies.



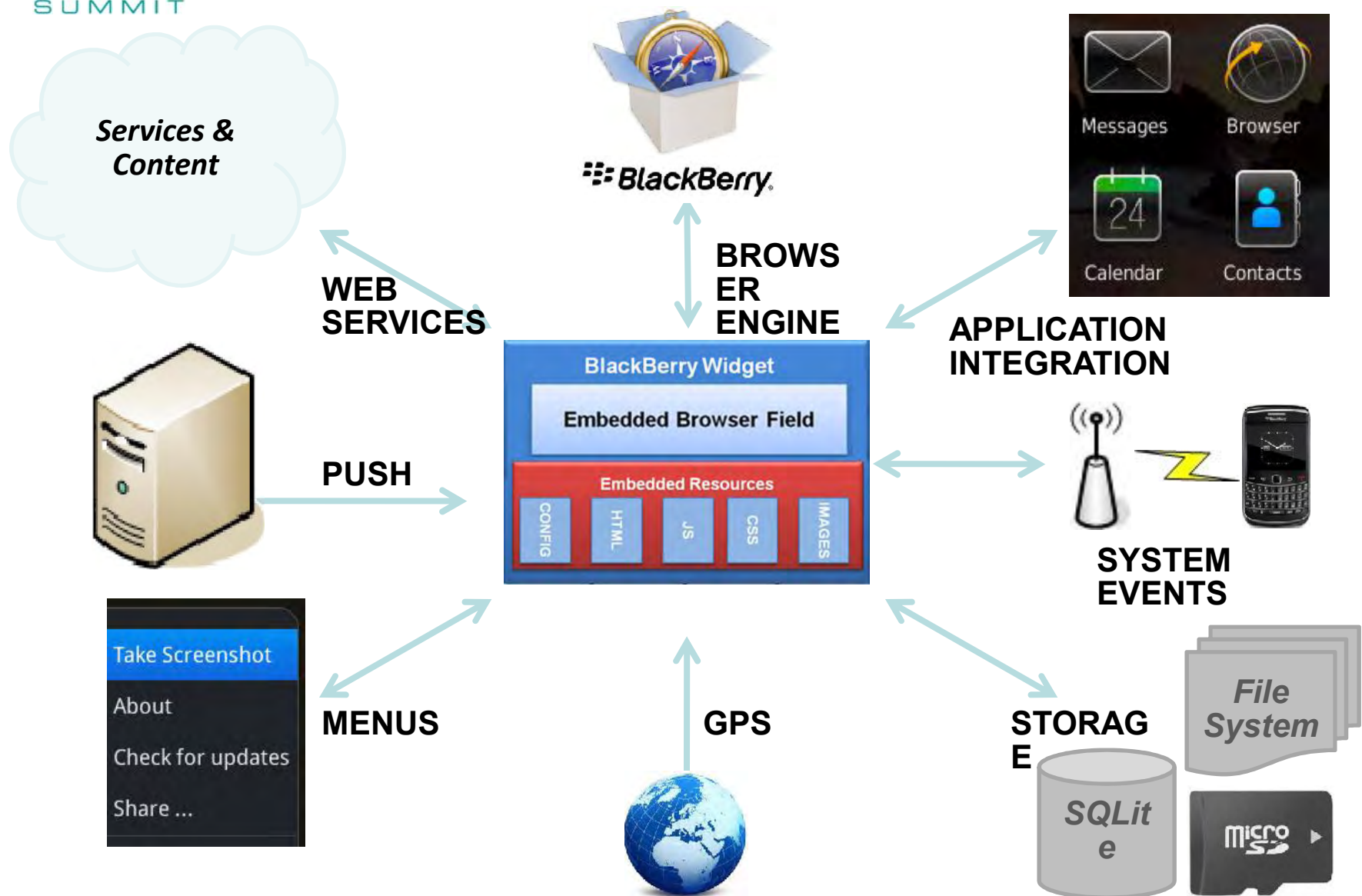


BlackBerry WebWorks

HTML UI +
Custom BlackBerry JavaScript



What Can A WebWorks App Do?





