

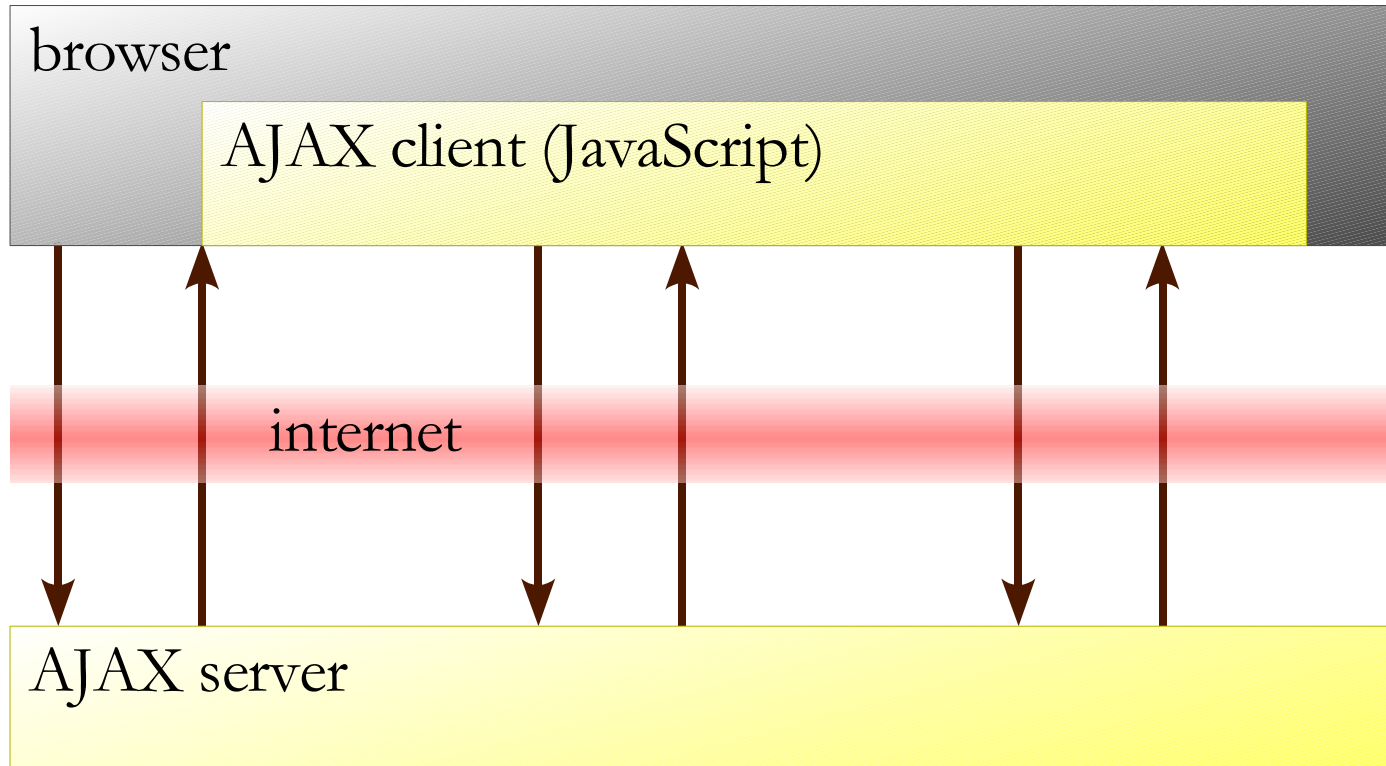
TROLLTECH DevDays 2006

Qt, AJAX, and Me

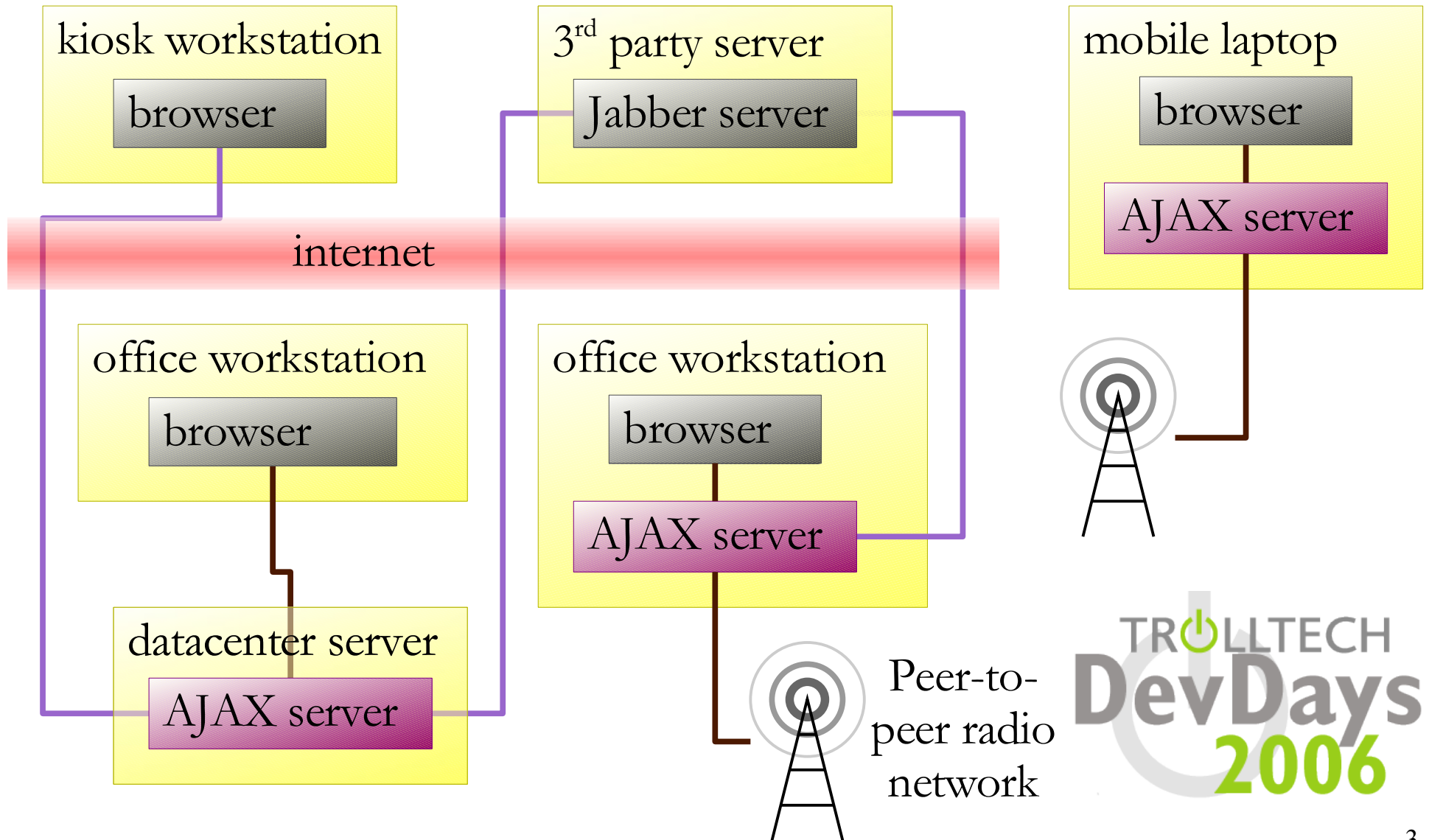


Chouser
4D Development, Inc.

AJAX application



Network topology options



Overview of Qt classes used in an AJAX server

- ▶ **We don't use widgets**

No UI events, no menu actions, no cursor classes, no decorations, no dialogs, no style options...

