

# Introduction to ExtJS

An overview of the ExtJS  
JavaScript Framework

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# Why ExtJS?

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- Previously YUI-Ext
- Intrusive versus Unobtrusive
- Documentation
- Community
- Dual Licensing Model
  - GPL
  - Commercial with Support

# API Overview

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- Support Libraries
  - DOM selection/manipulation
  - Events
  - Utilities
  - AJAX
- Layouts and Containers
- Forms
- Data Stores

# Sample – DOM Manipulation

- No more Document.getElementById

```
<div id="content"></div>
```

```
<script type="text/javascript">  
  var e = Ext.get('content');  
  e.addClass('bold');  
  e.update('Hello World!');  
</script>
```

- Also includes common effects
  - Fade, blur, focus, hide, show

# Sample - Events

- Unobtrusive JavaScript

```
<button id="eraser">Eraser</button>
```

```
<script type="text/javascript">
```

```
    var e = Ext.get('eraser').on('click',hideMe);
```

```
    function hideMe() {  
        Ext.get(this).hide(true);  
    }
```

```
</script>
```

# Sample - AJAX

- Ability to load elements via AJAX call, including automatic refresh

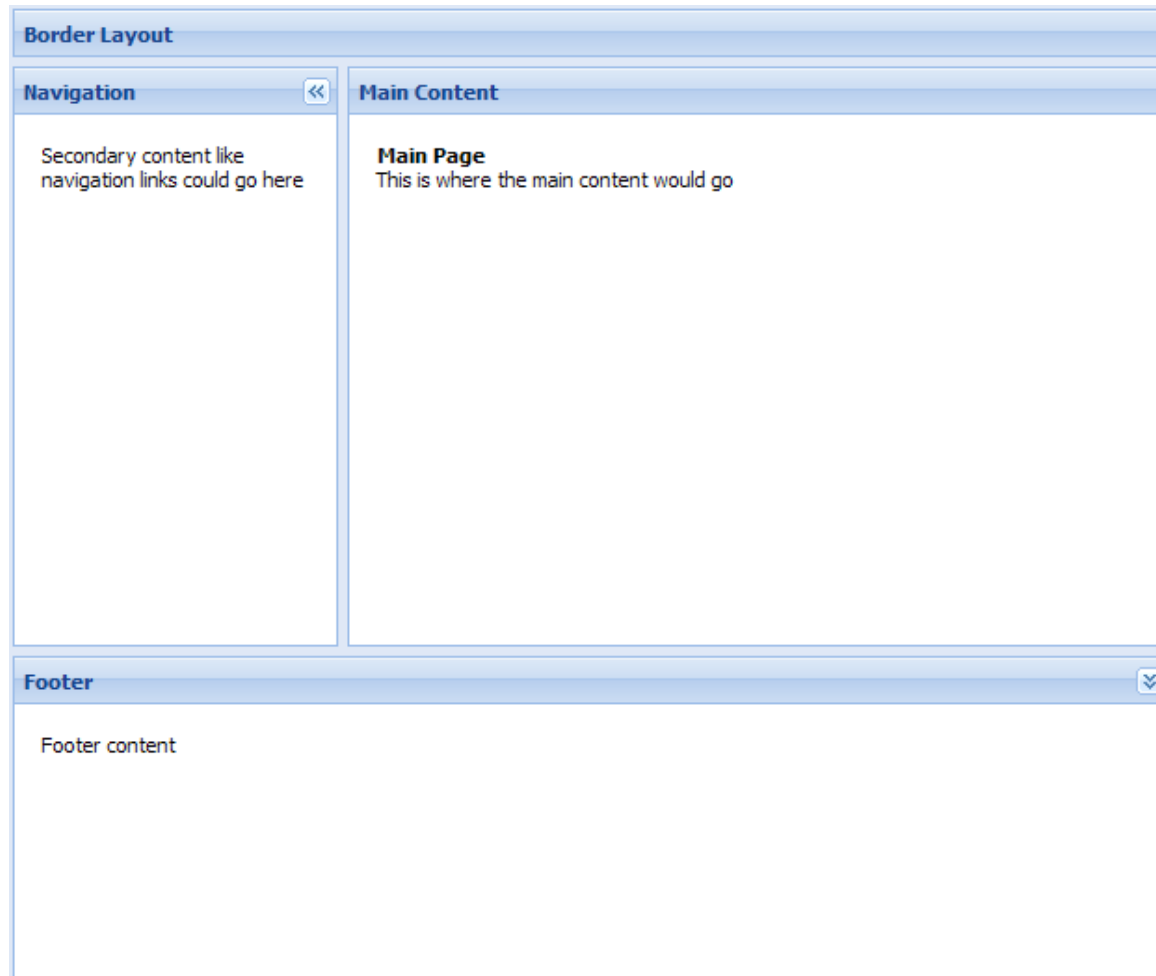
```
<div id="content"></div>
```

```
<script type="text/javascript">
```

```
Ext.get("content").load({url: "inner.html"});
```

