

[Focus Appearance reboot Take 1](#)

[Focus Appearance reboot Take 2](#)

[Focus Appearance](#)

[Focus Not Obscured](#)

[Definitions \[new\]](#)

[encompasses](#)

[focus indicator](#)

[Focus Appearance reboot Take 3](#)

[Focus Appearance](#)

[Focus Appearance reboot Take 4](#)

[Focus Appearance](#)

[Focus Appearance reboot Take 5](#)

[Focus Appearance](#)

[Examples for assessing](#)

Focus Appearance reboot Take 1

Working from [current editor's draft](#). Goals: 1) *reswizzle so focus indicator becomes measure instead of UIC*; 2) *as with move from Target Offset to Target Size, lead with the desired outcome and put the complexity in the exception*; 3) *work in exceptions for unadulterated user agent focus indicators*

Focus Appearance

When the keyboard focus indicator is visible, all of the following are true:

- The [focus indicator](#) encompasses the [user interface component](#)
- The [focus indicator](#) has a contrast ratio of at least 3:1 against the same pixels in the unfocused states
- The indicator has a contrast ratio of least 3:1 against adjacent colors.

Exceptions:

- The focus indicator and its background color are determined by the user agent and not modified by the author, or
- The focus indicator is defined by the user-agent and cannot be adjusted by the author, or
- An area of the focus indicator, at least as large as a 4 CSS pixel thick line along the shortest side of a [minimum bounding box](#) of the unfocused component, and no thinner than 2 CSS pixels, has a contrast ratio of at least 3:1 against the same pixels in the unfocused state and against adjacent colors.

Focus Not Obscured

When a [user interface component](#) receives keyboard focus, the component is not [entirely] hidden by author-created content.

focus indicator

pixels that are changed to visually indicate when a user interface component is in a focused state.

Encompasses

Surrounds, bounds or includes the whole of

Focus Appearance reboot Take 2

Goals: 1) *update preamble based on agwg responses*; 2) *attempt to trim verbage*; 3) *polish separated Focus Not Obscured SC*

Focus Appearance

When a user interface component has keyboard focus, the [focus indicator](#):

- [encompasses](#) the [user interface component](#)
- has a contrast ratio of at least 3:1 between its pixels in the focused and unfocused states
- has a contrast ratio of at least 3:1 against adjacent colors.

Exceptions:

- The focus indicator is defined by the user-agent and cannot be adjusted by the author, or
- The focus indicator and its background color are not modified by the author, or
- An area of the focus indicator, at least as large as a 4 CSS pixel thick line along the shortest side of a [minimum bounding box](#) of the unfocused component, and no thinner than 2 CSS pixels, has a contrast ratio of at least 3:1 against the same pixels in the unfocused state and against adjacent colors.

Focus Not Obscured

When a [user interface component](#) receives keyboard focus, the component is not hidden by author-created content.

Definitions [new]

encompasses

surrounds, bounds or includes the whole of

focus indicator

pixels that are changed to visually indicate when a user interface component is in a focused state.

Focus Appearance reboot Take 3

Goals: 1) *try to allow for gradations, etc in the focus indicator*

Focus Appearance

When a user interface component has keyboard focus, the [focus indicator](#):

- encompasses the [user interface component](#)
- has a majority of pixels that contrast at least 3:1 between the focused and unfocused states
- has a contrast ratio of at least 3:1 against adjacent colors.

Exceptions:

- The focus indicator is defined by the user-agent and cannot be adjusted by the author, or
- The focus indicator and its background color are not modified by the author, or
- An area of the focus indicator, at least as large as a 4 CSS pixel thick line along the shortest side of a [minimum bounding box](#) of the unfocused component, and no thinner than 2 CSS pixels, has a contrast ratio of at least 3:1 against the same pixels in the unfocused state and against adjacent colors.

Focus Appearance reboot Take 4

Goals: 1) *friendly amendment by David MacDonald to address gradient focus indicators, by removing “majority” from take 3 and including a 4th exception for minimum size to remove ambiguity of “majority of pixels”*

Focus Appearance

When a user interface component has keyboard focus, the [focus indicator](#):

- encompasses the [user interface component](#)
- has a contrast at least 3:1 between the focused and unfocused states
- has a contrast ratio of at least 3:1 against adjacent colors.

Exceptions:

- The focus indicator is defined by the user-agent and cannot be adjusted by the author, or
- The focus indicator and its background color are not modified by the author,
- The focus indicator is at least as large as a 4 CSS pixel thick line along the shortest side of a [minimum bounding box](#) of the unfocused component, and no thinner than 2 CSS pixels, has a contrast ratio of at least 3:1 against the same pixels in the unfocused state and against adjacent colors, or
- The focus indicator is at least the area of a 1 [CSS pixel](#) thick [perimeter](#) of the unfocused component and has a contrast ratio of at least 3:1 against the same pixels in the unfocused state and against adjacent colors.

