Proposal: Zoom Features for Media Queries

Tomoaki Konno
KDDI R&D Labs.
2015/8/27@FX TF
Agenda:

• Basic Functionality

• Proposed Features
Basic Functionality:
Overview:

• Draft Spec
  - https://rawgit.com/satakagi/mediaQueryZoom/master/index.html

• New feature
  - Changing styles/contents according to zoom

• Today’s goal
  - Unofficial Draft => Editor’s Draft
Use case:

**Mapping**  
(Ref: http://svg2.mbsrv.net/devinfo/devkddi/lvl0.1/airPort_r1.html)  
e.g. Switch content layers (Landmark)

**High-Resolution Photos**  
(Ref: http://www.microsoft.com/web/solutions/zoomit.aspx)  
e.g. Switch resolution (Char-readable level)
How to Code:

```css
@media (min-zoom: ZoomRatio) { ... }
```

```xml
<style type="text/css">
@media (min-zoom: 1.0) {
  .content {
    display: inline;
  }
}
@media (min-zoom: 2.0) {
  .content {
    display: none;
  }
}
</style>
```
Proposed Features:
Zoom Patterns:

deviceDotSize = \[ \text{resolution[dppx]} \times \text{PinchZoom} \times \text{DocumentScale(root's child)} \times \ldots \times \text{DocumentScale(this)} \times \text{contentSize} \]

resolution[dppx] = \text{nativeResolution} \times \text{PageZoom}
Possible Zooming Types:

<table>
<thead>
<tr>
<th>Device's dot size</th>
<th>UA Native’s zoom</th>
<th>WebApp’s zoom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Window's native CSS pixel size</td>
<td>'zoom'</td>
<td>Root document's css pixel size</td>
</tr>
<tr>
<td>Device's dot size</td>
<td>'zoom-dot'</td>
<td>Root document's css pixel size</td>
</tr>
<tr>
<td>Window's native CSS pixel size</td>
<td>'document-zoom'</td>
<td>contentSize</td>
</tr>
<tr>
<td>Device's dot size</td>
<td>'document-zoom-dot'</td>
<td>contentSize</td>
</tr>
<tr>
<td>Windows's CSS pixel size</td>
<td>'window-scale'</td>
<td>contentSize</td>
</tr>
<tr>
<td>Parent's CSS pixel size</td>
<td>'document-scale'</td>
<td>contentSize</td>
</tr>
</tbody>
</table>
Proposed Zoom Feature:

- "document-zoom" feature
  - Reflect CSS scale transform in addition to pinch zoom
  - Use case
    - e.g. Web page has a map content in iframe.
      - 1) User might zoom in whole web page.
      - 2) User might zoom in only a map content.
      - 3) When the whole web page is zoomed in using pinch zoom (not CSS transform), map content should be changed in some case.

@media (min-document-zoom: 2.0) { ... }
Conclusion:

- **Summary**
  - Basic Functionality
  - Proposed Features

- **Today’s goal**
  - Unofficial Draft $\Rightarrow$ Editor’s Draft
    - New feature: Zoom media features
Points at Issues:

1. Concept is acceptable?

2. Specific zoom feature are acceptable?

3. Terminology.