

Real-time collaborative *editor* for AsciiDoc

When WebSocket met Asciidoctor

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/Me

April 13-17, 2014 San Francisco, California

DEVNATION

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When WebSocket met Asciidoctor

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AsciiDoc

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AsciiDoc
Asciidoctor
Java EE 7

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Java EE 7

WebSocket

CDI

WildFly

When **WebSocket** met **Asciidoctor**

AsciiDoc

Asciidoctor

Java EE 7

WebSocket

CDI

WildFly

Javascript, Angular JS

When **WebSocket** met **Asciidoctor**

AsciiDoc

Asciidoctor

Java EE 7

WebSocket CDI WildFly

Javascript, Angular JS

HTML5

QUICK POLLS

QUICK POLLS

Who sent an email today?

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Who sent an email today?
Who wrote technical
documentation in the past two
days ?

QUICK POLLS

Who sent an email today?
Who wrote technical
documentation in the past two
days ?
Here we are !

“Writing documentation
have to be **as easy as**
writing email !”

AsciiDoc to the rescue

AsciiDoc is...

lightweight **markup
toolchain**

ASCIIDOC : LIGHTWEIGHT MARKUP

= Document Title2

Doc Writer <doc@asciidoc.org>

v1.0, 2013-01-01: Initial version

<http://asciidoc.org>[AsciiDoc] is a lightweight markup language.

This is the optional preamble (an untitled section body), useful for writing simple sectionless documents consisting only of a preamble.

NOTE: The abstract, preface, appendix, bibliography, glossary and index section titles are significant (*_specialsections_*).

== First section

Document sections start at *level 1* and can nest four levels deep.

- * Item 1
- * Item 2

“*Use AsciiDoc for document markup. It's actually readable by humans, easier to parse way more flexible than XML.*

— Linus Torvald

What is Asciidoctor ?

Asciidoctor

A modern, open source implementation of
AsciiDoc in Ruby

Output formats (i.e., backends)

Output formats (i.e., backends)

HTML 5

Output formats (i.e., backends)

HTML 5
DocBook 4.5 & 5.0

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man pages

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slides deck.js, dzslides, reveal.js

man pages

custom

How do I use Asciidoctor ?

How do I use Asciidoctor ?

Ruby asciidoctor asciidoctor-pdf

How do I use Asciidoctor ?

Ruby asciidoctor asciidoctor-pdf

Java asciidoctorJ, asciidoctor-maven-plugin

How do I use Asciidoctor ?

Ruby asciidoctor asciidoctor-pdf

Java asciidoctorJ, asciidoctor-maven-plugin

Javascript asciidoctor.js,

Chrome/Firefox extension

How do I use Asciidoctor ?

Ruby asciidoctor asciidoctor-pdf

Java asciidoctorJ, asciidoctor-maven-plugin

Javascript asciidoctor.js,

Chrome/Firefox extension

Groovy asciidoctor-gradle-plugin

Who is using Asciidoctor ?