Focus Appearance reboot Take 5

Goals: 1) *an attempt to simplify the 3rd bullet exception to accommodate a focus indicator that includes but is not just comprised of a contrasting 1 css pixel perimeter*

Focus Appearance

When a user interface component has keyboard focus, the [focus indicator](#):

- encompasses the [user interface component](#)
- has a contrast at least 3:1 between the focused and unfocused states
- has a contrast ratio of at least 3:1 against adjacent colors.

Exceptions:

- The focus indicator is defined by the user-agent and cannot be adjusted by the author, or
- The focus indicator and its background color are not modified by the author,
- An area of the focus indicator is at least as large as a 1 CSS pixel [minimum bounding box](#) of the unfocused component, and has a contrast ratio of at least 3:1 against the same pixels in the unfocused state and against adjacent colors

Examples for assessing

<https://alastairc.uk/tests/wcag22-examples/focus-more-visible-6.html>


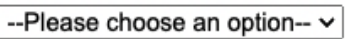
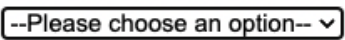
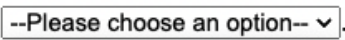
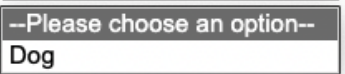

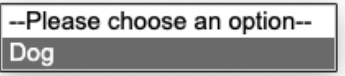

Key things we are looking for:

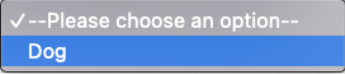


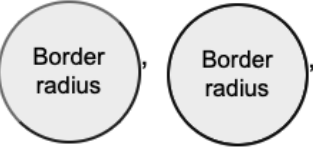
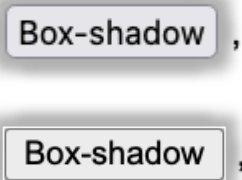
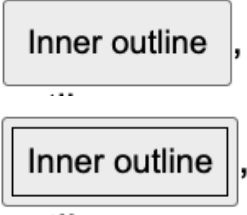
- Decorative effects (box shadows on the component, gradients on the indicators) do not create loopholes or over-burden.
- Non-outline approaches can still work if they are thick & contrasting.
- A short-thick indicator on one side doesn't fail depending on the amount of text in a button.
- The user's perception of where the focus should be is key (i.e. it applies to active-descendant type controls).
- Flipping colours can still work (e.g. changing a button with white background & black text to black background and white text).

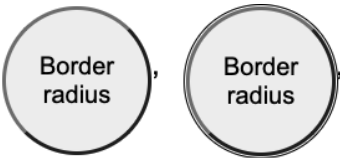

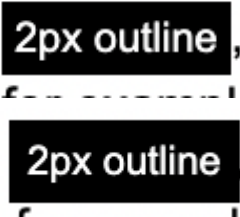
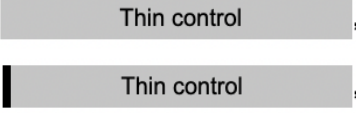
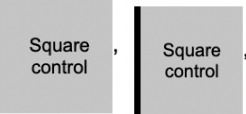

Primary = the first part of version 2 of the SC text above.



Exception = any of the exceptions.



The exception for sizing is: "An area of the focus indicator, at least as large as a 4 CSS pixel thick line along the shortest side of a [minimum bounding box](#) of the unfocused component, and no thinner than 2 CSS pixels, has a contrast ratio of at least 3:1 against the same pixels in the unfocused state and against adjacent colors."



Example (not-focused / focused)	Pass primary?	Pass exception?	Notes
Default button in FF: 	N	Y	The border changes from grey to blue (1.3:1), and is 1px thicker. I don't think that would meet the adjacent color clause. Passes as it is the un-altered browser default.
Select drop-down in focus: :  . :  .	Y	Y	Change of contrast (grey to black) of >4:1.
Select>option in focus: :  .  :  .  FF: 	Y	Y	Note that this isn't style-able, so passes the user-agent exception.

