Web Content Guidelines

Ver 3.10

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1 **About This Document**

This document provides information for creating Web content for the Internet browser implemented on the PlayStation®3 system software. The required client specifications, technical information, as well as guidelines are described. It is recommended for licensees to use the information in this document when creating applicable content.

However, it is possible for Internet browser client specifications to be changed for fixing bugs and improving quality. The content of this document is not guaranteed to be valid for future versions of the system software. In this document, the applicable version number ("1.00" or "1.10") is noted whenever differences exist depending on the version of system software.

Note
The specifications of the Web browser utility booted from the application are basically the same as those described in this document. However the specifications allowing the application to limit functions or to set the memory size are different.

Related Documents

For details about the specifications that the Internet browser conforms to or supports, refer to the following documents.

Protocol
- [RFC2616] Hypertext Transfer Protocol – HTTP/1.1 (The Internet Society, 1999)
- PERSISTENT CLIENT STATE HTTP COOKIES (Netscape, 1999)

Markup Language
- HTML 4.01 Specification (W3C (MIT, INRIA, Keio), December 1999)
  http://www.w3.org/TR/html401/

CSS
- Cascading Style Sheets, level 1 (April 2008)
  http://www.w3.org/TR/REC-CSS1
- Cascading Style Sheets, level 2 CSS2 Specification (April 2008)
  http://www.w3.org/TR/2008/REC-CSS2-20080411/

JavaScript™
- Standard ECMA-262 ECMAScript Language Specification (December 1999)
  http://www.ecma-international.org/publications/standards/Ecma-262.htm

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Note
The URLs listed in this document have been verified as of December 1, 2009. Be aware that these pages might be moved or altered.

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2 Basic Functionality

The Internet browser conforms to Internet standard protocols and supports the HTML 4.01 standard markup language as well as CSS, DOM, and JavaScript™.

This chapter describes this basic functionality.

HTTP

Supported Protocols

The Internet browser supports the following standard protocols.

- HTTP/1.0
- HTTP/1.1

Supported Methods

The Internet browser supports (uses) the following HTTP methods.

- GET
- POST
- HEAD

Supported Features

The Internet browser supports the following features.

- Redirect
- Keep-Alive
- Cookie
- Cache
- HTTP Authentication

Cookies

Cookies are not always saved. Cookie saving is controlled by user settings and by specification of the application that called the Internet browser. Cookie saving can also be canceled by user confirmation.

Supported Attributes

The Internet browser supports the following cookie attributes.

- Expires
- Path
- Domain
- Secure

Restrictions

The cookie feature has the following restrictions.

Number of cookies saved

At most 20 cookies are saved per domain.

Cookie size

The maximum size of one cookie is 4K bytes.

Memory for Contents

The size of memory allocated for the Internet browser for HTML or Adobe® Flash® contents is a fixed value (finite). This memory is allocated upon execution. For the Internet browser of system software 3.10, this value is set at 256MB which also includes heap to be used for execution. Approximately 200MB or less will be used as the heap for execution; approximately 56MB will be allocated for contents.

This memory is shared among all tabs. Memory size that can be used per page will differ according to the content size of other tabs. When the size of memory used by a content exceeds the space available for the Internet browser, a dialog will be displayed notifying you of memory insufficiency; subsequent content display will not be possible. Memory insufficiency occurs when memory usage exceeds available memory space, often when using Adobe Flash Player plug-ins or when operating a large volume of character strings in JavaScript™.

> **Note**
> Size of memory allocated to the Internet browser may change in the future (it will most probably be increased).

Cache

Cache Size

In the Internet browser of system software 3.10, the default cache size is set at 4MB.

HTTP Authentication

Supported Authentication Methods

The Internet browser supports the following authentication methods.

- Basic authentication
- Digest authentication

Input Information Saving

When the user selects to save the username and password entered for basic authentication or digest authentication, these will be saved for each URL and automatically entered in the next authentication.

This input information, which is saved per user to the PlayStation®3 console, is valid until the user performs a "delete authentication information" operation or until a "set up initialization" operation is performed.

Schemes

The Internet browser supports the following schemes.

- http
- https

Accessing local content using a file scheme is not currently supported. This operation and its future support are not guaranteed.

