Web Components
HURRICANE

by Bob Dylan and Jacques Levy

Here comes the story of the Hurricane
The man the authorities came to blame
For somethin’ that he never done
Put in a prison cell, but one time he could-a been
The champion of the world
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A footer typically contains information about its section such as who wrote it, links to related documents, copyright data, and the like.
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Custom Elements
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The champion of the world
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

var XLElement = document.registerElement('x-l', {
    prototype: XLElementPrototype
});
Three bodies lyin’ there does Patty see
And another man named Bello, movin’ around mysteriously
“I didn’t do it,” he says, and he throws up his hands
“I was only robbin’ the register, I hope you understand
I saw them leavin’,” he says, and he stops
“One of us had better call up the cops”
And so Patty calls the cops...
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And another man named Bello, movin’ around mysteriously
“"I didn’t do it,” he says, and he throws up his hands
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“One of us had better call up the cops”
And so Patty calls the cops...
hanging-punctuation
for (var xlElements = document.querySelectorAll('x-l'),
    l = xlElements.length, i = 0; i < l; i++)
{
    if (/^([^"\s]+)/.test(xlElements[i].innerHTML))
    {
        xlElements[i].classList.add('hanging-punctuation-start');
    }
}

for (var xlElements = document.querySelectorAll('x-l'), l = xlElements.length, i = 0; i < l; i++)
{
    if (/^\["\]/.test(xlElements[i].innerHTML))
    {
        xlElements[i].classList.add('hanging-punctuation-start');
    }
}

.hanging-punctuation-start
{
    text-indent: -1.42em;
}
for (var xlElements = document.querySelectorAll('x-l'),
    l = xlElements.length, i = 0; i < l; i++)
{
    xlElements[i].innerHTML = xlElements[i].innerHTML
        .replace(/^(""')+/,
            '<span class="hanging-punctuation-start">$1</span>');
}
for (var xlElements = document.querySelectorAll('x-l'), l = xlElements.length, i = 0; i < l; i++) {
  xlElements[i].innerHTML = xlElements[i].innerHTML.replace(/^(""\'|\'|').(<span class="hanging-punctuation-start">\4\5/);
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

var XLElement = document.registerElement('x-l', {
    prototype: XLElementPrototype
});
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

XLElementPrototype.createdCallback = function()
{
  this.innerHTML = this.innerHTML.replace(/^["'\"]+/,
    '<span class="hanging-punctuation-start">$1</span>');
}

var XLElement = document.registerElement('x-l', {
  prototype: XLElementPrototype
});
Shadow DOM
<input placeholder="..."/>

<input type="range"/>

<audio> </audio>
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

XLElementPrototype.createdCallback = function()
{
    this.innerHTML = this.innerHTML.replace(/^(""')+/,
    '<span class="hanging-punctuation-start">$1</span>');</n
var XLElement = document.registerElement('x-l', {
    prototype: XLElementPrototype
});
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

XLElementPrototype.createdCallback = function()
{
  var root = this.createShadowRoot();

  root.innerHTML = this.innerHTML.replace(/\(["'\]\)+/,
      '<span class="hanging-punctuation-start">$1</span>');
}

var XLElement = document.registerElement('x-l', { prototype: XLElementPrototype });
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

XLElementPrototype.createdCallback = function()
{
    var root = this.createShadowRoot();
    root.innerHTML = '<span class="hanging-punctuation-start">
        <span style="display: block; padding-left: 1em; text-indent: -1em; position: relative;">x-l
        {
            display: block;
            padding-left: 1em;
            text-indent: -1em;
            position: relative;
        }
    </span>
</span>';
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

XLElementPrototype.createdCallback = function() {
  var root = this.createShadowRoot();
  root.innerHTML = '<span class="hanging-punctuation-start">x-l
  {
    display: block;
    padding-left: 1em;
    text-indent: -1em;
    position: relative;
  }

  x-l::shadow .hanging-punctuation-start
  {
    position: absolute;
    right: 100%;
    text-align: right;
  }

  var XLElement = document.registerElement('x-l', {prototype: XLElementPrototype});
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

XLElementPrototype.createdCallback = function()
{
  var root = this.createShadowRoot();
  root.innerHTML = x-l
  {
    display: block;
    padding-left: 1em;
    text-indent: -1em;
    position: relative;
  }
}

root.innerHTML = x-l::shadow
{
  position: absolute;
  right: 100%;
  text-align: right;
}