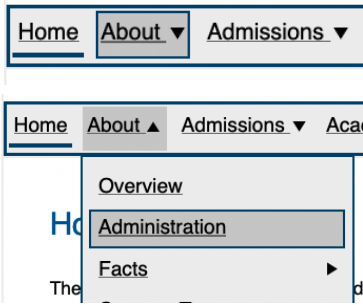

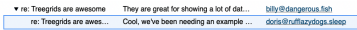
Example (not-focused / focused)	Pass primary?	Pass exception?	Notes
			
Dark-background button in Edge: 	N	N	Subtle change of border color is practically invisible. Background of focus indicator changed, therefore doesn't fit exception. NB: The location of focus indicators varies between browsers, some put it around the item (outline) some change border colors.
Link with white text on white background in FF: 	N	N	Changing the color of the text has changed the color of the focus indicator to match the background (which is not changed).
Extreme border-radius in Edge: 	N	Y	No change of focus indicator or background color from the default, just use of border-radius.
Box shadow, 1px white outline: 	Y?	Y	If "encompasses" excludes decorative content like shadows, this passes. Otherwise it would have to fall through to the exception, where for a 89x21px button + 5px box-shadow = 250px. 4 x 31px = 124px, therefore pass.
Inner outline: 	N	Y	93 x 35px button with outline-offset of -5px, so $(93-10) + (35-10) * 2 = 216$. The exception requires $4 * 25 = 140$ px area. Pass.

Example (not-focused / focused)	Pass primary?	Pass exception?	Notes
<p>Circle with 1px black border, outset by 1px;</p> 	Y	N	<p>Encompassing should work here for a 1px offset outline;</p> <p>Diameter of 80px, so the exception would require $80px * 4 = 320px$.</p> <p>Perimeter = $Pie * D+2$, = 257px</p> <p>It is an unusual case of the maths making this pass the primary clause, but fail the exception.</p> <p>A 1px outline without adjacent contrast would fail.</p>
<p>Border radius:</p> 	Y	Y	<p>Black outline contrasts with the grey border, so has adjacent contrast.</p> <p>When the button is wider and less radius it does pass the exception as well.</p> <p>Button is 98x32px, the straight lines are 80px wide and verticals must be over 32px therefore totals >224px area.</p> <p>$4 * 32 = 128$.</p>
<p>2px non-contrasting outline:</p> 	N	Y	<p>Doesn't pass the adjacent color requirement.</p> <p>Plenty of surface area and meets the exception.</p>
	N	Y	Matches the min requirement
	N	Y	Matches the min requirement
	N	Y	Matches the min requirement

Example (not-focused / focused)	Pass primary?	Pass exception?	Notes
<div>Color reversal</div> <div>Color reversal</div>	N	Y	Way more than 4px in width.
<div>Text moves</div> <div>Text moves</div>	N	N	<p>The text moves 4px to the right, within the component.</p> <p>You could compare the pixels and check the thickness, but I think this fails (and should fail!).</p>
<p>Massively expanded button area beyond the visual area.</p> <div> <small>This button fails current proposed Focus Appearance SC because the author dared to try and make a clickable area much larger than the apparent visual size of the button.</small> </div> <div> <small>This button fails current proposed Focus Appearance SC because the author dared to try and make a clickable area much larger than the apparent visual size of the button.</small> </div>	Y?	Y	<p>Assume that the outline has contrast, the key to this example is that the visible button is way smaller than the actual button and hit-area.</p> <p>If encompasses is tied to the UIC definition (based on perception), then I think this would pass.</p> <p>#UIC-Sizing</p>
<p>Cards:</p> <div>  <p>Art Visually Above Heading</p> <p>This looks perfect. Just Photoshop out the dog, add a baby, and make the curtains blue. There are more projects lined up; charge extra the next time. Can you make the logo bigger? Yes, bigger. Bigger still. The logo is too big.</p> </div> <div>  <p>Art Visually Above Heading</p> <p>This looks perfect. Just Photoshop out the dog, add a baby, and make the curtains blue. There are more projects lined up; charge extra the next time. Can you make the logo bigger? Yes, bigger. Bigger still. The logo is too big.</p> </div>	Y	Y	<p>In the HTML the blue text is the link, and the outline goes around the parent.</p> <p>This version should pass (with contrast) both.</p>

