

Rich Internet with JavaServer Faces, Facelets and Ajax4jsf

O'Reilly Boston Ignite

5/31/2007



irish pub

Cambridge, Ma

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Kendall Sq # 100, Cambridge, MA
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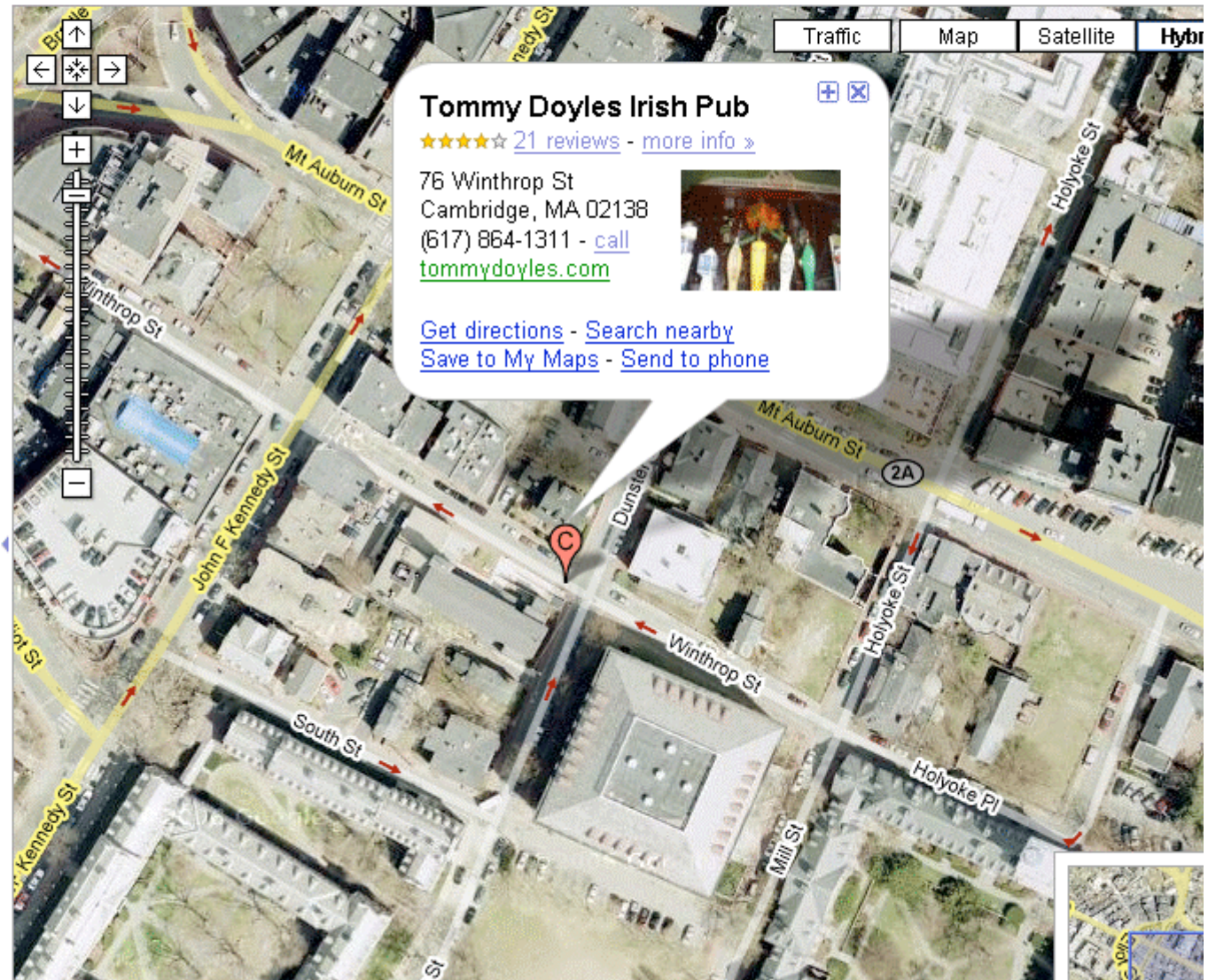
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(617) 718-0217