It's been suggested to remove this feature.
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

XLElementPrototype.createdCallback = function() {
  var root = this.createShadowRoot();
  root.innerHTML = x-l {
    display: block;
    padding-left: 1em;
    text-indent: -1em;
    position: relative;
  }

  x-l /deep/ .hanging-punctuation-start {
    position: absolute;
    right: 100%;
    text-align: right;
  }
}

var XLElement = document.registerElement('x-l', {
  prototype: XLElementPrototype
});
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

XLElementPrototype.createdCallback = function() {
  var root = this.createShadowRoot();

  root.innerHTML = '
    <span class="hanging-punctuation-start">
      \x-l
      {
        display: block;
        padding-left: 1em;
        text-indent: -1em;
        position: relative;
      }' >>> .hanging-punctuation-start
    {
      position: absolute;
      right: 100%;
      text-align: right;
    }
  }

var XLElement = document.registerElement('x-l', {prototype: XLElementPrototype});
It's currently disputed whether this combinator should exist.
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

XLElementPrototype.createdCallback = function()
{
    var root = this.createShadowRoot();

    root.innerHTML = this.innerHTML.replace(/^(['"'])+/,
         '<span class="hanging-punctuation-start">$1</span>')

};

var XLElement = document.registerElement('x-l', { 
    prototype: XLElementPrototype
});
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

XLElementPrototype.createdCallback = function()
{
    var root = this.createShadowRoot();

    root.innerHTML = this.innerHTML.replace(/(^\[""\']+)/,
        '<span class="hanging-punctuation-start">$1</span>')
    + '<style>.hanging-punctuation-start { position: absolute;
        right: 100%; text-align: right }
    </style>';}

var XLElement = document.registerElement('x-l', {
    prototype: XLElementPrototype,
});
Templates
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

XLElementPrototype.createdCallback = function()
{
    var result = /^(['"])+/.exec(this.innerHTML);
    if (result)
    {
        var template = document.querySelector('#hanging-punctuation-start-template');
        template.content.querySelector('.hanging-punctuation-start').innerHTML = result[0];
        var clone = document.importNode(template.content, true);
        var root = this.createShadowRoot();
        root.innerHTML = this.innerHTML.substr(result[0].length);
        root.appendChild(clone);
    }
}

var XLElement = document.registerElement('x-l', { prototype: XLElementPrototype });
HTML Imports
<link rel="import" href="hanging-punctuation-start-template.html">
var XLElementPrototype = Object.create(HTMLSpanElement.prototype);

XLElementPrototype.createdCallback = function()
{
  var result = /^([„“’]+)/.exec(this.innerHTML);
  if (result)
  {
    var link = document.querySelector('link[rel="import"]');
    var template = link.import.querySelector('#hanging-punctuation-start-template');
    template.content.querySelector('.hanging-punctuation-start').innerHTML = result[0];
    var clone = document.importNode(template.content, true);
    var root = this.createShadowRoot();
    root.innerHTML = this.innerHTML.substr(result[0].length);
    root.appendChild(clone);
  }
}

var XLElement = document.registerElement('x-l', { prototype: XLElementPrototype });
<table>
<thead>
<tr>
<th>Feature</th>
<th>Chrome</th>
<th>Opera</th>
<th>Safari</th>
<th>Firefox</th>
<th>Edge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Templates</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>HTML Imports</td>
<td>✔️</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Custom Elements</td>
<td>✔️</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Shadow DOM</td>
<td>✔️</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
</tbody>
</table>
An escalator can never break, it can only become stairs. You would never see an “Escalator Temporarily Out Of Order” sign, just “Escalator Temporarily Stairs. Sorry for the convenience. We apologize for the fact that you can still get up up there.”

—Mitch Hedberg
There’s a common misconception that progressive enhancement means that you’ll spend your time dealing with older browsers, but in fact the opposite is true. Putting the basic functionality into place doesn’t take very long at all. And once you’ve done that, you’re free to spend all your time experimenting with the latest and greatest browser technologies, secure in the knowledge that even if they aren’t universally supported yet, that’s okay: you’ve already got your fallback in place.

—Jeremy Keith
The key to thinking about web development this way is realising that there isn’t one final interface—there could be many, slightly different interfaces depending on the properties and capabilities of any particular user agent at any particular moment. And that’s okay. Websites do not need to look the same in every browser.