- ▶ **So what's left?**

Multi-platform support

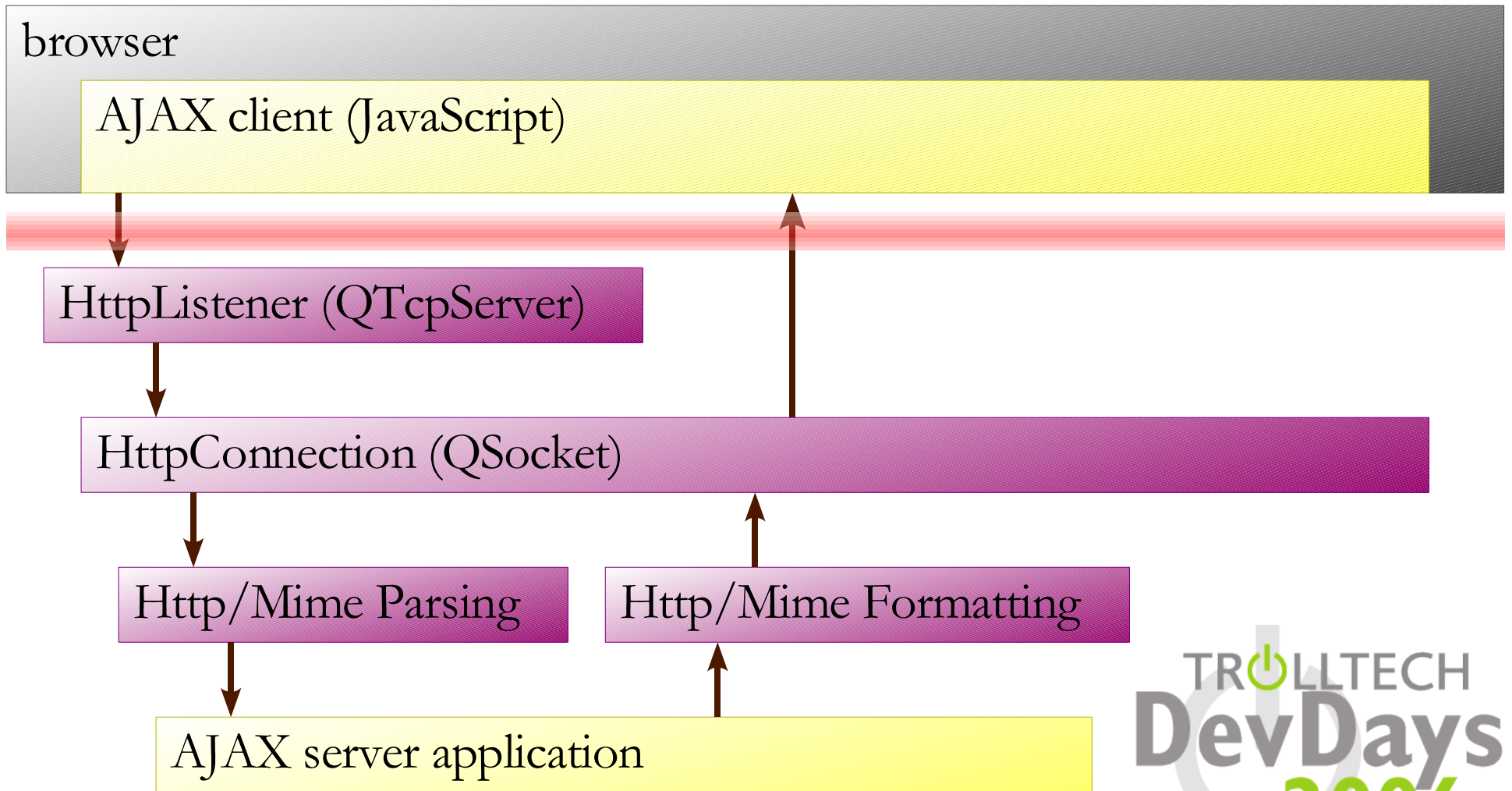
Container classes

QObject

Graphics, Network, XML, SQL ...



HTTP server



HTTP POST request and response

```
POST /handler/foo HTTP/1.1
Host: localhost
User-Agent: Mozilla/5.0
Accept-Encoding: gzip,deflate
