



# python in the browser

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PyCon 2010

IronRuby

python in the browser

# python in the browser

5 min	Introduction
5 min	“Hello, World”
5 min	Man behind the curtain
10 min	Batteries included
5 min	EARLY PROTOTYPE of Silverlight tooling for Visual Studio

## ... setting expectations

- Python is not available in the browser by default
  - Downloaded on-demand with each app
- Uses Silverlight for executing Python



®

Microsoft®

Silverlight®

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5 min Introduction

5 min “Hello, World”

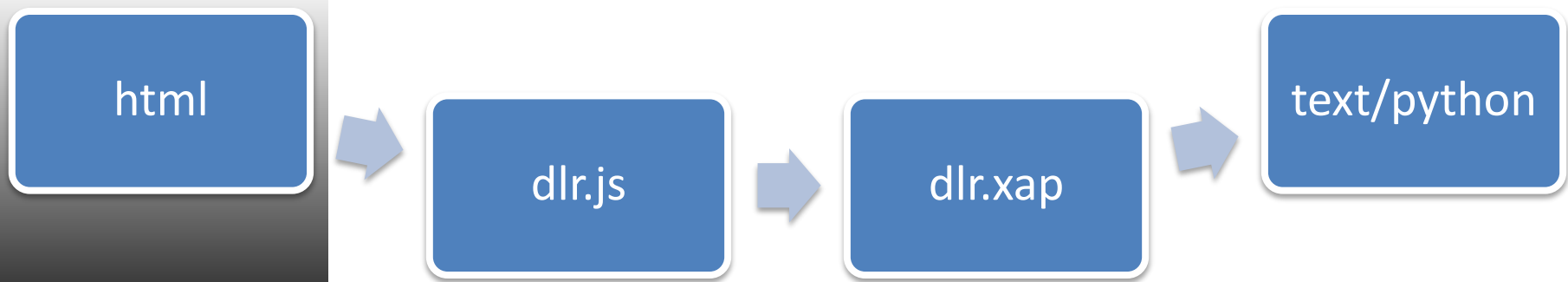
5 min Man behind the curtain

10 min Batteries included

5 min EARLY PROTOTYPE of Silverlight tooling  
for Visual Studio

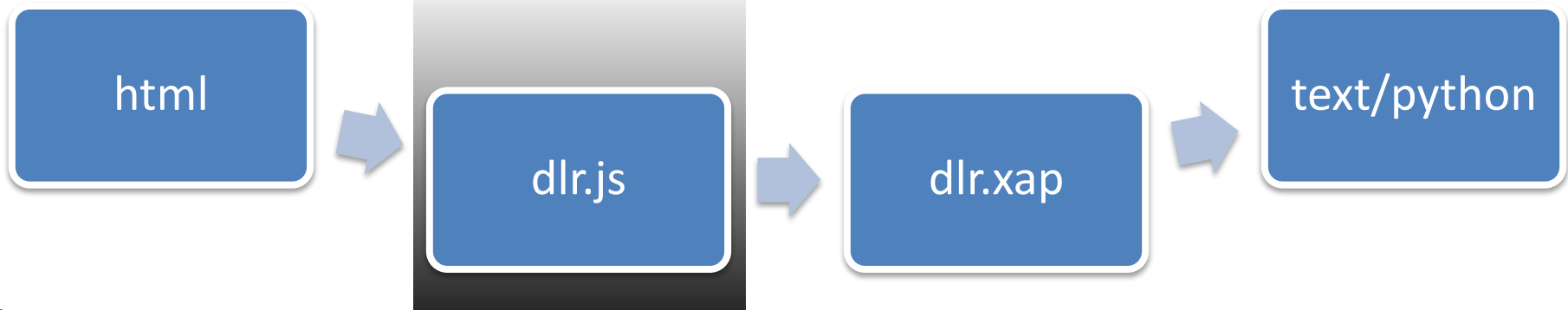


```
<script  
  src="http://go.ironpython.net/dlr.js">  
</script>
```



Injects Silverlight into the HTML page:

```
<object type="application/x-silverlight">  
  <param  
    name="source"  
    value="http://go.ironpython.net/dlr.xap" />  
</object>
```



- **Static Silverlight application**
  - Microsoft.Scripting.Silverlight.dll
- **Hosts the Dynamic Language Runtime**
  - Downloads languages on-demand
- **Executes script tags on HTML page**

