

Web Content Guidelines for PlayStation®4

Version 2.50

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1 About This Document

This document provides information for creating Web content for the Internet Browser implemented on the PlayStation®4 system software. The required client specifications, technical information, and 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 ("X.XX or later") is noted whenever differences exist depending on the version of the system software.

2 Basic Specifications of the Internet Browser

This chapter describes the basic specifications of the Internet Browser.

Standard Web Specifications

The Internet Browser supports the following standard Web specifications.

- HTML 4.01
- XHTML 1.1
- CSS 2.1 and partial CSS3
- JavaScript™ Version 1.7 (based on ECMA-262 3rd edition)
- DOM Level 2

Security

The Internet Browser complies with the following standard Web specifications.

- SSL v3.0
- TLS

Viewport

Viewport is not supported.

Vector Graphics

The canvas and svg elements are used to render vector graphics.

The following is an example.

```
<canvas id="mycanvas" width="600" height="400"></canvas>

<svg>
  <rect x="0" y="0" width="100" height="100" fill="blue">
</svg>
```

The canvas element only supports 2D contexts.

Media Playback

To play a video, use the video element.

```
<video src="myvideo.mp4"></video>
```

Audio playback using the audio element is not supported.

User Agent

The user agent string provided by the Internet Browser on PlayStation®4 is as follows.

```
Mozilla/5.0 (PlayStation 4 x.xx) AppleWebKit/xxx.xx (KHTML, like Gecko)
```

- PlayStation 4 x.xx
This represents the platform name and the version of the system software.
- AppleWebKit/xxx.xx
This represents the build number of the WebKit engine.

It is not recommended to detect Web browser functionality with the user agent. If you want to separate processing according to whether or not the Web browser supports certain functionalities, use object detection. Only use the user agent when object detection cannot detect functionalities or when contents must be strictly categorized by the Web browser.

Root Certificates

PlayStation®4 is embedded with the following root certificates and they are used in SSL connections of the Internet Browser.

No.	Certificate
	The Go Daddy Group, Inc.
6	Go Daddy Class 2 Certification Authority
	GoDaddy.com, Inc.
7	Go Daddy Root Certificate Authority - G2
	Starfield Technologies, Inc.
8	Starfield Class 2 Certification Authority
9	Starfield Root Certificate Authority - G2
10	Starfield Services Root Certificate Authority
11	Starfield Services Root Certificate Authority - G2
	ValiCert, Inc.
47	ValiCert Class 1 Policy Validation Authority
12	ValiCert Class 2 Policy Validation Authority
40	ValiCert Class 3 Policy Validation Authority
	GeoTrust Inc.
13	GeoTrust Global CA
	Equifax Secure Inc.
14	Equifax Secure Certificate Authority
15	Equifax Secure eBusiness CA-1
16	Equifax Secure Global eBusiness CA-1
	Comodo CA Limited
17	AAA Certificate Services
	AddTrust AB
18	AddTrust External CA Root
	The USERTRUST Network
19	UTN-USERFirst-Hardware
	VeriSign, Inc.
20	Class 3 Public Primary Certification Authority
21	Class 3 Public Primary Certification Authority - G2
22	VeriSign Class 3 Public Primary Certification Authority - G3
23	VeriSign Class 3 Public Primary Certification Authority - G5
24	VeriSign Class 4 Public Primary Certification Authority - G3
25	VeriSign Universal Root Certification Authority
	Thawte Consulting cc
26	Thawte Premium Server CA
27	Thawte Server CA
29	Thawte Premium Server CA (Serial Number: 1)
	thawte, Inc.
28	thawte Primary Root CA
	GlobalSign nv-sa
30	GlobalSign Root CA (Serial Number: 04:00:00:00:00:01:15:4b:5a:c3:94)
	GlobalSign
31	GlobalSign (Serial Number: 04:00:00:00:00:01:0f:86:26:e6:0d)
32	GlobalSign (Serial Number: 04:00:00:00:00:01:21:58:53:08:a2)
	Entrust.net