HTML

The Internet browser supports the following standard markup language specification.

- HTML 4.01

SSL/TLS

The Internet browser conforms to the following standard.

- SSL v3.0

Root Certificates

The following root certificates are built into the PlayStation®3 and used when the Internet browser makes an SSL connection.

Certificate	Embedded system software
Verisign® Root CA	**1.00 or later**
Verisign® Class 1 Public Primary CA	1.00 or later
Verisign® Class 2 Public Primary CA	1.00 or later
Verisign® Class 3 Public Primary CA	1.00 or later
Verisign® Class 1 Public Primary CA G2	1.00 or later
Verisign® Class 2 Public Primary CA G2	1.00 or later
Verisign® Class 3 Public Primary CA G2	1.00 or later
Verisign® Class 4 Public Primary CA G2	1.00 or later
Verisign® Class 1 Public Primary CA G3	1.00 or later
Verisign® Class 2 Public Primary CA G3	1.00 or later
Verisign® Class 3 Public Primary CA G3	1.00 or later
Verisign® Class 4 Public Primary CA G3	1.00 or later
Verisign® RSA® Secure Server CA	1.00 or later
Verisign® Time Stamping Authority CA	1.00 or later
RSA® Root CA	**1.00 or later**
RSA® Security Root CA 1024 (Valicert Class 3 CA)	1.00 or later
RSA® Security Root CA 2048 V3	1.00 or later
GeoTrust Root CA	**1.00 or later**
GeoTrust Global CA	1.00 or later
GeoTrust Equifax Secure CA	1.00 or later
GeoTrust Equifax Secure eBusiness CA-1	1.00 or later
EnTrust Root CA	**1.00 or later**
EnTrust.net Secure Server CA (CPS)	1.00 or later
Valicert Root CA	**1.00 or later**
Valicert Class 2 CA	1.00 or later
OmniRoot (CyberTrust CA)	**1.00 or later**
Omni Baltimore CyberTrust CA	1.00 or later
Omni GTE CyberTrust Global Root CA	1.00 or later
Omni GTE CyberTrust Root CA	1.00 or later
Omni Globalsign Root CA	1.00 or later
Thawte Root CA	**1.00 or later**
Thawte PremiumServer CA	1.00 or later
Thawte Server CA	1.00 or later
AAA Root CA	**2.50 or later**
AAA Certificate Services CA	2.50 or later
AddTrust Root CA	**2.50 or later**
AddTrust External Root CA	2.50 or later

Certificate	Embedded system software
UTN Root CA	**2.50 or later**
UTN USERFirst Hardware CA	2.50 or later

CSS

The Internet browser supports the following standards.

- CSS1
- CSS2 positioning

DOM

The Internet browser supports the following standards.

- DOM level 1
- Part of DOM level 2

JavaScript™

The Internet browser supports the following standard.

- Part of JavaScript™ 1.5
- responseText of XMLHttpRequest

Window Size

The size of the Internet browser window differs depending on user settings and browsing conditions. The standard size and maximum size are determined according to screen resolution settings and display area settings; the user will be able to select either the standard size or the maximum size. In the table below, the upper row in each two-lined column entry represents the standard size and the lower row represents the maximum size.

Display area	Screen resolution			
	1080p/1080i	720p	480p/NTSC 16:9	480p/NTSC 4:3
Full pixel	1152x976	1026x644	753x430	565x430
	1920x1080	1100x720	854x480	640x480
Standard	1094x927	974x611	715x408	536x408
	1824x1026	1216x684	811x456	608x456
-1	1036x878	923x579	677x387	508x387
	1728x972	1152x648	768x432	576x432
-2	979x829	872x547	640x365	480x365
	1632x918	1088x612	725x408	544x408

The above window sizes include the area for displaying the scroll bar. For pages exceeding the size of the window, the user must scroll down to view all contents.

Operation menu such as "Back" and "Forward" will be displayed overlapping the page.

> **Note**
> For the HTML Form combo box, a list that exceeds screen dimensions will be displayed with scrolling, with a margin of 15% left at the top and bottom in consideration of overscans.

If the JavaScript™ `window.resizeTo()` or `window.resizeBy()` method is used to change the window size, the Internet browser display settings will be changed according to the following rules.

