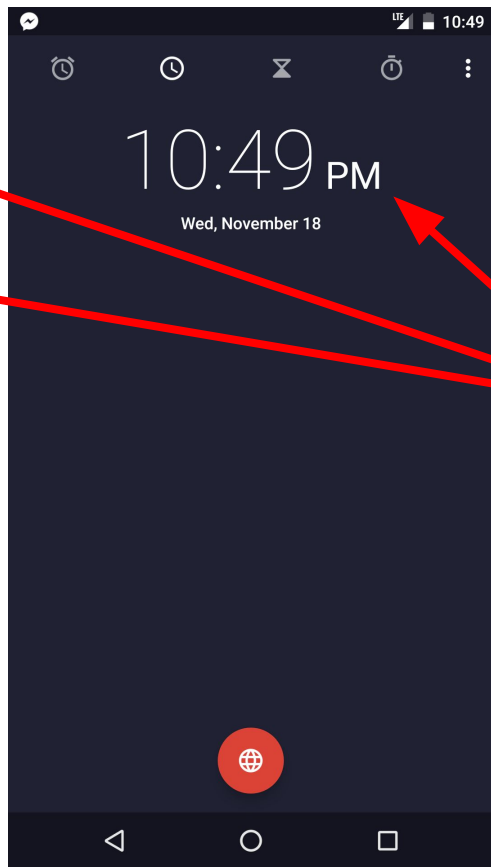
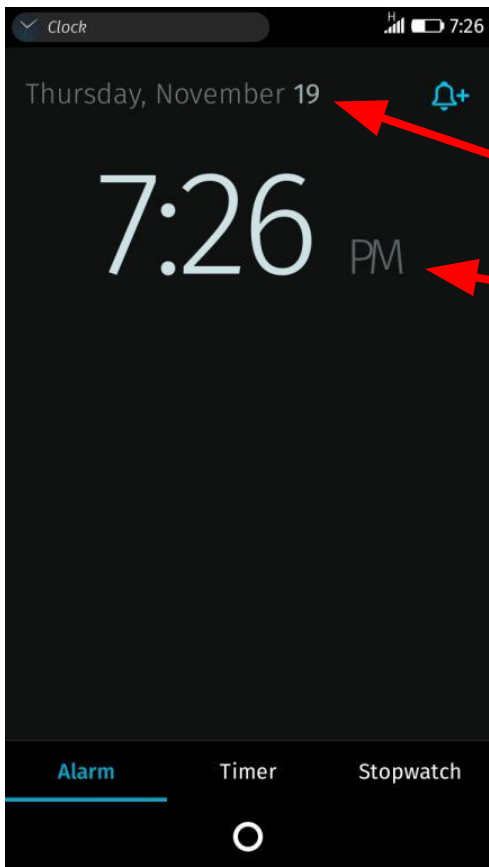


formatToParts

ECMA 402 Proposal

Zibi Braniecki (Mozilla)
Eric Ferraiuolo (Yahoo)
Steven Loomis (IBM)
Caridy Patiño (SalesForce)
Rafael Xavier de Souza (jQuery)



How do we do this in a
i18n-aware way in JS?

Problem: format() Returns Opaque Strings

```
let df = new Intl.DateTimeFormat('en', {  
  year: 'numeric',  
  month: 'long',  
  day: 'numeric'  
});
```

```
df.format(Date.now()); // "November 18, 2015"
```

Problem: format() Returns Opaque Strings

[[pattern]] "{month} {day}, {year}"



"November 18, 2015"

Proposal: formatToParts()

- **Intl.DateTimeFormat.prototype.formatToParts**
- **Intl.NumberFormat.prototype.formatToParts**
- Enable i18n-aware rich-text formatting
- Lower-level, *explains* format()
- Returns: Array<{type: string, value: string}>
- <https://github.com/tc39/ecma402/issues/30>

Proposal: formatToParts()

```
let df = new Intl.DateTimeFormat('en', {  
  year: 'numeric',  
  month: 'long',  
  day: 'numeric'  
});
```

```
let parts = df.formatToParts(Date.now());  
console.log(parts); // ...
```

Proposal: formatToParts()

```
[  
  {type: 'month',    value: 'November'},  
  {type: 'literal', value: ' '},  
  {type: 'day',     value: '18'},  
  {type: 'literal', value: ', '},  
  {type: 'year',    value: '2015'}  
]
```

Proposal: formatToParts()

```
let formattedDate = df.formatToParts(Date.now());  
  .map(({type, value}) => {  
    if (type === 'month') {  
      return `${value}`;  
    }  
    return value;  
  })  
  .reduce((string, part) => string + part);
```

November 18, 2015

How: Adding to ECMA 402

- New abstract operation used by `format()` and `formatToParts()`
- Instead of substring replace on `[[pattern]]`, split into a List of parts
 - `DateTimeFormat: [[pattern]], [[pattern12]]`
 - `NumberFormat: [[positivePattern]], [[negativePattern]]`
- Add new `formatToParts` prototype accessor `[[Get]]`:
 - `Intl.DateTimeFormat.prototype.formatToParts`
 - `Intl.NumberFormat.prototype.formatToParts`

Current Status

- Draft implementation in Intl.js Polyfill
- Patch for Gecko (b.m.o bug 1216150)
- Want feedback from implementers
- Advance to Stage 1