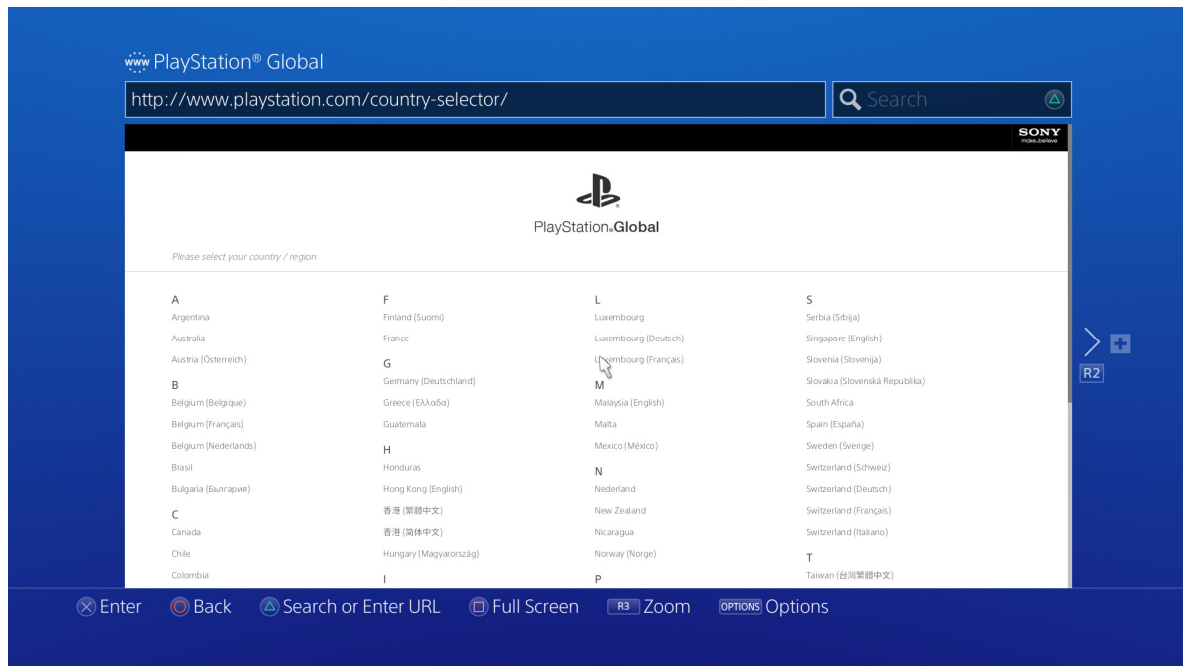
No.	Certificate
33	Entrust.net Secure Server Certification Authority
34	Entrust.net Certification Authority (2048)
	Entrust, Inc.
35	Entrust Root Certification Authority
36	Entrust Root Certification Authority - G2
	DigiCert Inc.
37	DigiCert High Assurance EV Root CA
38	DigiCert Assured ID Root CA
39	DigiCert Global Root CA
	RSA Security Inc
41	RSA Security 2048 V3
	Baltimore
42	Baltimore CyberTrust Root
	GTE Corporation
43	GTE CyberTrust Global Root
	Cybertrust, Inc.
44	Cybertrust Global Root
	StartCom Ltd.
45	StartCom Certification Authority
46	StartCom Certification Authority G2
	SECOM Trust.net
48	Security Communication RootCA1
	SECOM Trust Systems CO.,LTD.
49	Security Communication RootCA2
	SecureTrust Corporation
50	SecureTrust CA

Window Size

The size of the window displayed by the Internet Browser for showing Web contents differs between standard display and full-screen display, as follows.

- Standard: width 1540 pixels, height 754 pixels
- Full screen: width 1920 pixels, height 1080 pixels

Figure 1 Example of Standard Display of Web Contents



On full-screen display, display of Web contents is spread over the entire screen and content at the edges may be hidden by the screen peripherals on some displays. When creating Web content, consider a full-screen display and avoid displaying important information near the peripherals. This extra space is called the "safety zone".

Control of the Mouse Cursor

The position of the mouse cursor cannot be set from the Web page. The moving position cannot arbitrarily be changed for mouse cursor operation using the directional keys as well.

Downloads and Uploads

The downloading and uploading of files are not supported.

3 Events

Input Operation Events

Input Devices

The Internet Browser supports the following devices.

- DUALSHOCK®4 wireless controller
- USB/Bluetooth® keyboard

Use the DUALSHOCK®4 wireless controller to operate the onscreen mouse cursor. The cursor can be moved with the left stick. Clicks can be made with the Enter button (either the circle button or cross button depending on the region). It is also possible to jump to elements that can be clicked using the directional keys. Other buttons will be assigned to features unique to the Internet Browser.

For details, refer to the PlayStation®4 User's Guide.