- Both height and width are changed to a larger size
  Setting will switch to the maximum size. No changes will occur if the setting is already at the maximum size.

- Both height and width are changed to a smaller size
  Setting will switch to the standard size. No changes will occur if the setting is already at the standard size.

Resolutions

The Internet browser allows the user to select a resolution from five levels in order to accommodate various types of televisions. When the resolution setting is changed, the resolution of the window will be changed according to the window size and the screen resolution as follows.

Resolution Setting	Screen Resolution			
	1080p/1080i	720p	480p/NTSC 16:9	480p/NTSC 4:3
+2	Cannot be selected	1.3 x	1.3 x	1.3 x
+1	Cannot be selected	1.1 x	1.1 x	1.1 x
Standard	Same size	Same size	Same size	Same size
-1	0.9 x	0.9 x	0.9 x	0.9 x
-2	0.7 x	0.7 x	0.7 x	0.7 x

Character Display

Font Size

The Internet browser supports five font sizes (+2, +1, standard, -1, -2), which can be selected by the user. The specified font size will be mapped to the point sizes in the following table according to the user setting and whether or DOCTYPE is declared in the content. (Font sizes specified as fixed sizes such as with CSS will be displayed in the specified sizes.)

NO DOCTYPE Declaration (Backward Compatible Mode)

Size Specification	Setting Specified by the User				
	+2	+1	Standard	-1	-2
7	45	38	29	25	18
xx-large	45	38	29	25	18
6	30	26	20	17	12
x-large	30	26	20	17	12
5	23	19	15	13	9
Large	23	19	15	13	9
4	18	15	12	10	7
Medium	18	15	12	10	7
3	15	13	10	8	6
Small	15	13	10	8	6
2	13	11	9	8	5
x-small	13	11	9	8	5
1	11	9	8	7	5
xx-small	11	9	8	7	5

DOCTYPE Declared (Standard Compliant Mode)

Size Specification	Setting Specified by the User				
	+2	+1	Standard	-1	-2
7	45	38	30	26	18
xx-large	45	38	30	26	18
6	30	26	20	17	12
x-large	30	26	20	17	12
5	23	19	15	13	9
large	23	19	15	13	9
4	18	15	12	10	7

Size Specification	Setting Specified by the User				
	+2	+1	Standard	-1	-2
medium	18	15	12	10	7
3	15	13	10	8	6
small	15	13	10	8	6
2	13	11	8	7	5
x-small	13	11	8	7	5
1	11	9	7	7	5
xx-small	11	9	7	7	5

Font Family

The Internet browser allows the display font to be changed by specifying the font family.

The following font families can be specified.

- Serif
- Sans-Serif

Example

```
<span style="font-family:Sans-Serif">Sans-Serif</span>
```

Font Style

The Internet browser supports font style and font weight specifications.

The following font styles can be specified.

- italic
- bold

Examples

```
<b>bold</b> and <i>italic</i>
<span style="font-style:italic">italic</span>
```

Supported Character Sets

The Internet browser determines and displays character set based on a specification of the META tag in the HTML content.

Example

```
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
```

The following character sets are supported for display.

- Automatic selection
- Cyrillic (ISO-8859-5)
- Japanese (EUC-JP)
- Japanese (Shift-JIS)
- Korean (EUC-KR)
- Simplified Chinese (GB18030)
- Traditional Chinese (Big5)
- Western (ISO-8859-1)
- UTF-8

Note
Due to some fonts being embedded in PlayStation®3, it is possible for some characters not to be correctly displayed.

The character set that will be selected when there is no META tag specification may not always be the same. This may differ according to the version of the system software. For example, a certain character set may be selected according to settings made for the display language in the system software, or Unicode (UTF-8) may always be selected.

Moreover, for pages using frame or iframe, if there are no character specifications made in the frame file, there is no guarantee that the specification made in the base file will be inherited.

Character Input Mode

By applying the extended character-type property in the style sheets to the text boxes and text areas, it is possible to limit the input mode for character input. However, this setting will not apply for character input using USB keyboards.