Example (not-focused / focused)	Pass primary?	Pass exception?	Notes								
<div><p>Art Visually Above Heading</p><p>This looks perfect. Just Photoshop out the dog, add a baby, and make the curtains blue. There are more projects lined up; charge extra the next time. Can you make the logo bigger? Yes, bigger. Bigger still. The logo is too big.</p></div> <div><p>Art Visually Above Heading</p><p>This looks perfect. Just Photoshop out the dog, add a baby, and make the curtains blue. There are more projects lined up; charge extra the next time. Can you make the logo bigger? Yes, bigger. Bigger still. The logo is too big.</p></div>	Y?	Y?	<p>If you take the blue text as the UIC, this passes.</p> <p>If you were taking the whole card as the UIC, I don't think it passes either.</p> <p>I think this is ok if we allow the focus indicator to be a hint as to what the UIC is.</p> <p>#UIC-Sizing</p>								
<p><u>Input with expanded focus/select styling:</u></p> <div><div><input type="radio"/> Test 1 Additional text goes here more info. More text could go here to further explain this particular thing.</div><div><input checked="" type="radio"/> Test 2 text goes here interactive. more text here...</div></div>	Y	Y	<p>You could take either the circle (radio button) or the box as the UIC, and it still works.</p> <p>#UIC-Sizing</p>								
<p><u>Combined control</u>, both the box and the arrow work to expand the accordion.</p> <div><div>Product name90n/a▼</div><div>Product name90n/a▼</div></div>	Y?	Y	<p>For sizing, there are multiple interpretations of what the UIC could be. For example, using the arrow on the right does the same function as the button on the left, and mousing over the arrow highlights the button.</p> <p>However, if you are guided by what 'thing' is associated with the focus indicator, then it is clearly the button.</p> <p>#UIC-Sizing</p> <p>(The black outline does contrast with the grey border.)</p>								
<p><u>Selectable table rows</u></p> <table><thead><tr><th>Name</th><th>Information</th></tr></thead><tbody><tr><td>Asset 1</td><td>This asset is great. So very great.</td></tr><tr><td>Asset 2</td><td>This particular asset wants to be great. But it's just sort of ok.</td></tr><tr><td>Asset 3</td><td>This asset is horrible. Absolutely awful and you definitely do not want to learn anything more about it.</td></tr></tbody></table>	Name	Information	Asset 1	This asset is great. So very great.	Asset 2	This particular asset wants to be great. But it's just sort of ok.	Asset 3	This asset is horrible. Absolutely awful and you definitely do not want to learn anything more about it.	N	Y	<p>The 'thing' which gains focus is a hidden radio button, but it is the row that highlights focus. The links are separately focusable, but visually nested inside the row.</p> <p>Doesn't pass the adjacent sizing, but plenty of area & 2px thickness for the sizing exception.</p>
Name	Information										
Asset 1	This asset is great. So very great.										
Asset 2	This particular asset wants to be great. But it's just sort of ok.										
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Example (not-focused / focused)	Pass primary?	Pass exception?	Notes															
			#UIC-Sizing															
ARIA checkboxes <div><input type="checkbox"/> My custom checkbox</div> <div><input type="checkbox"/> My custom checkbox</div>	Y	Y	There is no default-interactive control, it is using attributes & aria to create checkboxes.															
Separated focus indicator: <div><div><input type="radio"/> Markus</div><div><input checked="" type="radio"/> <div> Chloe currently signed in</div></div><div><input type="radio"/> <div> Ash</div></div></div>	Y	Y	<p>When you first focus on the radio buttons there is no ‘selection’ indicator, the focus indicator is the dark area to the right of the radio buttons.</p> <p>Again, if you consider the focus indicator a guide to the ‘thing’, then this as a UIC passes.</p> <p>#UIC-Sizing</p>															
ARIA grid items: <table><thead><tr><th>Date</th><th>Type</th><th>Description</th></tr></thead><tbody><tr><td>01-Jan-16</td><td>Deposit</td><td>Cash Deposit</td></tr><tr><td>02-Jan-16</td><td>Debit</td><td>Down Town Grocery</td></tr><tr><td>03-Jan-16</td><td>Debit</td><td>Hot Coffee</td></tr><tr><td>04-Jan-16</td><td>Debit</td><td>The Filling Station</td></tr></tbody></table> <div><div></div>02-J</div>	Date	Type	Description	01-Jan-16	Deposit	Cash Deposit	02-Jan-16	Debit	Down Town Grocery	03-Jan-16	Debit	Hot Coffee	04-Jan-16	Debit	The Filling Station	Y	Y	<p>The indicator is 3px thick dotted, which is 50% of a solid line, so 50% more than a 1px solid outline.</p> <p>The whole table does not show focus, but each item within it does (like a radio button group).</p> <p>#UIC-Sizing</p>
Date	Type	Description																
01-Jan-16	Deposit	Cash Deposit																
02-Jan-16	Debit	Down Town Grocery																
03-Jan-16	Debit	Hot Coffee																
04-Jan-16	Debit	The Filling Station																
ARIA combobox <div>State<div>Wyoming</div></div> <div>State<div>Wyoming</div></div> <div>State<div>Alaska</div><div>Alabama</div><div>Alaska</div></div>	Y	Y	The component (text input) gets focus, but typing anything and arrowing down highlights an option (with a 2px thick outline).															
ARIA menu	Y	Y	The ‘component’ doesn’t get focus at all, it’s the descendant elements.															

Example (not-focused / focused)	Pass primary?	Pass exception?	Notes
			
<p>Google docs tooltips:</p> 	Y	Y	<p>Not a traditional indicator, but plenty of size & visibility.</p> <p>(Note that some you need to arrow to, rather than tab.)</p>
<p>ARIA treegrid</p> 	Y	Y	<p>The 'component' doesn't get focus at all, it's the descendant elements.</p>