

jQuery Performance

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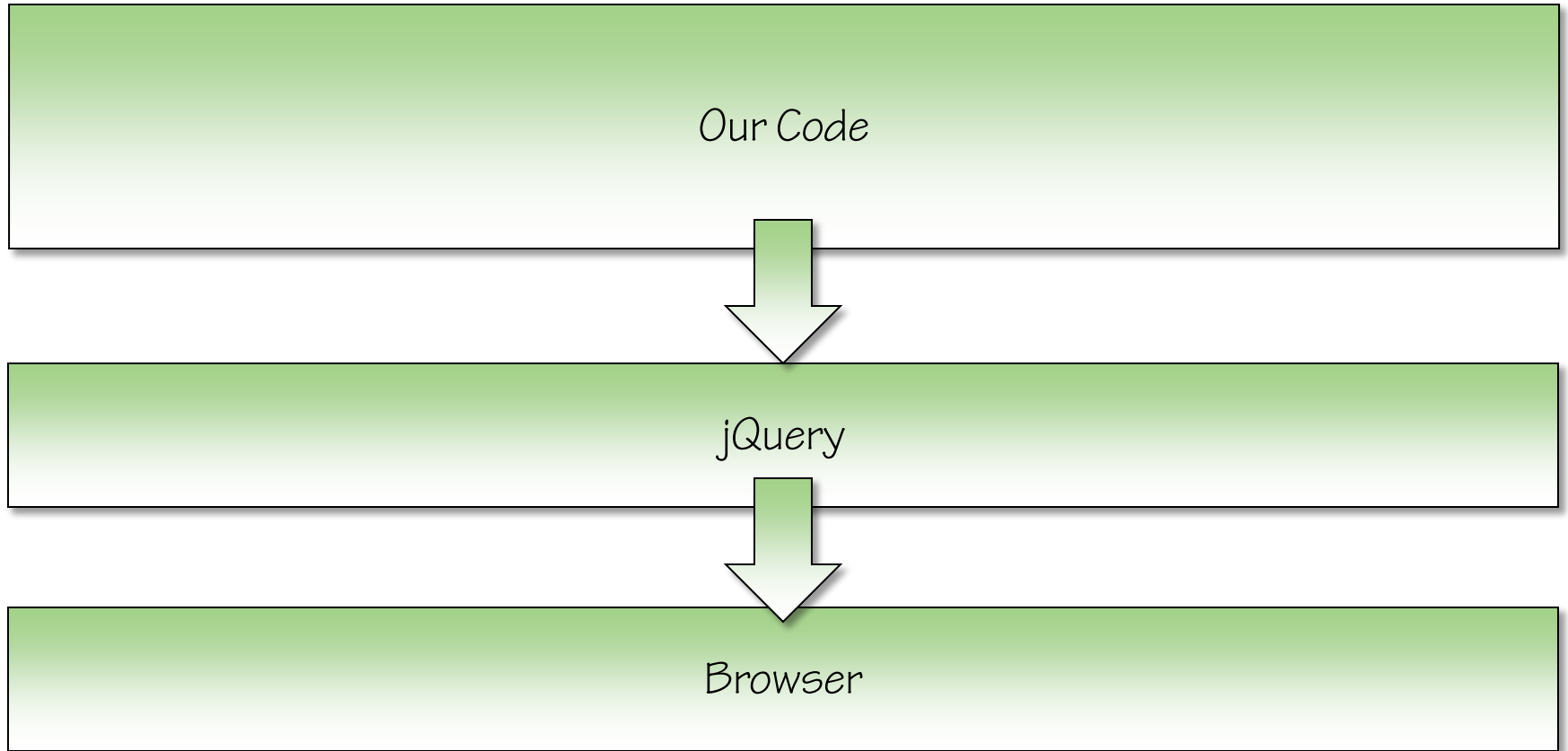
Outline

- Introduction
- Identifying Performance Problems
- General Performance Tips
- Selectors
- DOM Manipulation
- Summary