If "all" is specified or the property is not specified, the input mode and URL input mode for the system language settings will be selectable.

character-type Values and Input Modes

Value	Selectable Input Mode
all/no specification	Default language and URL
number	Half-width numeral (10-key)
alphabet	Half-width alphabet
hankaku	Half-width alphabet
zenkaku	Hiragana, katakana, half-width alphabet
katakana	Katakana
hiragana	Hiragana

Example

```
<input type="text" style="character-type: number">
```

Image Display

Supported Formats

The Internet browser supports the display of images in GIF, PNG, and JPEG formats. Support details for each format are as follows.

Image format	Support details
GIF	GIF87a, GIF89a Interlaced, non-interlaced, transparent color, or animation
PNG	Interlaced, non-interlaced, transparent color, or semitransparent (alpha channel) *Animation (MNG) is not supported
JPEG	Baseline DCT or progressive DCT

Limitations

The following limitations apply to image display.

Image size

To display an image, heap memory is temporarily used in an amount equal to the number of pixels in the image multiplied by 4 bytes.

The remaining amount of heap memory varies according to the heap memory size that is assigned by the application that called the Internet browser, the cache size setting, and how other tabs are being used. Because of this, it may not be possible to display the image in some cases.

When an image cannot be displayed, a ❌ mark is displayed in white space equivalent to the image size or the size specified by the img tag.

Plug-ins

The Internet browser supports plug-in features.

The following plug-ins are supported.

Plug-in	MIME-Type	Supporting system software
Adobe Flash Player 9 plug-in *	application/x-shockwave-flash	2.50 or later

*Contains Adobe Flash Player technology.

For details about this plug-in, see the applicable section in this document.

3 **Application Functionality**

The Internet browser has many application features besides the basic browsing features of tabs, bookmarks, and file downloading.

This chapter explains aspects of these features that are related to content creation.

Addresses

The Internet browser has no specific constraints on the length of addresses that are used for links and image references in content. However, when handling address strings on the client side, a restriction applies in which a single address can be no more than 1024 characters in length.

Since an address that exceeds 1024 characters is automatically cut to one that is less than or equal to 1024 characters, be particularly careful with pages that may have been bookmarked.

The following features are affected by this constraint.

- Editing the address of the page that is currently being displayed
- Registering a bookmark

Titles

The Internet browser has no specific constraints on the length of a content title. However, when handling title strings on the client side such as when registering bookmarks, a restriction applies in which a single title can be no more than 1024 characters in length.

Since a title that exceeds 1024 characters is automatically cut to one that is less than or equal to 1024 characters, be particularly careful with pages that may have been bookmarked.

The following feature is affected by this constraint.

- Registering a bookmark

Also, when a long title is to be displayed, it will be shortened. The following features are affected by this constraint.

- Displaying the title bar
- Displaying the list of personal bookmarks
- Displaying the history list

Character Input

The Internet browser allows the user to input characters such as when entering addresses. Although characters are entered by using the on-screen keyboard, the maximum number of characters that can be entered is 1024.

The following features are affected by this constraint.

- Address entry
- Address entry for the homepage setting
- Address entry for bookmark editing
- Title entry for bookmark editing
- Form entry
    - input (text, password, file)
    - textarea
    - Forms within an Adobe Flash content

- Filename entry for downloading, saving a link destination, or saving an image

- Username and password entry in the HTTP authentication dialog

- Character entry in the JavaScript™ prompt() dialog

Languages that can be entered also depend on on-screen keyboard support. The following languages can be entered according to display language settings.

Supported input language	Supporting system software
German	1.00 or later
English	1.00 or later
Spanish	1.00 or later
French	1.00 or later
Italian	1.00 or later
Dutch	1.00 or later
Portuguese	1.00 or later
Russian	1.00 or later
Japanese	1.00 or later
Korean	1.50 or later
Danish	1.80 or later
Finnish	1.80 or later
Norwegian	1.80 or later
Swedish	1.80 or later
Simplified Chinese	1.90 or later
Traditional Chinese	1.90 or later
Polish	3.10 or later

Bookmarks

The Internet browser allows bookmarks to be registered. Bookmarks are managed per user and saved to the internal hard disk drive.   The bookmark feature is outlined below.

Maximum number of bookmarks that can be registered	1000
Registration items	Address, title, and last access date *For a page that has no title, the address will be registered instead of the title.
Maximum number of address characters	1024
Maximum number of title characters	1024
Duplicate registrations	Not allowed (automatic overwrite)

Windows/Tabs

The Internet browser supports the tab feature. The tab feature is outlined below.