Live Vs. Local Web Content

- A WebWorks application does not need an active network connection

- Assets can be local:

```
<a href="local:///index.html">Home</a>  
<a href="file:///accounts/1000/shared/camera/IMG_01.jpg">  
    Camera Pic</a>
```

- Or use live resources to populate content dynamically:

```

```



WebWorks JavaScript API's

- Custom objects that can connect browser engine with underlying Java code
 - Enables “Super App” functionality

<p>API Reference</p> <ul style="list-style-type: none">ApplicationApplication EventsInvokeSystemSystem EventsUser InterfaceUtilities	<h2>Application API Summary</h2> <p>This is the complete list of Application APIs. Click the object names to see the details.</p> <h3>Application</h3> <p>The Application object provides functions and properties for the currently running application.</p> <p>Application Details</p> <table><tr><td>static void</td><td>exit</td><td>()</td><td></td></tr><tr><td>static readonly property</td><td>String</td><td>author</td><td></td></tr><tr><td>static readonly property</td><td>String</td><td>authorEmail</td><td></td></tr><tr><td>static readonly property</td><td>String</td><td>authorURL</td><td></td></tr><tr><td>static readonly property</td><td>String</td><td>copyright</td><td></td></tr><tr><td>static readonly property</td><td>String</td><td>description</td><td></td></tr><tr><td>static readonly property</td><td>String</td><td>id</td><td></td></tr><tr><td>static readonly property</td><td>String</td><td>license</td><td></td></tr><tr><td>static readonly property</td><td>String</td><td>licenseURL</td><td></td></tr><tr><td>static readonly property</td><td>String</td><td>name</td><td></td></tr><tr><td>static readonly property</td><td>String</td><td>version</td><td></td></tr></table>	static void	exit	()		static readonly property	String	author		static readonly property	String	authorEmail		static readonly property	String	authorURL		static readonly property	String	copyright		static readonly property	String	description		static readonly property	String	id		static readonly property	String	license		static readonly property	String	licenseURL		static readonly property	String	name		static readonly property	String	version	
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static readonly property	String	name																																											
static readonly property	String	version																																											



JavaScript Example

```
<script type="text/javascript">
  // Create our Appointment
  var newAppt = new blackberry.pim.Appointment();
  newAppt.location = "Your office";
  newAppt.summary = "Talk about new project";
  // Create our hour time slot
  var start = new Date();
  newAppt.start = start;
  var end = start.setHours(start.getHours() + 1);
  newAppt.end = end;
  // Create Attendee
  var attendees = new Array();
  var onlyAttendee = new blackberry.pim.Attendee();
  onlyAttendee.address = "john@foo.com";
  attendees.push(onlyAttendee);
  // Save Appointment
  newAppt.attendees = attendees;
  newAppt.save();
</script>
```





Top 5 Tips

#1 – Know Your Audience



Tip 1 - Know your audience

- The Smartphone ecosystem is “diverse”
 - Screen sizes (Even multiple screens!)
 - Input methods (Trackpads, Keyboard, Touch, Camera)
 - Operating Systems (and versions)
 - API Capabilities
- Defining your audience will define the your solution!



Tip 1 - Know your audience

- What can I do?
 - Engage the Marketing team and conduct research...
 - Your BES admin can provide a breakdown of all devices
 - Ensure that the business understands that each device needs to be coded **and tested**



Top 5 Tips

#2 – “Put First Things First”



Tip 2 – “Put First things First”

- Always start with the server side integration... always.
 - Without the server’s data... what do you have?
 - “Coffee Maker” example

- More than interfaces:
 - Connectivity
 - Security
 - Online / Offline access



Tip 2 – “Put First things First”

- What can I do?
 - I. Take a step back... remove mobility from the equation
 - II. Draw logical diagram
 - III. Draw physical diagram
 - IV. Prove the C.R.U.D.
 - V. Now add Mobile!



Top 5 Tips

#3 – Deployment and Support are NOT Footnotes



Tip 3 – Deployment & Support

- The definition of a successful application...
 - ...is not dependant on delivery team's personal opinion! (Sorry)
 - How often the application is used, how many people use it, and what would happen if you revoked it

- How to drive success:
 - Ensuring that you users clearly understand **what** the application does and **how** to use it
 - Providing help to the user-base when required



Tip 3 – Deployment & Support

- Keys to successfully launching your applications:
 - Push the applications out to the users
 - Promote your applications!
 - Provide hand-on training & write user documentation
 - Help the HelpDesk help you...
 - How about a “help” screen inside your application?