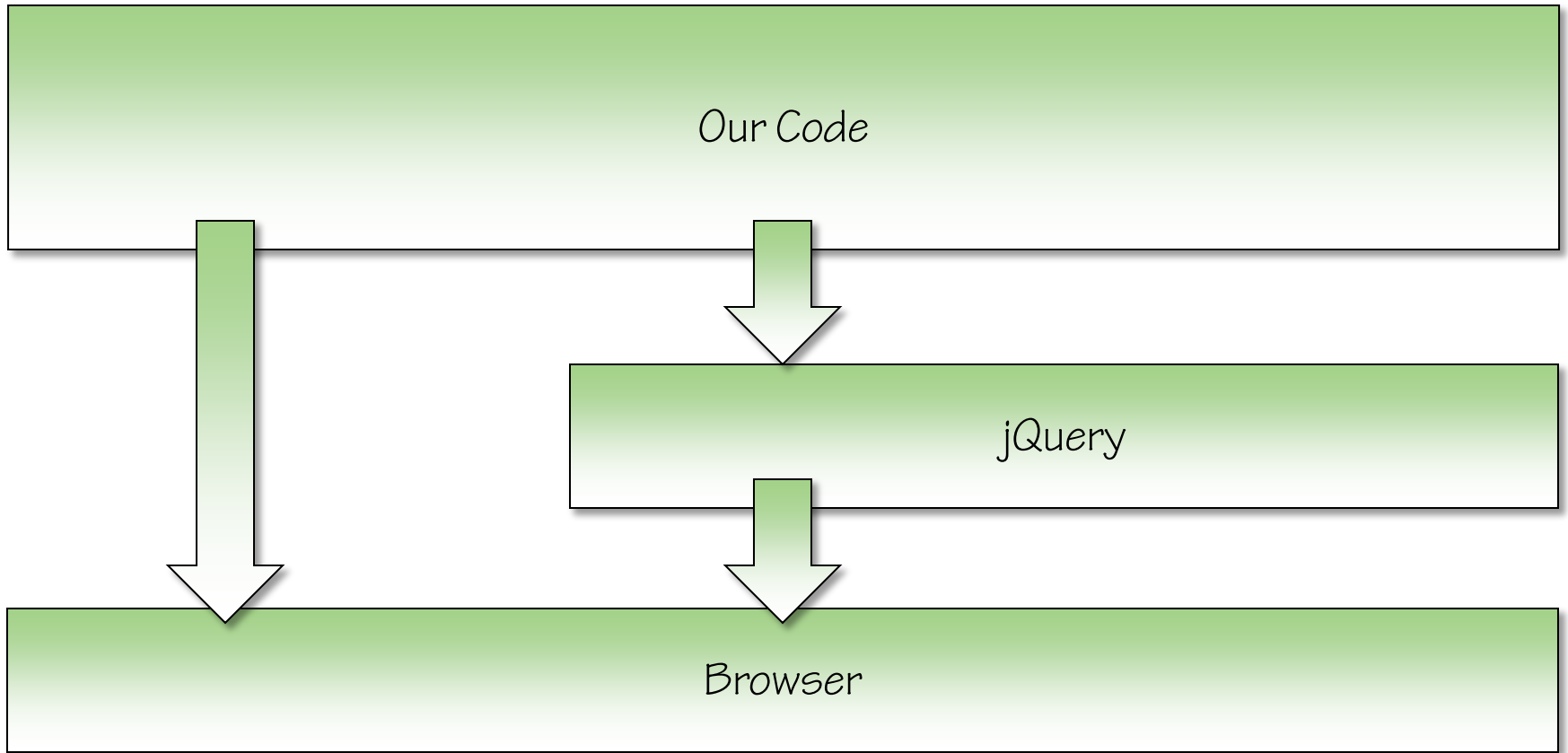
Performance Overview

“Premature optimization is the root of all evil”

