**MOBILE FIRST**

**CH1 Growing**

Apple’s iOS requires Objective C; Google’s Android needs Java; Microsoft’s Windows Phone 7 relies on Silverlight; Samsung’s Bada requires C++; RIM’s Blackberry has Java, WebWorks, and Adobe Air solutions.

**CH2 Constraints**

**Screen Size:**

Desktop: 1024×768 pixels resolution

Smartphone: 320×480 pixel resolution

With mobile first, the end result is an experience focused on the key tasks users want to accomplish without the extraneous detours and general interface debris that litter many of today’s websites.

**Performance:**

Make sure you:

• Use image sprites to group multiple images into a single encoded file. (Just make sure it’s not too big when decoded!)

• Bundle together and minify CSS and Javascript files.

• Limit or remove dependencies on heavy Javascript libraries—especially if they are just being used for one or two functions.

• Likewise, limit the use of CSS grid systems.

• Use proper HTTP headers to ensure files are appropriately cached in the browser’s memory.

• Where appropriate, take advantage of modern browser capabilities like Canvas (http://bkaprt.com/mf/29) and

Appcache (http://bkaprt.com/mf/30) in HTML5.

• And my favorite: use CSS3 properties for rounded corners, gradients, text shadows, and box shadows.

**Time and Place:**

“One eyeball and one thumb.”

**Embracing Constraints:**

**CH3 Capabilities**

**Finding the tube:**

Nearest Tube uses mobile device capabilities (camera, location detection, magnetometer, and accelerometer) to really innovate in what seems to be a simple use case.

**But what’s in the browser?**

1. Location detection
2. **Device orientation/accelerometer**
3. **Touch**

**Extending your capabilities**

Additional capabilities may be here soon, including:

• *Direction:* from a digital compass

• *Gyroscope:* 360 degrees of motion

• *Audio:* input from a microphone; output to speaker

• *Video and image:* capture and input from a camera

• *Dual cameras:* front and back

• *Device connections:* through Bluetooth

• *Proximity:* device closeness to physical objects

• *Ambient light:* light/dark environment awareness

• *NFC:* Near Field Communications through RFID readers

**Starting mobile first**