



Live Updates (Ajax for Seaside)

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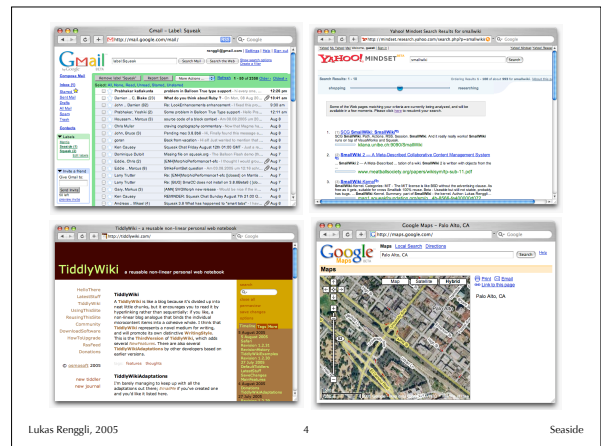
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Problem

- ✧ HTTP (1989) and HTML (1992) are both very outdated and didn't change much in the past.
- ✧ Customers ask for *rich* web UIs, that are quick and easy to navigate.

Solution

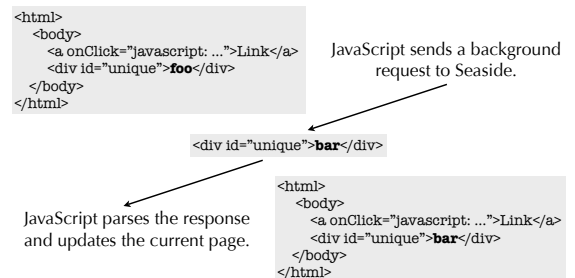
- ✧ JavaScript Trick: do a request in the background and selectively update the current page
- ✧ Avoids a full reload of the browser window
- ✧ The web application feels more responsive
- ✧ Enhanced form elements give better user-experience



Live Updates in Seaside

- ✧ Seaside is a server-based web framework that doesn't require JavaScript.
- ✧ A small JavaScript library is included into the resulting HTML to enable live updates.
- ✧ You don't need to know about JavaScript.
- ✧ Smalltalk rendering code defines the live-updates and live-actions of the particular components.

Live Update Handling



Live Anchor

- ✧ Render an anchor with a live action:

```
html
  anchorWithAction: [ ]
  liveAction: [ :renderer | ... ]
  text: 'Anchor'.
```

Live Anchor

SomeComponent>>renderContentOn: html

```
self renderTimeOn: html.
html
  anchorWithAction: [ ]
  liveAction: [ :renderer |
    self renderTimeOn: renderer ]
  text: 'Update'.
```

SomeComponent>>renderTimeOn: html

```
html divNamed: 'time' with: Time now.
```

Live Form Elements

- ✧ Render a text field with live callback:

```
html
  textInputWithCallback: [ :value | ... ]
  liveCallback: [ :value :renderer | ... ].
```

- ✧ Render a drop-down list-box with live callback:

```
html
  selectFromList: self collection
  selected: self selected
  callback: [ :value | ... ] labels: [ :value | ... ]
  liveCallback: [ :value :renderer | ... ].
```

Live Scroll-bar

- ✧ Tables with many rows are slow to render and require a lot of data to be transferred to the client.

- ✧ Render an live scroll-bar and update text, tables, text-boxes, etc.:

```
html
  scrollbarWithHeight: self heightInPixels
  size: self numberOfItems
  liveCallback: [ :value :renderer | ... ].
```

Live Scroll-bar

SomeComponent>>renderContentOn: html

```
self renderValue: 0 on: html.
html
  scrollbarWithHeight: 100
  size: 1000
  liveCallback: [ :value :renderer |
    self renderValue: value on: renderer ].
```

SomeComponent>>renderValue: anInteger on: html

```
html spanNamed: 'scroll' with: anInteger.
```

Live Refresh

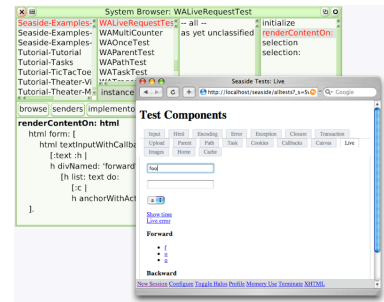
- ✧ Render an automatically refreshing div:

```
html
  refreshDivNamed: 'id'
  with: [ :value :renderer | ... ]
  every: self duration.
```

Live Refresh

```
SomeComponent>>renderContentOn: html  
html  
refreshDivNamed: 'theTimeIsNow'  
with: [ :value :renderer |  
  renderer render: Time now ]  
every: 2 seconds.
```

Example



Summary

Live Updates greatly enhances the user experience of web applications and Seaside makes it a breeze to enable live updates in your code.

Further Reading

- ✧ Ajax Patterns
 - ✧ <http://ajaxpatterns.org/>
- ✧ Avi Bryant, HREF Considered Harmful:
 - ✧ <http://www.cincomsmalltalk.com/userblogs/avi/blogView?entry=3268075684>
- ✧ Lukas Renggli, Seaside Tutorial:
 - ✧ Exercise: 24