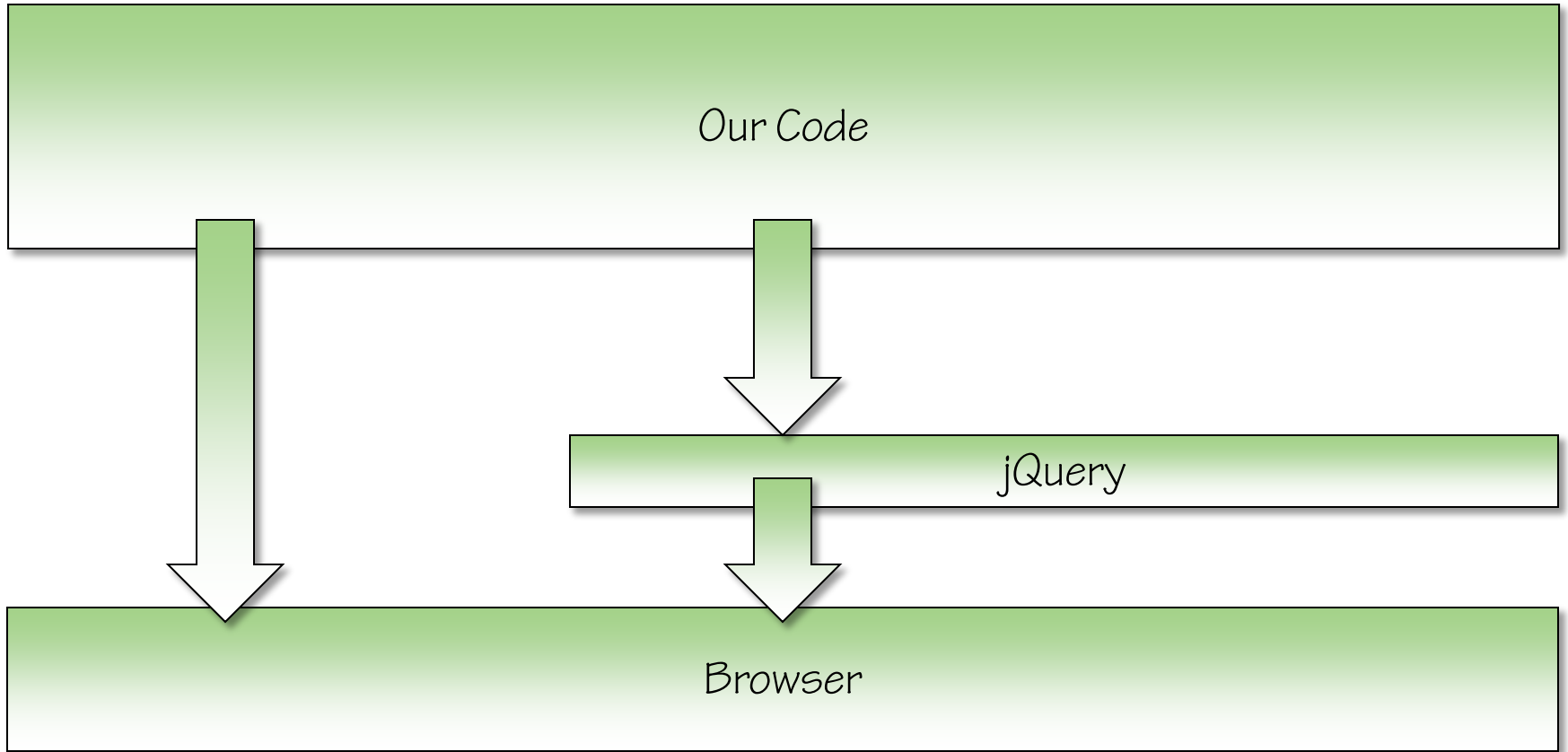
jQuery as an Abstraction Layer



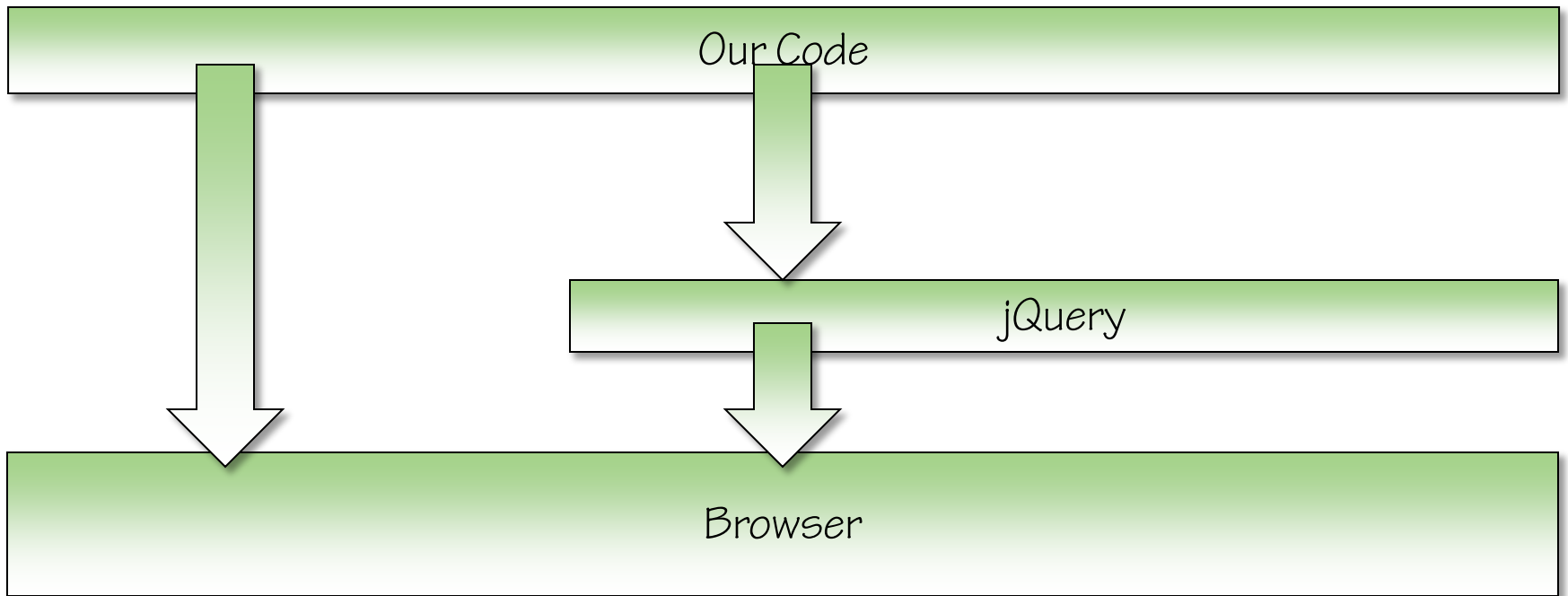
jQuery as an Abstraction Layer



jQuery as an Abstraction Layer



jQuery as an Abstraction Layer



Identifying Performance Problems

Tools

1. Profilers
2. Manual Timing

Calling Profilers

Firefox & Chrome

1. Profile Button
2. `profile()` & `profileEnd()` from console
3. `console.profile()` & `console.profileEnd()` in code

```
console.profile("description");  
// code  
console.profileEnd("description");
```

IE

1. Button only

Manual Timing

Tools

1. Profilers
2. Manual Timing

```
console.time("description");  
// code  
console.timeEnd("description");
```

Performance Problem Identification Strategy

1. Profile all usage
2. Look at times, call counts to zero in on problem areas
3. Use manual timing to assist in identifying problems
4. Profile specific function calls in isolation
5. Try alternate algorithms
6. Repeat as necessary

Tips:

- Use named functions
- Isolate AJAX & HTTP calls
- Learn the profilers

General Performance Tips

1. Use the latest jQuery
2. Caching Selections
3. Caching Other Items
4. Use element properties when possible

Selector Performance

Sizzle

```
$(“.parent .child”)
```

Selector Options

```
<ul class="method-list">  
  <li class="keynav">  
    <h2 class="entry-title" />  
  </li>  
</ul>
```

```
$(“ul.method-list li.keynav h2.entry-title”)  
$(“ul li.keynav h2.entry-title”)  
$(“li.keynav h2.entry-title”)  