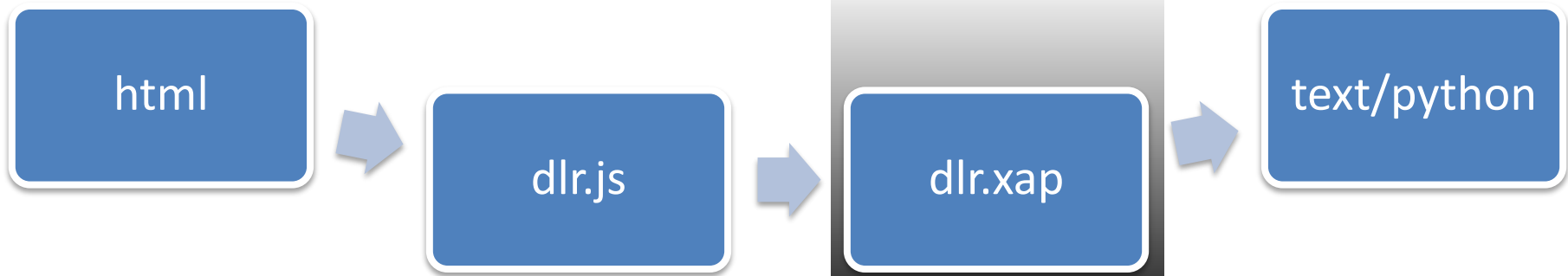
# IronPython Payload

First request ~ 1.5 MB

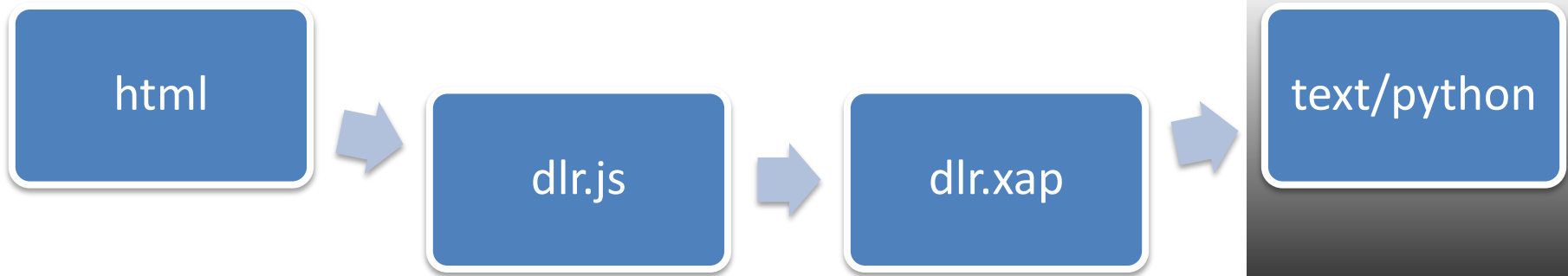
URL	Status	Domain	Size	Timeline
GET helloworld.html	200 OK	localhost	538 B (?)	119ms
GET dlr.js	200 OK	localhost	7.9 KB	70ms
GET dlr.xap	200 OK	localhost	860 B	52ms
GET Microsoft.Script	200 OK	localhost	671.2 KB (?)	61ms
GET IronPython.slvx	200 OK	localhost	861.9 KB	69ms
5 requests			1.5 MB	1.12s (onload: 292ms)

N requests ~ 8 KB

URL	Status	Domain	Size	Timeline
GET helloworld.html	304 Not Modified	localhost	538 B	115ms
GET dlr.js	304 Not Modified	localhost	7.9 KB	17ms
2 requests			8.4 KB (8.4 KB from cache)	153ms (onload: 249ms)



```
<script type="text/python">  
  def say_ouch(s,e):  
    s.html = "Ouch"  
    document.message.onclick += say_ouch  
</script>
```



```
var pythonString = @"  
def say_ouch(s,e):  
    s.html = ""Ouch""  
document.message.onclick += say_ouch  
";  
var engine = Python.CreateEngine();  
engine.Execute(pythonString);
```

html



dlr.js



dlr.xap



text/python

[ironpython.net/browser/sl-back-to-just-text.pdf](http://ironpython.net/browser/sl-back-to-just-text.pdf)



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## Now you know ...

- What a Python browser app looks like
- What is going on behind the scenes
- How to use real python libs in the browser
- How to use Silverlight APIs from Python
- That there is a prototype of IronPython tooling for Visual Studio in your swag bag!

[ironpython.net/browser](http://ironpython.net/browser)

*Questions?*

IronPython  
import clr

*Thanks!*

[ironpython.net/browser](http://ironpython.net/browser)



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