Maximum number of tabs	1 to 6 *Always 6 when the Internet browser is started up from the "Internet Browser" icon of the system software. If the application calls the Web browser utility, the application can specify a value in the range from 1-6. **If an attempt is made to open a page using a separate tab, which would cause the maximum number of tabs to be exceeded, the user can cancel this operation.
Target specification	Not allowed

JavaScript™ verification	Yes *If an attempt is made to open a page with JavaScript™ using a separate tab, the user can cancel this operation.

Downloads

The Internet browser supports the downloading of data that is linked on a page. When downloading, the Internet browser evaluates the MIME-Type (Content-Type) and extension and automatically determines the appropriate save destination.

Content to Be Downloaded

Downloadable content is as follows.

MIME-Type

- text/html
- text/plain
- image/gif
- image/png
- image/jpeg
- each plug-in

Extension

- html, htm
- txt
- gif
- png
- jpg, jpeg

Download Destination

The following table shows relationships among the MIME-Type and download destination folders.

MIME-Type	Download destination	Supporting system software
image/*	"Photo"/Selectable	1.00 or later
application/vnd.sony.dstartup	Not disclosed (Not selectable)	1.00 or later
Other	Any (Selectable)	1.00 or later

Although there are a few exceptions, the user is allowed to select freely from the specific folders targeted for downloading. The user is not allowed to change the filename.

Uploads

The Internet browser supports the uploading of a file from a form. The file to upload is selected by the user from specific folders targeted for uploading, after the user presses the select button. The filename cannot be input directly to the input box of an input tag.

4 **Client Identification Information**

The Internet browser provides a means of obtaining information that can be used effectively for client identification based on the standards that were described in the previous chapter. This kind of information can be used in a server program, CGI, or JavaScript™ to perform dynamic content distribution, process switching, and browsing control.

This chapter describes the various kinds of information that can be used for client identification.

Request Header

Identification information that can be referenced from a CGI as server program or server variables is sent from the Internet browser in the HTTP request header.

The request header contains the following information related to client identification.

User-Agent

Header content

```
User-Agent: Mozilla/5.0 (PLAYSTATION 3; 1.00)
```

Description

This is a standard header representing the Internet browser type and version.

A CGI references it by using the variable HTTP_USER_AGENT.

The content of this header may be changed if features are significantly changed or extended in a future version upgrade and it becomes necessary for sites to support these features.

Supporting system software

1.00 or later

Accept-Language

Header content

```
XAccept-Language: xx, xx;q=0.5
```

Description

This is a standard header representing the language that is permitted by the Internet browser (user).

A CGI references it by using the variable HTTP_ACCEPT_LANGUAGE.

The Internet browser determines the languages that are permitted according to the system software's display language setting and changes the *xx, xx* part as follows.

Display language setting	*xx, xx*	Supporting system software
German	"de, en"	1.00 or later
English	"en"	1.00 or later
Spanish	"es, en"	1.00 or later
French	"fr, en"	1.00 or later
Italian	"it, en"	1.00 or later
Dutch	"nl, en"	1.00 or later
Portuguese	"pt, en"	1.00 or later
Russian	"ru, en"	1.00 or later
Japanese	"ja, en"	1.00 or later
Korean	"ko, en"	1.00 or later

Example

```
Accept-Language: de, en;q=0.5
```

x-ps3-browser

Header content

```
x-ps3-browser: n.nn(xxx; yyy; zzz; …)
```

Description

This is a unique extension header that represents the system software version of the Internet browser, and from which plug-in the access is being made.

$n.nn$ represents the version of the Internet browser's system software. Although this is usually synchronized with the version of the PlayStation®3 system software, minor version updates in which the specifications of the Internet browser remain unchanged may not be reflected as version updates.

A keyword and other properties identifying from which plug-in or system utility the access is being made will be entered in xxx, yyy, zzz…. The order by which a keyword and other properties are shown has not been defined.

The keywords and properties currently defined are as follows.

