Mu-An Chiou (@muan)

Previously GitHub (accessibility, JS, WC)

Now Head of Design Systems,

Ministry of Digital Affairs, Taiwan

```
*[headinglevelstart]
```

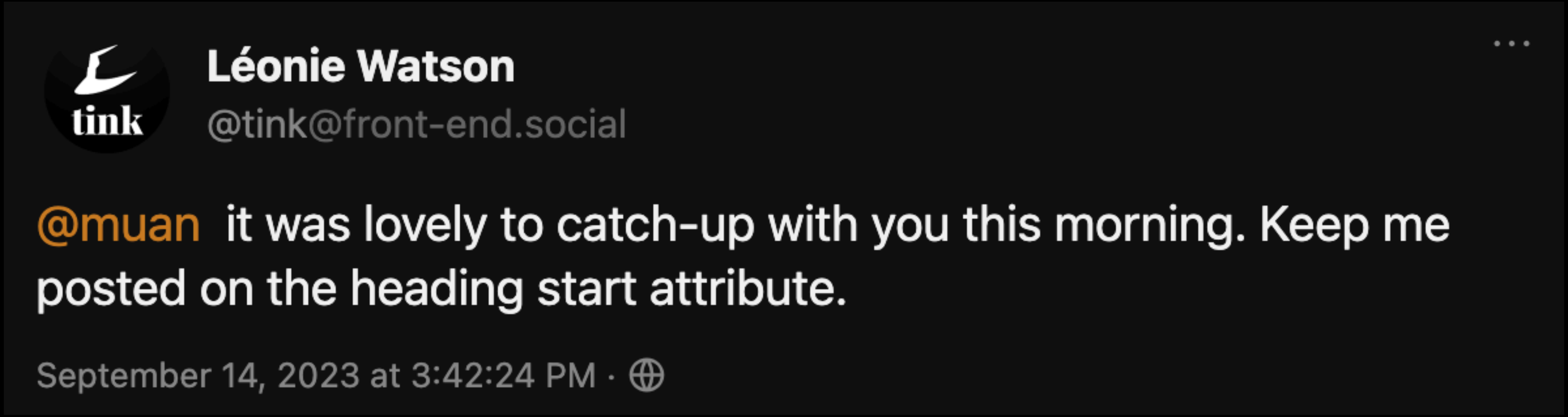
(attribute name/value to be bikeshed)

whatwg/html#5033

Issue participants

- @scottaohara
- @jimmyfrasche
- @aardrian
- @LJWatson
- @patrickhlauke
- @bkardell

Issue summary



Léonie Watson

@tink@front-end.social

@muan it was lovely to catch-up with you this morning. Keep me posted on the heading start attribute.

September 14, 2023 at 3:42:24 PM ·

Why

User generated content can affect application's heading structure, which has adverse affect on accessibility.

Example

```
<h1>jsdom/jsdom</h1>
<h2>Files</h2>
<h2>README.md</h2>
<div><!-- user generated
content starts -->
  <h1>jsdom</h1>
  <h2>Basic usage</h2>
  <h2>Customizing jsdom</h2>
  ...
</div>
<h2>About</h2>
  <h3>Resources</h3>
  <h3>Licenses</h3>
<h2>Releases</h2>
...
```

Heading structure

```
h1 jsdom/jsdom
    h2 Files
    h2 README.md
h1 jsdom
    h2 Basic usage
    h2 Customizing jsdom
    h2 About
        h3 Resources
        h3 licenses
    h2 Releases
```

Previous "solution"

Outline algorithm with `<section>`

Introducing `headinglevelstart`

Think `ol[start]`, but for AT.

Example

```
<h1>jsdom/jsdom</h1>
<h2>Files</h2>
<h2>README.md</h2>
<div headinglevelstart="3"><!--
user generated content starts -->
  <h1>jsdom</h1>
  <h2>Basic usage</h2>
  <h2>Customizing jsdom</h2>
  ...
</div>
<h2>About</h2>
  <h3>Resources</h3>
  <h3>Licenses</h3>
<h2>Releases</h2>
...
```

Heading structure

```
h1 jsdom/jsdom
    h2 Files
    h2 README.md
        h3 jsdom
            h4 Basic usage
            h4 Customizing jsdom
    h2 About
        h3 Resources
        h3 licenses
    h2 Releases
```

Existing "solution"

> If an author can identify what value needs to be set in `headinglevelstart`, then it stands to reason the author can increment that in their own code for each descendant heading instead of offloading that burden to the user agent.

– Adrian Roselli

Counter argument

> The priority of constituencies puts users and authors before implementors, and this seems to be one of the times when that prioritisation is needed. Authors struggle with heading levels as it is, and this has an impact on users. If we ask authors to take on handling more, I'm afraid things will only get harder for authors and worse for users.