Connection: keep-alive
Content-Type: text/xml
Content-Length: 114
```

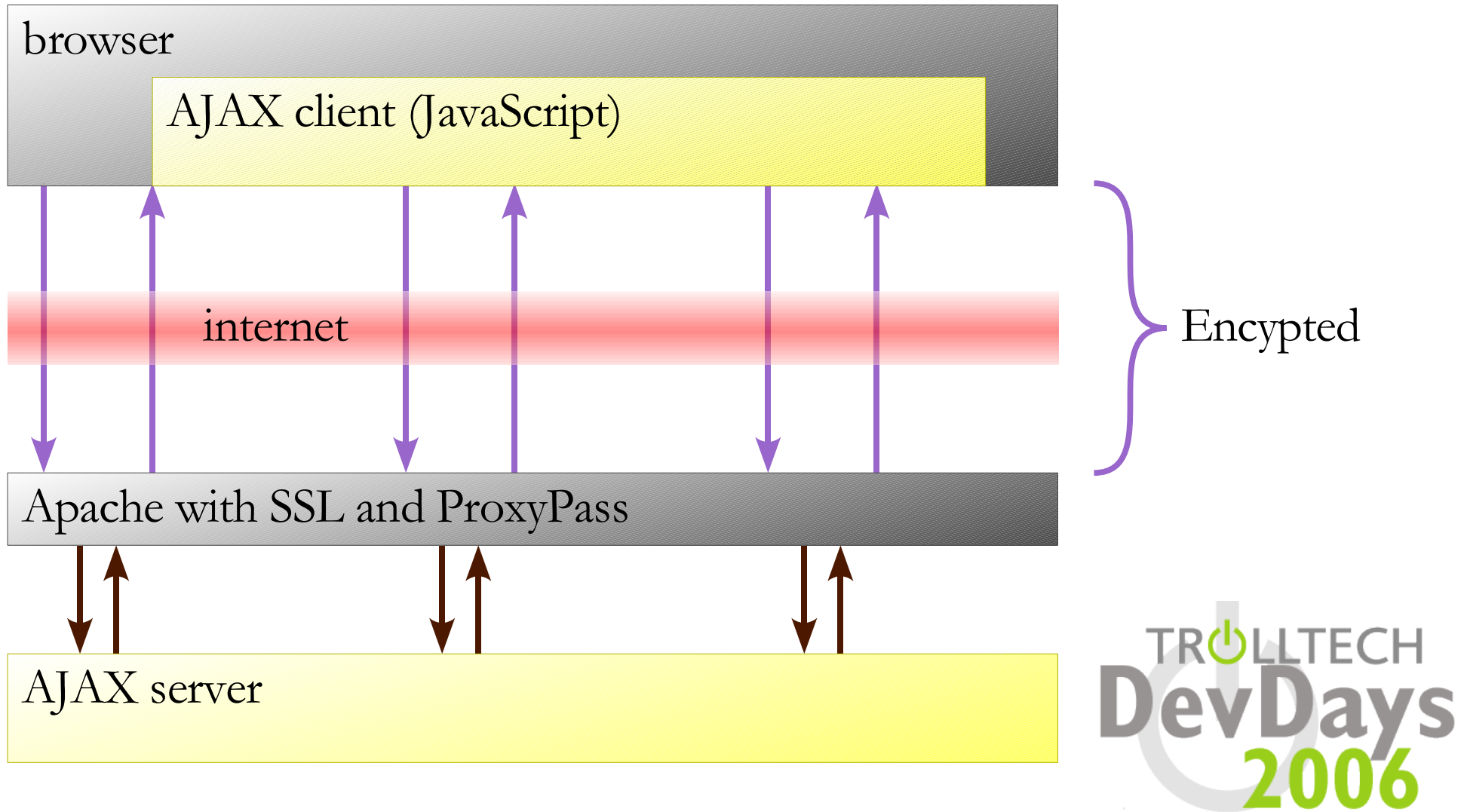
```
<request>...</request>
```

```
HTTP/1.1 200 OK
Server: HttpServer_4D
Content-Type: text/xml
Content-Length: 1297
Pragma: no-cache
Content-Encoding: gzip
```