Keyword	Description	Supporting system software
WP	Accessed from an Internet browser	1.10 or later
BU	Accessed from a Web browser utility	1.10 or later

Property	Value	Supporting system software
system	System software version	1.10 or later

Example

```
x-ps3-browser: 1.10 (WP; system=1.10)
```

Supporting system software

1.10 or later

JavaScript™

Identification information, that can be referenced from the JavaScript™ code within a content, is built into the JavaScript™ engine of the Internet browser.

This information may be changed if features are significantly changed or extended in a future version upgrade and it becomes necessary for sites to support these features.

The main identification information is shown below.

Navigator Object

Property	Value
userAgent	"Mozilla/5.0 (PLAYSTATION 3; 1.00)"
appCodeName	"Mozilla"
appName	"PLAYSTATION 3"
appVersion	"5.0 (PLAYSTATION 3)"
platform	"PLAYSTATION 3"

Screen Object

Property	Value
colorDepth	32
pixelDepth	Undefined

5 Extensions

JavaScript™ Extensions

The Internet browser has several unique features built in for extending JavaScript™ features and coordinating them with the system software.

Error Notification Window

This feature displays error messages of JavaScript™ in a pop-up window.

Error messages are displayed in the following format and will disappear after a certain time or when the browser is closed.

```
Error: Error message [file: line number in which the error occurred]
```

The error notification window does not grab the focus. Thus, the scroll cannot be used within the error notification window.

It is also possible to display other messages in the error notification window.

To use the error notification window, execute the following JavaScript™ codes.

JavaScript™ Code	Description
window.external.webbrowser.startDebugging()	Enable the error notification window
window.external.webbrowser.stopDebugging()	Disable the error notification window
window.external.webbrowser.debugTrace(*str*)	Output message specified in *str*

Supporting system software

3.10 or later

Download

To enable the download feature, execute the following JavaScript™ code.

```
window.external.system("Webbrowser.Download.method?url");
```

For the *method* section, specify normal download or background download. In addition, write the URL of the file to download following the "?" mark inserted after *method*.

method	Description
Start	Downloads the file specified by *url* A dialog for selecting the save location will be displayed. The return value will always be true.
StartBackground	Performs a background download of the file specified by *url* The system software will select an appropriate save location and start the download automatically. There will be no dialog displayed for this. When the addition to the background download tasks succeeds, true is returned; when the addition fails, false is returned.

Example: To perform a background download of http://www.playstation.jp/sample.mp4

```
window.external.system("Webbrowser.Download.StartBackground?http://www.plays
tation.jp/sample.mp4");
```

Supporting system software

2.20 or later

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6 Adobe Flash Player Plug-in

The Internet browser supports playback of Adobe Flash content using an Adobe Flash Player plug-in.

This section presents an overview of the Adobe Flash Player functions that are built in to PlayStation®3 system software 3.10.

Version

The version of the Adobe Flash Player for system software 3.10 is 9 (9,0,151,0).

Basic features conform to the specifications of the Adobe Flash Player with the above version.

Supported Devices

The Adobe Flash Player for system software 3.10 supports the following input and output devices.

Mouse

The left analog stick and the Enter button of the controller work as a one-button mouse of the PC.

Pointer movement, click and drag & drop features are supported.

Keyboard

The up/down/left/right buttons of the controller work as the up, down, left, right cursor keys of a PC keyboard.

Character Input

Character input in text boxes using the on-screen keyboard is supported.

Fonts

Device fonts are supported.

Applicable scope of font sizes and styles are the same as the Internet Browser.

Sound

PCM, ADPCM and MP3 audio/sound playback are supported.

Unsupported Functions

The following features are not supported for the Adobe Flash Player for system software 3.10.

Clipboard

Text copy, cut and paste features are not supported.

Printing

Printing is not supported.

Context menu

Context menu display, control and features that are normally included in them are not supported.

Live Connect

The communication feature between JavaScript™ and Adobe Flash Player plug-ins is not supported.

FCS (Flash Communication Server)

A connection to FCS, or features that require it are not supported.

Related functions
- HTTP tunneling
- Screen sharing

Screen Sharing

Scheme

The https scheme is not supported.

Camera and Microphone

Camera and microphone devices are not supported.

Hardware Keyboard

USB hardware keyboards are not supported.

Known Problems and Limitations

The Adobe Flash Player for system software 3.10 has the following limitations.

Size of Content

Large-size Adobe Flash content cannot be played.