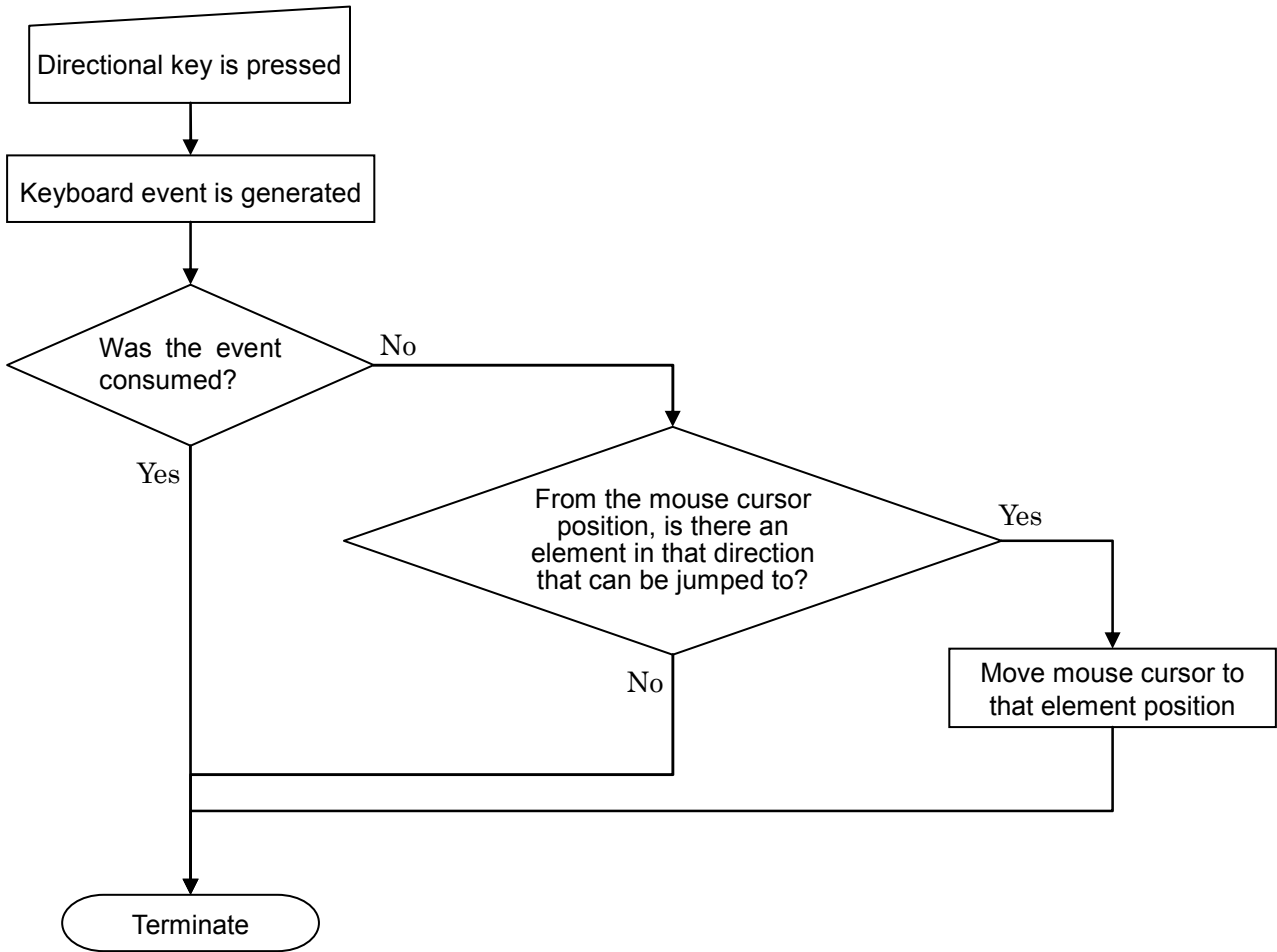
Input Operation Obtainment

Given the above-described input device operations, general mouse events and keyboard events will be generated. Web contents cannot individually obtain information of various buttons and the touchpad of the DUALSHOCK®4 wireless controller.

Directional Key Behavior

The directional keys of the DUALSHOCK®4 wireless controller are usually used to jump to elements near the mouse cursor that can be clicked; at this time, processing indicated in Figure 2 is carried out. With Web content, the `preventDefault` method can be called upon generation of a keyboard event in order to cancel the mouse cursor movement triggered by that event.

Figure 2 Directional Key Behavior



Window's Focus Events

Multiple windows can be opened at the same time on the Internet Browser. When switching between these windows, the onfocus/onblur event is generated for the window object. The same onblur event is generated when the PS button is pressed to return to the home screen.

Character Input Field's Focus Event

The software keyboard or the USB/Bluetooth® keyboard is used to input characters to the Internet Browser; however, in either case, character input cannot be started just by setting the focus on the input element or textarea element (at the onfocus event generation timing). To start character input, one of the following operations is required from the user.

- Click the mouse on the character input field
- Press the Enter key while the focus is on the character input field

Moreover, the focus is kept on the character input field when the software keyboard is closed. To release this focused state, the user must click the mouse on another element or explicitly remove the focus with a script. Note that the onchange event will be generated for the character input field when the focus is removed from the element and not when the software keyboard is just closed.

4 Software Keyboard

This chapter describes the behavior of the software keyboard upon entering characters to the Internet Browser.