– Léonie Watson

Implementation suggestions

- `[headingstartlevel="3"]`
- `[start="h3"]`
- `[start="3"]` (exactly like `ol`)

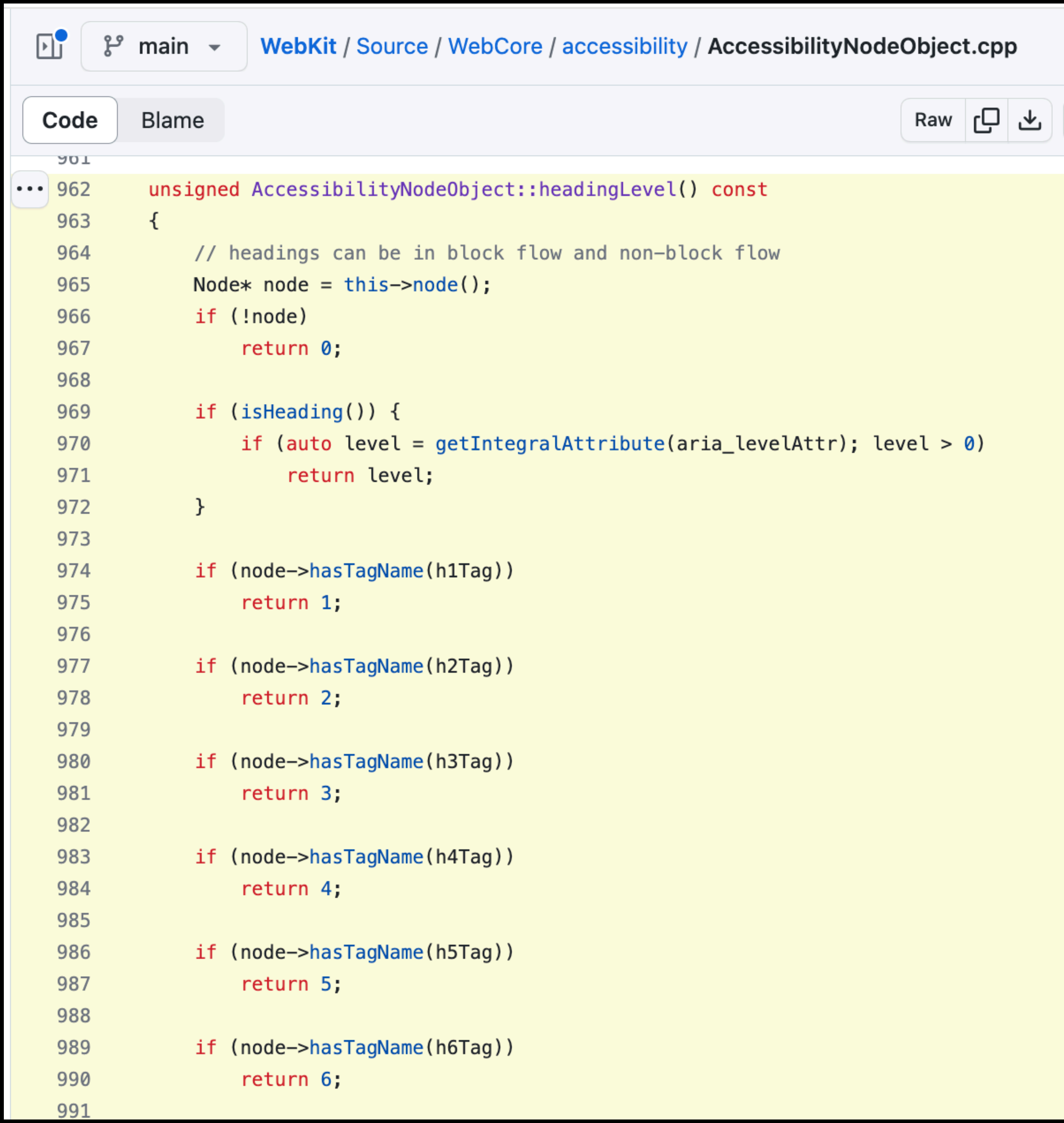
Additional/Optional

IDL

```
interface HTMLHeadingElement {
  [CEReactions] attribute long level;
  ...
};
```

Somewhat answered questions

1. Implementation difficulties?
2. What happens to `[headinglevelstart=3]` + `<h6>` = 9?


main
WebKit / Source / WebCore / accessibility / AccessibilityNodeObject.cpp
Code
Blame
Raw

```cpp
unsigned AccessibilityNodeObject::headingLevel() const
{
    // headings can be in block flow and non-block flow
    Node* node = this->node();
    if (!node)
        return 0;

    if (isHeading()) {
        if (auto level = getIntegralAttribute(aria_levelAttr); level > 0)
            return level;
    }

    if (node->hasTagName(h1Tag))
        return 1;

    if (node->hasTagName(h2Tag))
        return 2;

    if (node->hasTagName(h3Tag))
        return 3;

    if (node->hasTagName(h4Tag))
        return 4;

    if (node->hasTagName(h5Tag))
        return 5;

    if (node->hasTagName(h6Tag))
        return 6;

```

**Good idea? Bad idea?
(browsers friends wdyt?)** →

Name suggestions?

(async to not take up valuable time?) →

Next step?