—Jeremy Keith
Once you truly accept that, it’s an immensely liberating idea. Instead of spending your time trying to make websites look the same in wildly varying browsers, you can spend your time making sure that the core functionality of what you’re building works everywhere, while providing the best possible experience for more capable browsers.

—Jeremy Keith
### Bruce Springsteen's studio albums

<table>
<thead>
<tr>
<th>title</th>
<th>release date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greetings from Asbury Park, N.J.</td>
<td>1973-01-05</td>
</tr>
<tr>
<td>The Wild, the Innocent &amp; the E Street Shuffle</td>
<td>1973-09-11</td>
</tr>
<tr>
<td>Born to Run</td>
<td>1975-08-25</td>
</tr>
<tr>
<td>Darkness on the Edge of Town</td>
<td>1978-06-02</td>
</tr>
<tr>
<td>The River</td>
<td>1980-10-10</td>
</tr>
<tr>
<td>Nebraska</td>
<td>1982-09-20</td>
</tr>
<tr>
<td>Born in the U.S.A.</td>
<td>1984-06-04</td>
</tr>
<tr>
<td>Tunnel of Love</td>
<td>1987-10-09</td>
</tr>
<tr>
<td>title</td>
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</tr>
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<td>--------------------------------------------</td>
<td>---------------</td>
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</tbody>
</table>
<table sortable>
  <caption>Bruce Springsteen’s studio albums</caption>
  <thead>
    <tr>
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    </tr>
  </thead>
  <tbody>
    <tr>
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</table>
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  <caption>Bruce Springsteen’s studio albums</caption>
  <thead>
    <tr>
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    </tr>
    <tr>
      <td>Tunnel of Love</td>
      <time>1987-10-09</time>
    </tr>
  </tbody>
</table>
var XSortableTableElementPrototype = Object.create(HTMLTableElement.prototype);

var XSortableTableElement = document.registerElement('x-sortable-table', {
    prototype: XSortableTableElementPrototype,
    extends: 'table'
});

→ http://codepen.io/gunnarbittersmann/pen/XXwZpP
Custom Elements

Shadow DOM

Templates

HTML Imports
Look Ma, no JS framework!
<!DOCTYPE html>
<html ng-app="analogClockApp">
  <head>
    <meta charset="UTF-8"/>
    <link rel="stylesheet" href="analog-clock.css"/>
  </head>
  <body ng-controller="AnalogClockCtrl">
    <time analog-clock/>
    <script src="angular.min.js"></script>
    <script src="analogClockApp.js"></script>
  </body>
</html>
analogClockTemplate.html

<div class="face">
  <div class="hour-hand" style="transform: rotate({{ 30 * (now | date:'h') + (now | date:'m') / 2 }}deg)"></div>
  
  <div class="minute-hand" style="transform: rotate({{ 6 * (now | date:'m') }}deg)"></div>
  
  <div class="second-hand" style="transform: rotate({{ 6 * (now | date:'s') + (now | date:'m') * 360 + (now | date:'h') * 360 }}deg)"></div>
</div>
.face
{
  width: 250px;
  height: 250px;
  position: relative;
  background-position: left top;
  transform: translate(461px,51px) rotateX(46deg) rotateY(27deg) rotateZ(-38deg);
}

.hour-hand
{
  width: 4%;
  height: 35%;
  background: hsl(0, 0%, 95%);
  position: absolute;
  left: 48%;
  top: 25%;
  transform-origin: center 71.43%;
}
var analogClockApp = angular.module('analogClockApp', []);

analogClockApp.directive('analogClock', function ()
{
    return {
        templateUrl: 'analogClockTemplate.html'
    };
});
analogClockApp.controller('AnalogClockCtrl', function ($scope, $timeout) {

  $scope.now = 'Loading...';

  var updateTime = function () {

    $timeout(function () {
      $scope.now = new Date();
      updateTime();
    }, 1000);

  };

  updateTime();
});
My javascript is shit -> I should learn more javascript
My CSS is shit -> I'll do it with javascript
Web Components

Hurricane
written by Bob Dylan
and Jacques Levy

Blinded by the Light
written by Bruce Springsteen

Copenhagen Metro Escalators
photo by Stig Nygaard, CC-BY-2.0