$(“li h2.entry-title”)  
$(“h2.entry-title”)  
$(“.entry-title”)
```

Selector Options – With Parent ID

```
<ul class="method-list">  
  <li id="post-280">  
    <h2 class="entry-title" />  
  </li>  
</ul>
```

↓
↓
↓
↓

```
$("#post-280 .entry-title")  
$("#post-280 h2.entry-title")  
$("#post-280").children(".entry-title")  
$("#post-280").find(".entry-title")
```

DOM Manipulation

```
var parent = $('#parent');  
$.each(arr, function() {  
    parent.append("<div>" + this + "</div>");  
});
```


DOM Manipulation

```
var appendString = "";  
$.each(arr, function() {  
    appendString += "<div>" + this + "</div>";  
});  
$('#parent').append(appendString);
```

DOM Manipulation

```
var appendArray = [];  
var i = 0;  
$.each(arr, function() {  
    appendArray[i++] = "<div>";  
    appendArray[i++] = this;  
    appendArray[i++] = "</div>";  
});  
$('#parent').append(appendArray.join(' '));
```

DOM Manipulation

```
var appendArray = [];  
var i = 0;  
for(var j=0; j<arrLen; j++) {  
    appendArray[i++] = "<div>";  
    appendArray[i++] = arr[j];  
    appendArray[i++] = "</div>";  
}  
$('#parent').append(appendArray.join(' '));
```

DOM Manipulation

```
var appendString = "";
$.each(arr, function() {
    appendString += "<div>" + this + "</div>";
});
$('#parent').append('<div>' + appendString + '</div>');
```

Summary

- Get to Know the Profiler
- Cache When Possible
- Selectors – Less is More
- Use One Append
- Insert Using a Containing Element