Role of the Done Key

The Done key on the software keyboard serves the role of the Enter key (key code 13). Because of this, the Enter key event is generated when the Done key is pressed for the character input field of the input element placed on the form and the form is submitted. When the Done key is pressed for the character input field of the textarea element, the software keyboard just closes and the Enter key event is not issued. The Enter key event is also not issued when the user presses the return button (cross button or circle button depending on the region) to close the software keyboard.

Language Specification with the lang Attribute

The software keyboard supports multiple languages, but the Internet Browser displays the software keyboard in the language specified by the lang attribute of the input element. When there is no language specification or when the specified language is not supported, the display language setting of the PlayStation®4 system will be used.

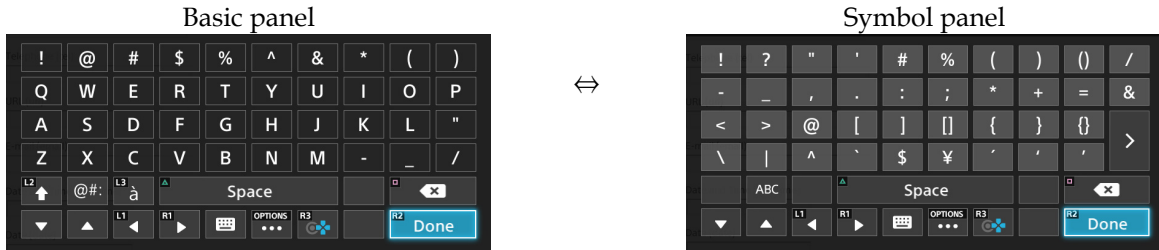
The languages supported by the Internet Browser are as follows.

lang attribute	Description
ar	Arabic
da	Danish
de	German
en, en-US	English (United States)
en-GB	English (United Kingdom)
es	Spanish (Spain)
es-419	Spanish (Latin America)
fi	Finnish
fr	French (France)
fr-CA	French (Canada)
it	Italian
ja	Japanese
ko	Korean
nl	Dutch
no	Norwegian
pl	Polish
pt, pt-PT	Portuguese (Portugal)
pt-BR	Portuguese (Brazil)
ru	Russian
sv	Swedish
tr	Turkish
zh, zh-Hans	Chinese (simplified)
zh-Hant	Chinese (traditional, Taiwan)
zh-Hant-HK	Chinese (traditional, Hong Kong)

Panel Specification with the type Attribute

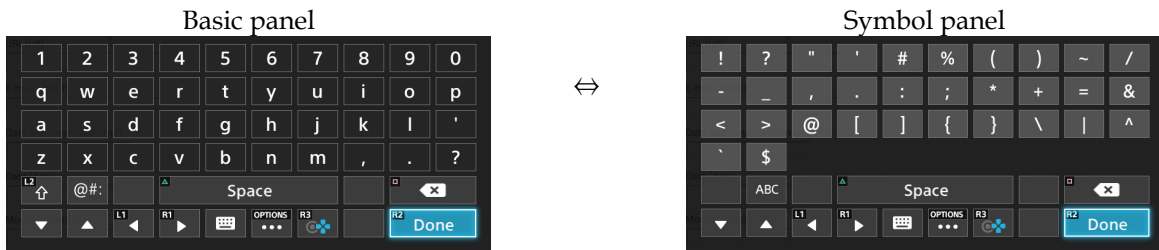
The software keyboard has panels supporting various input modes. The Internet Browser selects the appropriate browser according to the value specified to the type attribute of the input element. Examples of when the language is English are given below.

type="text", "search", "datetime", "date", "month", "week", "time", "datetime-local", "color"

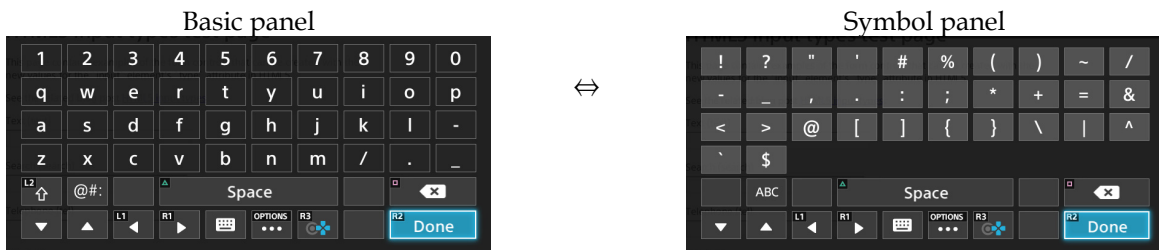


* Example when the automatic capitalization on the keyboard is enabled and when the first character is input

type="tel"



type="url"



type="email"



type="number"



* Only the basic panel