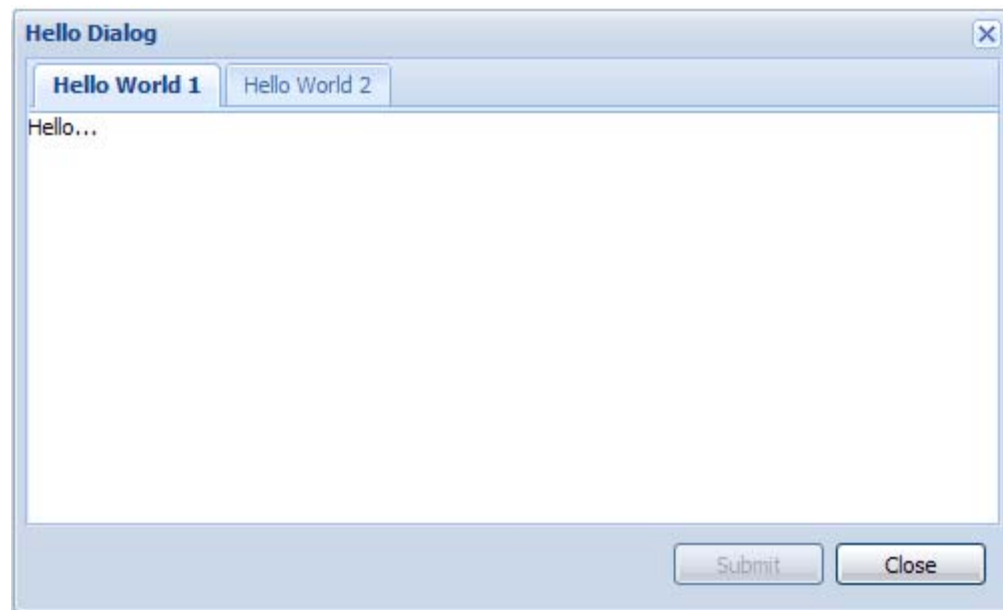
```
</script>
```

# Sample - Layouts



# Sample - Containers

- Most all common paradigms
  - Windows, Panels, Tabs, Accordion





# Sample - Grid

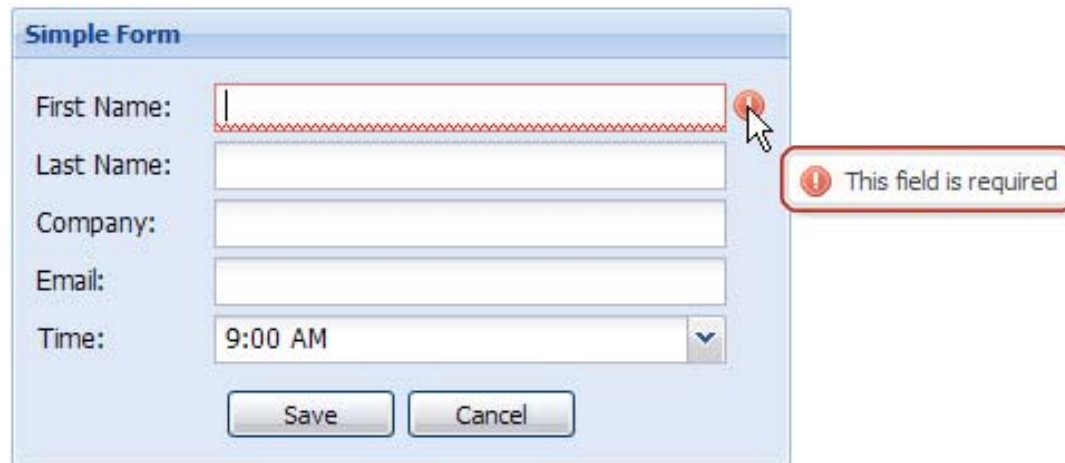
- Feature rich grid class
  - Sorting
  - Column hiding
  - In-cell editing
  - Customer rendering / formatting
  - Bound to Data Store
  - Plug-ins (grouping, summaries, expands)

# Sample – Grid (cont)

Sponsored Projects				
Task	Due Date ▲	Estimate	Rate	Cost
Ext Forms: Field Anchoring				
Integrate 2.0 Forms with 2.0 Layouts		hours	\$150.00	\$900.00
Implement AnchorLayout		hours	\$150.00	\$600.00
Add support for multiple types of anchors		hours	\$150.00	\$600.00
Testing and debugging		hours	\$0.00	\$0.00
(4 Tasks)	06/29/2007	22 hours	\$112.50	\$2,100.00
Ext Grid: Single-level Grouping				
Add required rendering "hooks" to GridView	07/01/2007	6 hours	\$100.00	\$600.00
Extend GridView and override rendering functions	07/03/2007	6 hours	\$100.00	\$600.00
Extend Store with grouping functionality	07/04/2007	4 hours	\$100.00	\$400.00
Default CSS Styling	07/05/2007	2 hours	\$100.00	\$200.00
Testing and debugging	07/06/2007	6 hours	\$100.00	\$600.00
(5 Tasks)	07/06/2007	24 hours	\$100.00	\$2,400.00
Ext Grid: Summary Rows				
Ext Grid plugin integration	07/01/2007	4 hours	\$125.00	\$500.00
Summary creation during rendering phase	07/02/2007	4 hours	\$125.00	\$500.00
Dynamic summary updates in editor grids	07/05/2007	6 hours	\$125.00	\$750.00