Top 5 Tips

#3 – Performance Tune In Parallel



Tip 4 – Performance tuning

- A big change from Enterprise development:
 - I. Make it work
 - II. Make it right
 - III. Make it fast

- “Slow? Just add horsepower!” is not possible in the mobile space

- Responsiveness is important



Tip 4 – Performance tuning

- If left until the end you may risk:
 - Major application re-architecture
 - Limiting scope & application usefulness
 - User complaints due to battery drain

- What can I do?
 - Define success up front
 - UI response is not server response –
Multi-threading
 - Leverage Push Technologies



Top 5 Tips

#5 – Usability is KING!



Tip 5 – Usability is King!

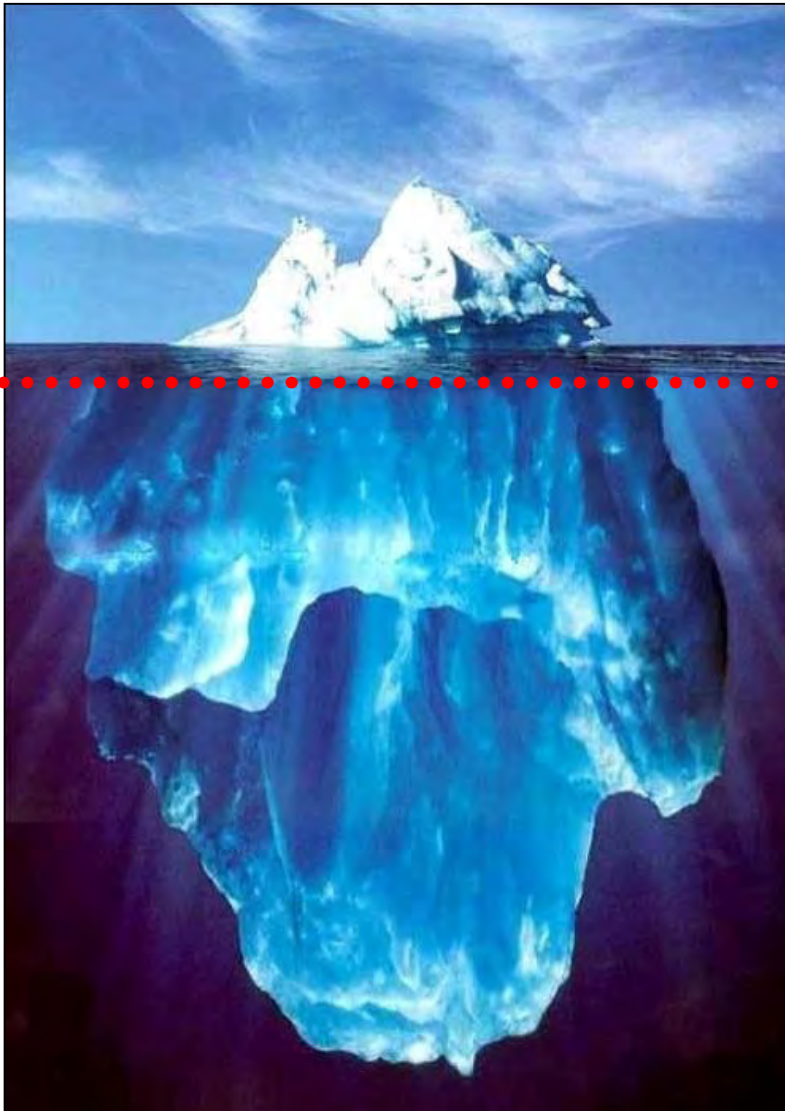
- This isn't a stretch:
 - If your application is hard to use, people won't use it
 - “Simple” is not “bad”
 - Usability includes responsiveness

- What can I do?
 - Understand how user's interact with their devices
 - Don't try to replicate the desktop experience
 - Think about doing small things perfectly
 - Create a common mobile experience

These are hard lessons...



Recap: Top 5 Enterprise App Tips



- Business Development
- Application Coding
- Application Management

Waterline

- Network Availability
- Testing & Troubleshooting
- Performance & Tuning
- Application Rollout
- User Training



Thanks for your attention and time!!

Any Questions?