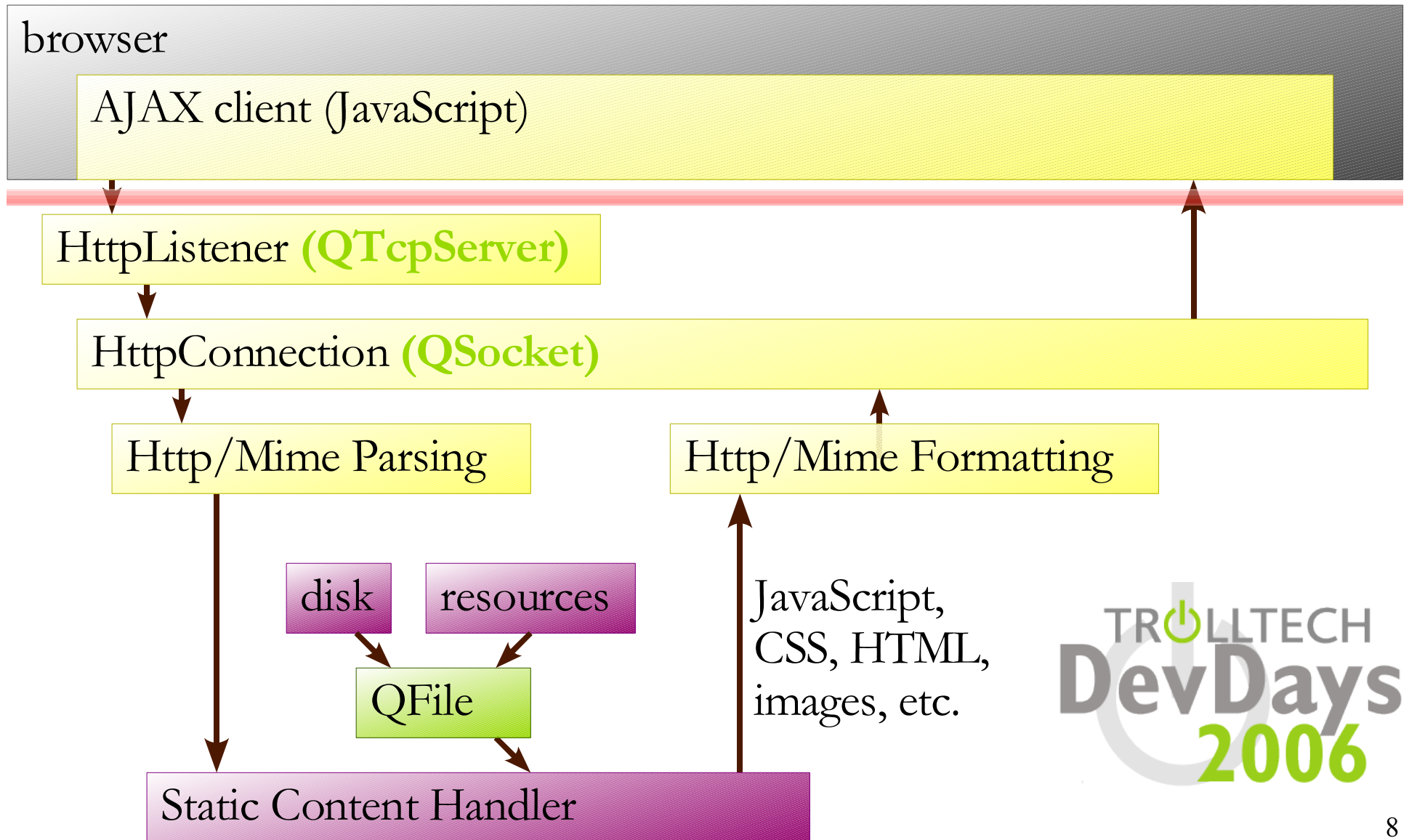
```
<response>...</response>
```



AJAX application with Apache ProxyPass



Serving static content over HTTP



Using .qrc files for static content

Add to foo.pro: `RESOURCES += foo.qrc`

Create foo.qrc:

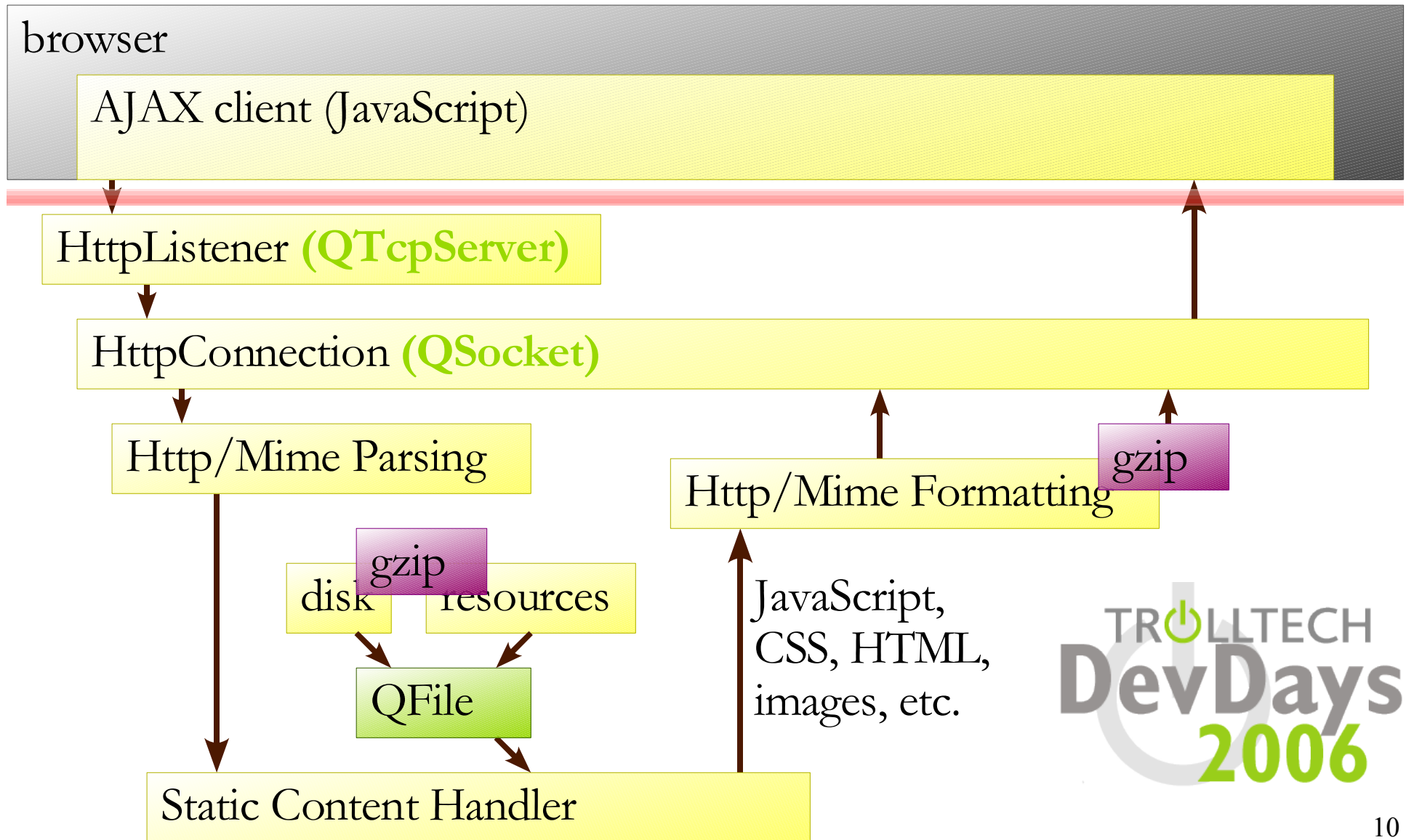
```
<RCC>
  <qresource prefix="/foo">
    <file>foo.js</file>
    <file>foo.css</file>
    <file>img/logo.png</file>
  </qresource>
</RCC>
```

Read from resources:

```
QByteArray data = QFile(path).readAll();
if( data.isEmpty() )
  data = QFile(":/" + path).readAll();
```



Content compression options



Dynamic data formats

URL-encoded: `?methodName=newobject&name=test`

XML:

