



## COMPLIANCE COMPONENT

### DEFINITION

<i>Name</i>	Handheld Devices
<i>Description</i>	A 'handheld device' is any small, portable electronic instrument that provides computing and information storage and retrieval abilities. The more common forms are the Personal Digital Assistant (PDA) and a Mobile/Smart Phone.
<i>Rationale</i>	Increasingly, handheld devices are being combined with wireless technologies capable of accessing the Internet and other devices. Through proper Web site planning and accessibility coding strategies, State of Missouri agencies can reach a wider audience through the use of these devices.
<i>Benefits</i>	Handheld devices provide a means for mobile users to interact with Web-based information and applications provided by State of Missouri agencies, and allows for easy sharing of information.

### ASSOCIATED ARCHITECTURE LEVELS

<i>Specify the Domain Name</i>	Interface
<i>Specify the Discipline Name</i>	Access
<i>Specify the Technology Area Name</i>	Web Access Devices
<i>Specify the Product Component Name</i>	

### COMPLIANCE COMPONENT TYPE

<i>Document the Compliance Component Type</i>	Guidelines
<i>Component Sub-type</i>	

### COMPLIANCE DETAIL

<i>State the Guideline, Standard or Legislation</i>	<p><b>Personal Digital Assistant (PDA)</b> Most PDA's have a small keyboard and/or electronically sensitive pad on which handwriting can be received, interpreted and displayed as text. Typical uses include schedule tracking, address book, 'to-do' lists, note-taking and e-mail. These devices typically use Palm OS or Windows CE operating systems. Some include Bluetooth, a short-range wireless technology allowing Bluetooth-enabled devices to communicate with each other. These devices are data-centric and typically do not include telephone capabilities.</p> <p><b>Mobile/Smart Phones</b> Mobile/Smart phones connect to a wireless communications network through radio wave or satellite transmissions. Most of these devices provide voice communications, Short Message Service (SMS), Multimedia Message Service (MMS), and newer phones may also provide Internet services such as Web browsing and e-mail. Some include Bluetooth.</p> <p><b><u>Guidelines for applications or Web pages which will be using handheld devices as a primary source of access</u></b></p>
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**Limit graphical content**

Content designed for display on a desktop browser appears very differently on the space-constrained displays that are typical of mobile devices. Also, due to limited processing power of handheld devices, graphical content can significantly influence page loading times. As a result of these limitations, Web content that is destined for use on mobile devices is often customized (sometimes referred to as *mobile-device optimized*). This optimization can occur easily through utilizing a cascading style sheet option (media=handheld). The goal of optimization is to present Web page information with minimal scrolling (vertical & horizontal), improve download times, and reduce system-resource demands, while maintaining an intuitive and easy-to-use interface.

A handheld device screen is considerably smaller than a workstation display. Page graphics, in the form of logos, icons, frames, and images, both increase page load times and unnecessarily occupy this limited space, thus forcing relevant information (text, hypertext, and essential data-entry fields) to the outskirts of the display area.

**Limit text, use link navigation (numbered when appropriate)**

Due to display size limitations, text use should be limited. For devices that provide a physical keyboard, it is good practice to number the links. This allows users to select a link using the keyboard/number pad instead of the stylus, thus providing means for one-handed interaction.

**Limit text size**

Avoid the use of large text and icons. The default sizing of text and icons should be consistent with individual devices' standard font sizes.

**Utilize empty space**

Excessive vertical and horizontal spacing between various page elements (text, icons, fields, and so on) and page borders should be avoided.

**Limit the use of forms/data entry fields**

Device data entry is typically a challenging process for a user for several reasons. First, the input methods ("thumb keyboards," soft-keyboards, and "graffiti") are restrictive when compared with full-sized keyboards and mice. Another problem with the use of forms containing multiple data-input fields is that display space is rapidly consumed by the empty input fields.

**Limit (or eliminate) the use of widgets**

Whenever possible, use links in place of pull-downs, icon-style buttons, radio buttons, or forms. If widgets are used, minimize and match their sizing to surrounding screen elements such as text, to avoid excessive consumption of space, awkward alignment, and line spacing problems.

**Enable appropriate word-wrapping**

Allow text to wrap at the page border to prevent the need for horizontal scrolling. However, paired page elements, such as navigation links with associated buttons (for example, a cancel button and a cancel link), should not be wrapped onto separate lines (and should generally be avoided to conserve space; the link is sufficient).

Compliance Sources			
<i>Name</i>	IBM	<i>Website</i>	http://www-128.ibm.com/developerworks/wireless/library/wi-web/
<i>Contact Information</i>			
<i>Name</i>		<i>Website</i>	
<i>Contact Information</i>			
KEYWORDS			
<i>List Keywords</i>	Mobile/Smart Phone, Personal Digital Assistant (PDA), Bluetooth, Palm OS, Windows CE		
COMPONENT CLASSIFICATION			
<i>Provide the Classification</i>	<input type="checkbox"/> <i>Emerging</i>	<input checked="" type="checkbox"/> <i>Current</i>	<input type="checkbox"/> <i>Twilight</i> <input type="checkbox"/> <i>Sunset</i>
<i>Sunset Date</i>			
COMPONENT SUB-CLASSIFICATION			
<i>Sub-Classification</i>	<i>Date</i>	<i>Additional Sub-Classification Information</i>	
<input type="checkbox"/> <i>Technology Watch</i>			
<input type="checkbox"/> <i>Variance</i>			
<input type="checkbox"/> <i>Conditional Use</i>			
Rationale for Component Classification			
<i>Document the Rationale for Component Classification</i>			
Migration Strategy			
<i>Document the Migration Strategy</i>			
Impact Position Statement			
<i>Document the Position Statement on Impact</i>			
CURRENT STATUS			
<i>Provide the Current Status</i>	<input type="checkbox"/> <i>In Development</i> <input type="checkbox"/> <i>Under Review</i> <input checked="" type="checkbox"/> <i>Approved</i> <input type="checkbox"/> <i>Rejected</i>		
AUDIT TRAIL			
<i>Creation Date</i>	9/5/2006	<i>Date Approved / Rejected</i>	11/28/2006
<i>Reason for Rejection</i>			
<i>Last Date Reviewed</i>		<i>Last Date Updated</i>	
<i>Reason for Update</i>			