# Sample - Forms

- Rich forms support
  - Tied to MVC framework
  - Excellent validation support



The image shows a 'Simple Form' dialog box with a light blue header and a white body. It contains five input fields: 'First Name:', 'Last Name:', 'Company:', 'Email:', and 'Time:'. The 'First Name' field is highlighted with a red border and a red dashed line, indicating it is required. A red circle with an exclamation mark is positioned to the right of the 'First Name' field, and a tooltip with the text 'This field is required' is displayed next to it. The 'Time' field is a dropdown menu showing '9:00 AM'. At the bottom of the dialog are 'Save' and 'Cancel' buttons.

# Sample – Data Stores

- Model implemented as Data Store

```
<script type="text/javascript">
  var store = new Ext.data.JsonStore({
    url: '/countries.json',
    root: 'rows',
    totalProperty: 'count',
    fields: [
      {name: 'code', mapping: 'code', type: 'string'},
      {name: 'name', mapping: 'name', type: 'string'},
      {name: 'population', mapping: 'population', type: 'int'}
    ],
    sortInfo: {field: 'code', direction: "ASC"}
  });
</script>

{count: 2, rows: [
  {"code": "ABW", "name": "Aruba", "population": 103000},
  {"code": "AFG", "name": "Afghanistan", "population": 22720000}
]}
```

# Backend Integration

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- XML
- JSON
- Script Tag Proxy
  - Allows for Cross Domain calls
  - Requires callback semantic from client

# Other Coolness

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- Skins
- Desktop
- Drag and Drop
- Templates
- Namespaces
- Browser History management
- Google Maps Integration

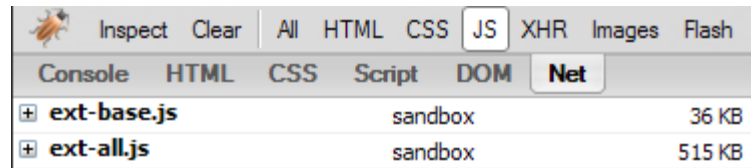
# Compared To...

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- Flex and Silverlight
- DOJO
- YUI
- GWT
- Prototype/Scriptaculous
- JQuery
- Tibco GI

# Library Size

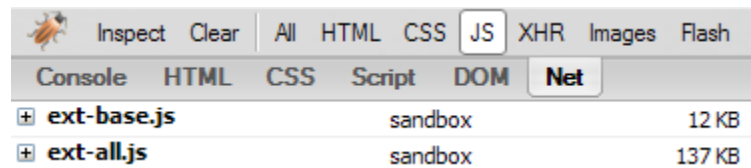
- Without Compression



A screenshot of the Chrome DevTools JavaScript tab. The top bar shows tabs for 'Inspect', 'Clear', 'All', 'HTML', 'CSS', 'JS' (selected), 'XHR', 'Images', and 'Flash'. Below this is a sub-bar with 'Console', 'HTML', 'CSS', 'Script', 'DOM', and 'Net' (selected). The main area displays a list of loaded scripts:

File	Source	Size
<b>ext-base.js</b>	sandbox	36 KB
<b>ext-all.js</b>	sandbox	515 KB

- With Compression



A screenshot of the Chrome DevTools JavaScript tab, similar to the one above but showing compressed file sizes. The top bar and sub-bar are identical. The main area displays the same list of loaded scripts with significantly reduced sizes:

File	Source	Size
<b>ext-base.js</b>	sandbox	12 KB
<b>ext-all.js</b>	sandbox	137 KB



# Product Roadmap

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- Just released v2.2
- V3.0 Planned for end of year:

## Ext JS 3.0 (Winter 2008/Early 2009)

- ▶ Update the Ext event registration model
- ▶ Flash Charting API
- ▶ Comet/Bayeux support
- ▶ Integrated client-server data binding/marshaling for Ext components
- ▶ ListView component
- ▶ Enhanced Button and Toolbar components
- ▶ ARIA/Section 508 accessibility improvements
- ▶ CSS updates for reset style scoping and easier custom theming
- ▶ Ext.Ajax enhancements

# Resources

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- [ExtJS Home](#)
- [Mozilla Developer Center](#)
- [JavaScript: The Good Parts](#) (Douglas Crockford)
- [JavaScript: The Definitive Guide](#) (David Flanagan)

# Questions?

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