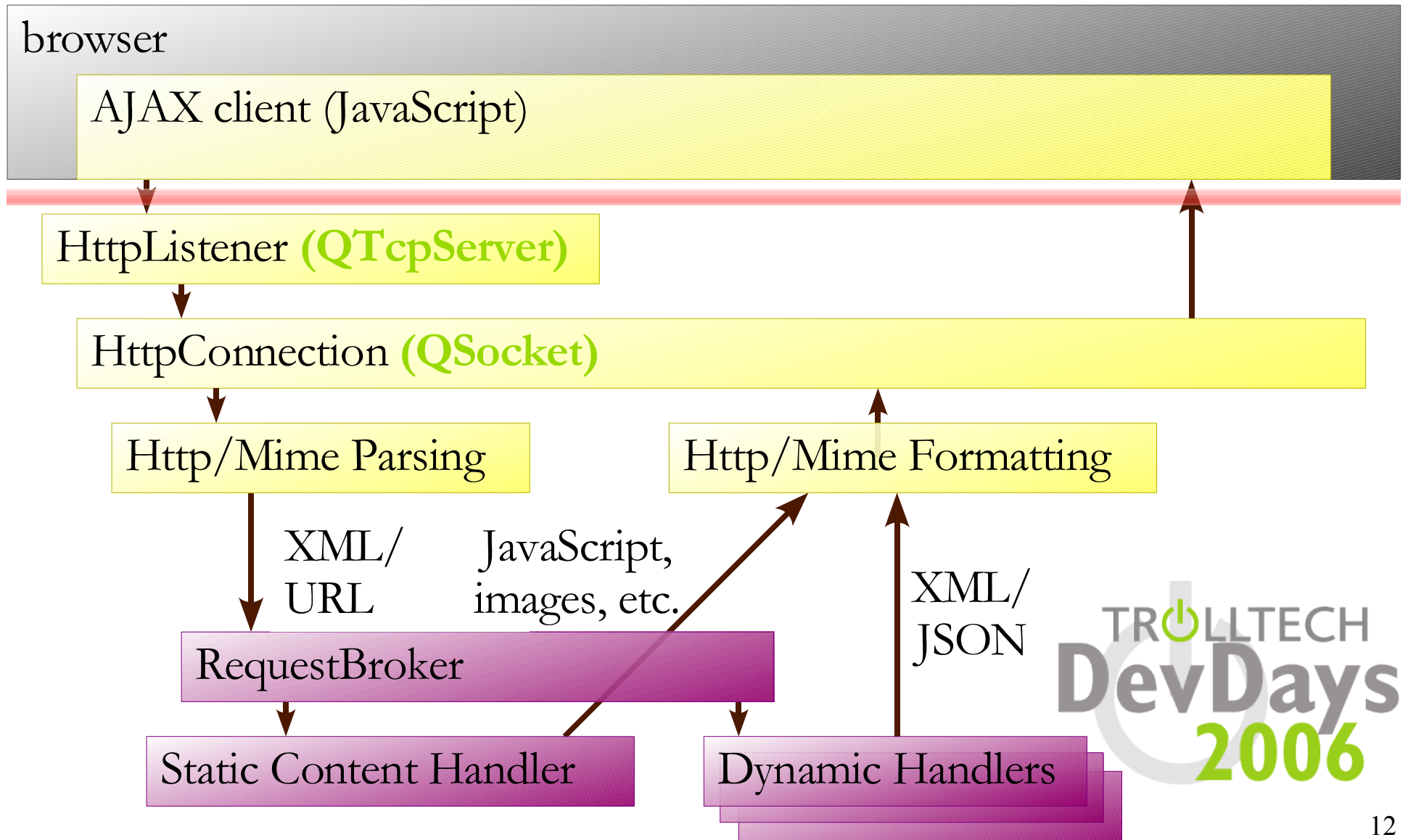
```
<?xml version="1.0"?>
<methodCall>
  <methodName>newobject</methodName>
  <name>test</name>
</methodCall>
```

JSON:

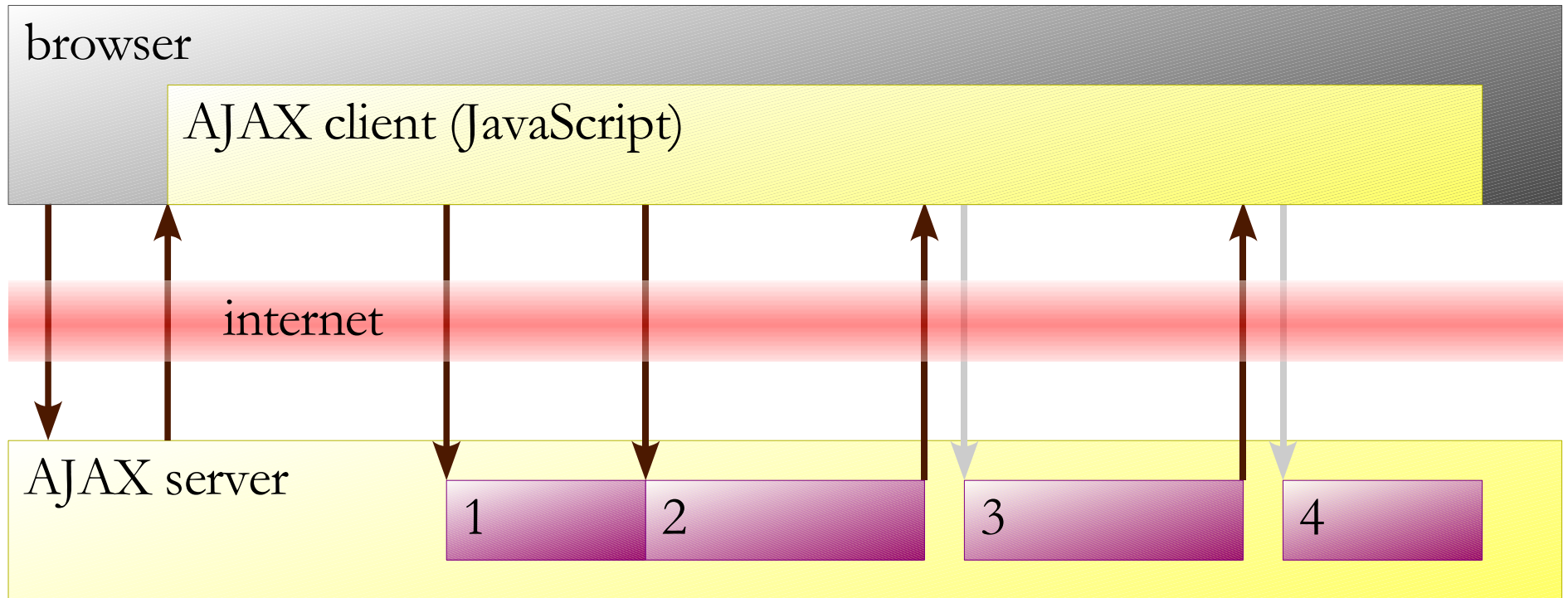
```
{
  methodCall: {
    methodName: 'newobject',
    name: 'test',
  }
}
```