Although it depends on the content, on average, the amount of memory required by the Adobe Flash Player is approximately three times the size of the Adobe Flash content file. For usable memory volume, refer to "Memory for Contents" in Chapter 2 "Basic Functionality".

Loading External Files

If a function such as `loadVariable()` is used to load data from an external file, the timing when data is loaded may be different from that of PCs.

Therefore, the completion of loading must be confirmed.

Size of Device Fonts

Device fonts have 5 sizes, just like the Internet browser.

It may not be possible to achieve the same layout as on a PC because Adobe Flash content may not fit as expected.

Generating a mouseout Event

A mouseout event may not occur when the pointer gets out of the Adobe Flash content if objects are arranged on the edge of the content field.

Exercise caution in these cases by anticipating when content will be displayed in unexpected ways.

Nesting of ActionScript

Restrictions when deep nesting occurs with ActionScript are different from PCs. Nesting is terminated at a shallower level compared to a PC.

RTMP/RTMPE

RTMP/RTMPE is supported. However, the encryption of RTMPE is not supported.

H.264 Playback by the flv Container

H.264 playback using the flv container is not supported.

Video Codec

Of the video codecs supported, a unique decoder for PlayStation®3 is used for H.264.

Because of this, there may be Adobe Flash content that can be played back by Adobe Flash Player on a PC but not on PlayStation®3.

Recommendations

The usage of the following technical tips are recommended for a web page that includes Adobe Flash content played back with the Adobe Flash Player for system software 3.10.

Prevent the Adobe Flash Content from Obtaining the Focus

Depending on the configuration of the web page, the Adobe Flash content may obtain the focus upon completion of the page read. When the Adobe Flash content obtains the focus, the operation of the directional buttons of the controller are notified to the Adobe Flash content, and it will not be possible to operate the directional buttons for the Internet browser. To prevent the Adobe Flash content from obtaining the focus, place a div element with z-index specified over the object element. Set the same background color as the object element to the div element.

Obtain the Focus back from the Adobe Flash Content

To obtain the focus back from the Adobe Flash content, call the focus method of JavaScript™ and set the focus on an arbitrary element.

To perform this operation from the Adobe Flash content, perform processing via ExternalInterface/GetURL.

Performance

Performance of Adobe Flash Player upon playback is greatly affected by image size and number of layers to be rendered by Adobe Flash Player, as well as by ActionScript. Depending on the conditions, performance may decrease dramatically in comparison to a PC, for example. Please make appropriate adjustments on the PlayStation®3.

7 **FAQs and Answers**

FAQ 1: How can I resolve memory insufficiency?

The main difference between the PC browser and the PlayStation®3 Internet browser has to do with memory size. With the PlayStation®3 Internet browser, all of the approximately 56MB allocated as the memory for contents is shared among contents that are being displayed by tabs. Because there is a limit to this memory for contents, when creating a PlayStation®3 content, take note of its memory size. Refrain from using large image sizes to reduce memory consumption.

Example:

When using an image of width 1280px and height 720px, the memory space for contents that this image will consume is as follows.

1280 x 720 x 4 bytes = approximately 3.5MB

FAQ 2: How can I keep the scroll bar hidden?

Input as follows in the body tag of the HTML input to hide the scroll bar.

```
<body scroll="no">
```

Note however, that when this is specified, the scroll bar will not be displayed even for contents to be scrolled.

FAQ 3: How can I move the cursor over Adobe Flash Player content?

The mouse cursor can usually be moved using the up/left/right/down buttons of the controller for PlayStation®3. However, when the mouse cursor is over an Adobe Flash content, the controller events will be obtained by the Adobe Flash content instead of the Internet browser. Thus, you will hereafter be unable to move the mouse cursor using the up/left/right/down buttons of the controller.

Because the Internet browser is unable to obtain whether or not the Adobe Flash content is using the up/left/right/down buttons in the current specifications, Adobe Flash content is always prioritized.

FAQ 4: How can I display Adobe Flash Player content on a full screen?

System software 2.53 or later supports full-screen display.

To display Adobe Flash content full-screen, set true to allowFullScreen with a tag, and use ActionScript to specify as follows.

```
Stage.displayState = StageDisplayState.FULL_SCREEN
```

Hardware acceleration is always enabled in the Adobe Flash Player full-screen function.