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category: Irish



JavaServer Faces & Facelets

- JavaServer Faces
 - event-driven
 - component-based
- Facelets
 - Templating framework for JSF
 - Simplifies JSF development
 - Composition component

Ajax: the good, the bad and the ugly

- Ajax - asynchronous JavaScript + XML
- the good: supports updating a portion of the page with an asynchronous request.
- the bad: complexity – lots of JavaScript and potential browser incompatibilities
- the ugly: content, formatting and code are all wrapped up in JavaScript.

Ajax framework (ajax4jsf)

- encapsulates JavaScript that performs core functions
- provides components for common functions
- integrates with JavaServer Faces
- frees developer from repetitive, error prone tasks



As you type, Google

rich in	
rich internet applications	112,000,000 results
rich internet application	117,000,000 results
rich internet application development	32,300,000 results
rich industries	25,300,000 results
rich internet application goodness	864,000 results
rich in love	88,100,000 results
rich indians	1,330,000 results
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Facelets View -- JSF and ajax4jsf tags

```
<h:outputLabel for="title" value="Recipe Title" />
  <h:inputText id="title" styleClass="input-text" maxlength="64"
    value="#{searchRecipesBean.title}" >
    <a4j:support reRender="suggestions"
      event="onkeyup"
      oncomplete="javascript:showSuggestions('srch-recp-form:title',
        'srch-recp-form:suggestions');"
      actionListener="#{searchRecipesBean.ajaxRecipeTitleListener}"
      requestDelay="1000" eventsQueue="suggestQueue"
      ignoreDupResponses="true"/>
  </h:inputText>
  <a4j:outputPanel id="suggestions" layout="inline" styleClass="dropdown" >
    <a4j:repeat value="#{searchRecipesBean.suggestList}" var="suggest" >
      <span>#{suggest}<br /></span>
    </a4j:repeat>
</a4j:outputPanel>
```

JavaScript

```
Function showSuggestions(id1,id2) {  
    var textNode = document.getElementById(id1);  
    var suggestNode = document.getElementById(id2);  
    suggestNode.style.left = getLeft(textNode) + "px";  
    suggestNode.style.top = (getTop(textNode)  
        + textNode.getOffsetHeight) + "px";  
    suggestNode.style.visibility = "visible";  
}  
function getLeft(aNode) {  
    ...  
    return leftOffset;  
}  
function getTop(aNode) {  
    ...  
    return topOffset;  
}
```

JavaServer Faces Backing Bean Method

```
/**
 * ajax4jsf ActionListener for the recipe title text input field.
 * @param anActionEvent
 * @throws Exception
 */
public void ajaxRecipeTitleListener(ActionEvent anActionEvent) throws Exception {
    // 1. get the component that fired the event
    UIInput uiinput = (UIInput) anActionEvent.getComponent().getParent();
    // 2. get the user input
    String inputValue = uiinput.getValue().toString();
    List<String> aList = new ArrayList<String>();
    // 3. make EJB call to get List of suggesstions
    aList = EjbConnector.lookupEJB(
        SearchRecipeBaseService.class).getRecipeTitles(inputValue);
    setSuggestList(aList);
}
```

CSS Style Rules

```
span.dropdown {  
  position: absolute;  
  top: 0;  
  left: 0;  
  width: 248px;  
  background-color: white;  
  border: 1px solid green;  
  padding-left: 2px;  
  visibility: hidden;  
  z-index: 1;  
}  
span.dropdown span {  
  cursor: default;  
  padding: 0 3px;  
}
```

Summary

- Competition and End User expectations are pushing organizations toward rich internet (or intranet) applications
- JavaServer Faces and Facelets together with an Ajax framework are a workable tool for rich internet applications
 - event driven: can wire up a browser window event to a JSF ActionListener method
 - component based: develop with components that encapsulate much of the complexity