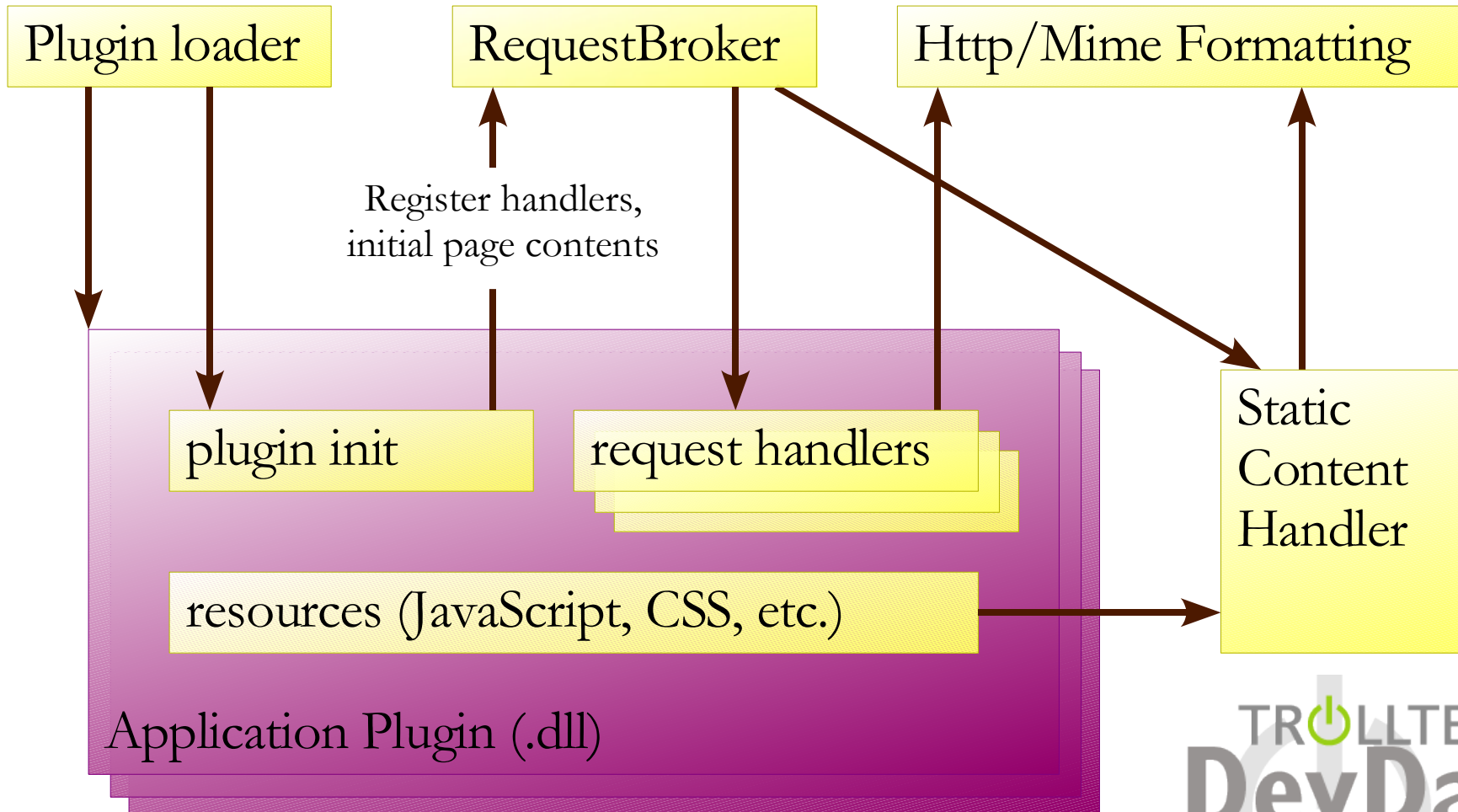
RequestBroker



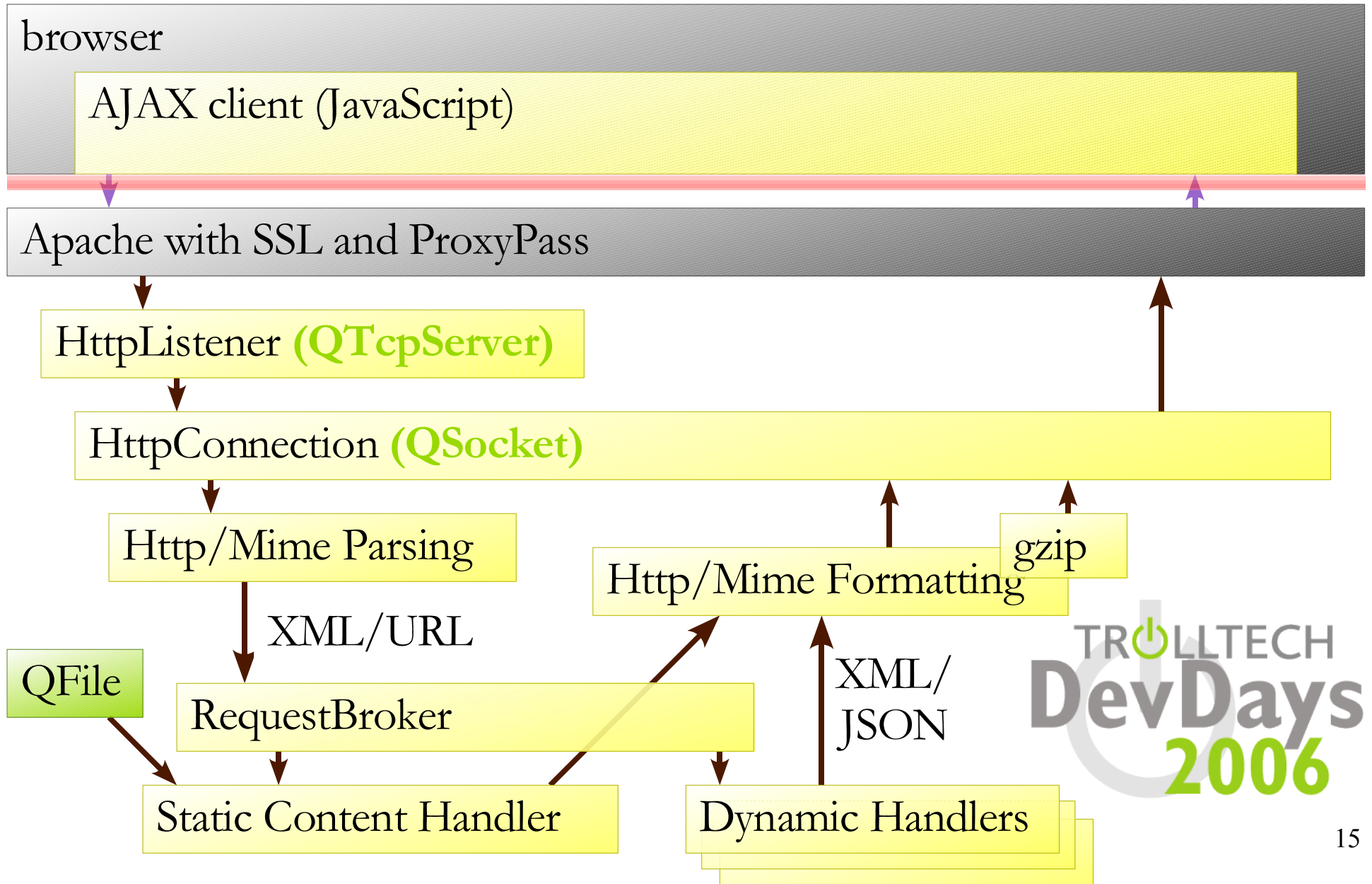
Persistent connections



Plugins with static content and dynamic handlers



AJAX server - the whole picture



Potential improvements

Simple HTTP server base class

HTTP/MIME parsing and formatting

Standards-based serialization (XML or JSON)

UI widget library for browsers (JavaScript)

Move more QtSolutions into main library



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