8 Appendix

Detailed HTML Specifications

The Internet browser is pursuant to HTML 4.01. The elements supported by the Internet browser are as follows. However, note that even when an element is indicated as being usable, its attributes noted as unsupported cannot be used.

Usable element	Description	Unsupported attribute
A	anchor	hreflang, charset
ABBR	abbreviated form (e.g., WWW, HTTP, etc.)	
ACRONYM		
ADDRESS	information on author	
AREA	client-side image map area	alt
B	bold text style	
BASE	document base URI	
BASEFONT	base font size	
BDO	I18N BiDi over-ride	rtl, ltr
BIG	large text style	
BLOCKQUOTE	long quotation	
BODY	document body	
BR	forced line break	
BUTTON	push button	tabindex, accesskey
CAPTION	table caption	
CENTER	shorthand for DIV align=center	
CITE	citation	
CODE	computer code fragment	
COL	table column	span, width, align, valign, char, charoff
COLGROUP	table column group	span, width, align, valign, char, charoff
DD	definition description	
DEL	deleted text	
DFN	instance definition	
DIR	directory list	
DIV	generic language/style container	
DL	definition list	compact
DT	definition term	
EM	emphasis	
FIELDSET	form control group	
FONT	local change to font	
FORM	interactive form	accept-charset, charset
FRAME	subwindow	noresize
FRAMESET	window subdivision	
H1	heading	
H2	heading	
H3	heading	
H4	heading	
H5	heading	
H6	heading	
HEAD	document head	
HR	horizontal rule	

Usable element	Description	Unsupported attribute
HTML	document root element	
I	italic text style	
IFRAME	inline subwindow	
IMG	Embedded image	alt, longdesc
INPUT	form control	accesskey, alt
INS	inserted text	
KBD	text to be entered by the user	
LABEL	form field label text	
LEGEND	fieldset legend	
LI	list item	
LINK	a media-independent link	
MAP	client-side image map	
MENU	menu list	
META	generic metainformation	
NOFRAMES	alternate content container for non frame-based rendering	
NOSCRIPT	alternate content container for non script-based rendering	
OBJECT	generic embedded object	data, type
OL	ordered list	
OPTGROUP	option group	label
OPTION	selectable choice	disabled
P	paragraph	
PARAM	named property value	
PRE	preformatted text	
S	strike-through text style	
SAMP	sample program output, scripts, etc.	
SCRIPT	script statements	
SELECT	option selector	multiple, disabled
SMALL	small text style	
SPAN	generic language/style container	
STRIKE	strike-through text	
STRONG	strong emphasis	
STYLE	style info	
SUB	subscript	
TABLE	table class displayed	
TBODY	table body	
TD	table data cell	
TEXTAREA	multi-line text field	
TFOOT	table footer	
TH	table header cell	
THEAD	table header	
TITLE	document title	
TR	table row	
TT	teletype or monospaced text style	
U	underlined text style	
UL	unordered list	
VAR	instance of a variable or program argument	

Initial Values and Limits

The initial values and limits for items that can be changed by user operation, user setting, or specification from the application are as follows.

Category	Item	Initial value	Limit/Scope	Supporting system software
Display	Font size	Standard	-2/-1/Standard size/1/2	1.00 or later
Tool	Display area	Standard size	-2/-1/Standard size/Full pixels	1.00 or later
	Browser termination confirmation	On	On/Off	1.00 or later
Cookie	Receiving cookies	Allow	Allow/Prohibit	1.00 or later
	Size	-	4KB	1.00 or later
	Number of cookies	-	20 entries/1 domain	1.00 or later
JavaScript™	JavaScript™	On	On/Off	1.00 or later
Tab	Number of tabs	6	1 - 6	1.00 or later
Character input	Address input	-	1024 characters	1.00 or later
	Homepage setting	-	1024 characters	1.00 or later
	Form input	-	1024 characters	1.00 or later
Bookmark	Number of saved entries	-	1000 entries	1.00 or later
	Number of characters for an address	-	1024 characters	1.00 or later
	Number of characters for a title	-	1024 characters	1.00 or later
History	Number of saved entries	-	1000 entries	1.00 or later