Frameworks Spring, Infinispan

JSR CDI Specifications, JavaEE 8 Specs

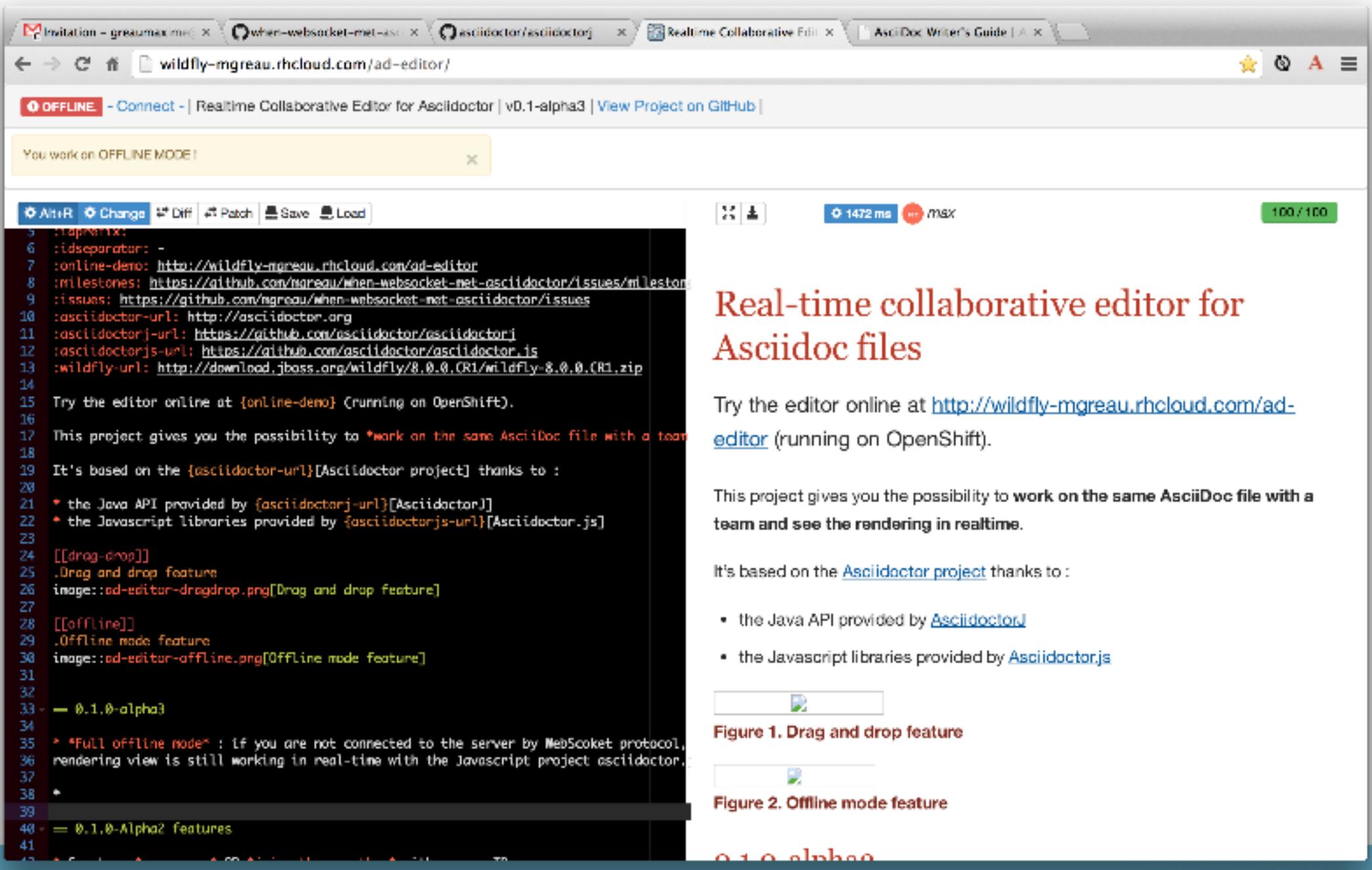
Publishers O'Reilly

Repositories Github, Bintray

and more...

Asciidoctor via asciidoctor.js

DEMO TIME



The screenshot shows a web browser window with multiple tabs open. The active tab is titled "Realtime Collaborative Editor" and has the URL "wildfly-mgreau.rhcloud.com/ad-editor/". A yellow banner at the top says "You work on OFFLINE MODE!". The main content area contains an Asciidoc editor interface with a toolbar at the top. The editor displays the following Asciidoc code:

```
3 :mapname: 
4 :idseparator: -
5 :online-demo: http://wildfly-mgreau.rhcloud.com/ad-editor
6 :milestones: https://github.com/mgreau/when-websocket-net-asciidoctor/issues/milestones
7 :issues: https://github.com/mgreau/when-websocket-net-asciidoctor/issues
8 :asciidoctor-url: http://asciidoctor.org
9 :asciidoctorj-url: https://github.com/asciidoctor/asciidoctorj
10 :asciidoctorjs-url: https://github.com/asciidoctor/asciidoctor.js
11 :wildfly-url: http://download.jboss.org/wildfly/8.0.0.CR1/wildfly-8.0.0.CR1.zip
12
13 Try the editor online at {online-demo} (running on OpenShift).
14
15 This project gives you the possibility to *work on the same AsciiDoc file with a team*
16
17 It's based on the {asciidoctor-url}[Asciidoctor project] thanks to :
18
19 * the Java API provided by {asciidoctorj-url}[Asciidoctorj]
20 * the Javascript libraries provided by {asciidoctorjs-url}[Asciidoctor.js]
21
22 [[drag-drop]]
23 .Drag and drop feature
24 image::ad-editor-dragdrop.png[Drag and drop feature]
25
26 [[offline]]
27 .Offline mode feature
28 image::ad-editor-offline.png[Offline mode feature]
29
30
31
32 - 0.1.0-alpha3
33
34 * *Full offline mode* : if you are not connected to the server by WebScocket protocol,
35 rendering view is still working in real-time with the Javascript project asciidoctor.js
36
37 *
38
39 == 0.1.0-Alpha2 features
40
41
```

Below the editor, there is a summary section with the title "Real-time collaborative editor for Asciidoc files" and a brief description. It also lists the project's dependencies and features.

Try the editor online at <http://wildfly-mgreau.rhcloud.com/ad-editor> (running on OpenShift).

This project gives you the possibility to work on the same AsciiDoc file with a team and see the rendering in realtime.

It's based on the [Asciidoctor project](#) thanks to :

- the Java API provided by [Asciidoctor](#)
- the Javascript libraries provided by [Asciidoctor.js](#)



Figure 1. Drag and drop feature



Figure 2. Offline mode feature

0.1.0_alpha3

Asciidoctor resources

Website <http://asciidoctor.org> (blog, user manual, writing guide...)

Github sources

<http://github.com/asciidoctor>

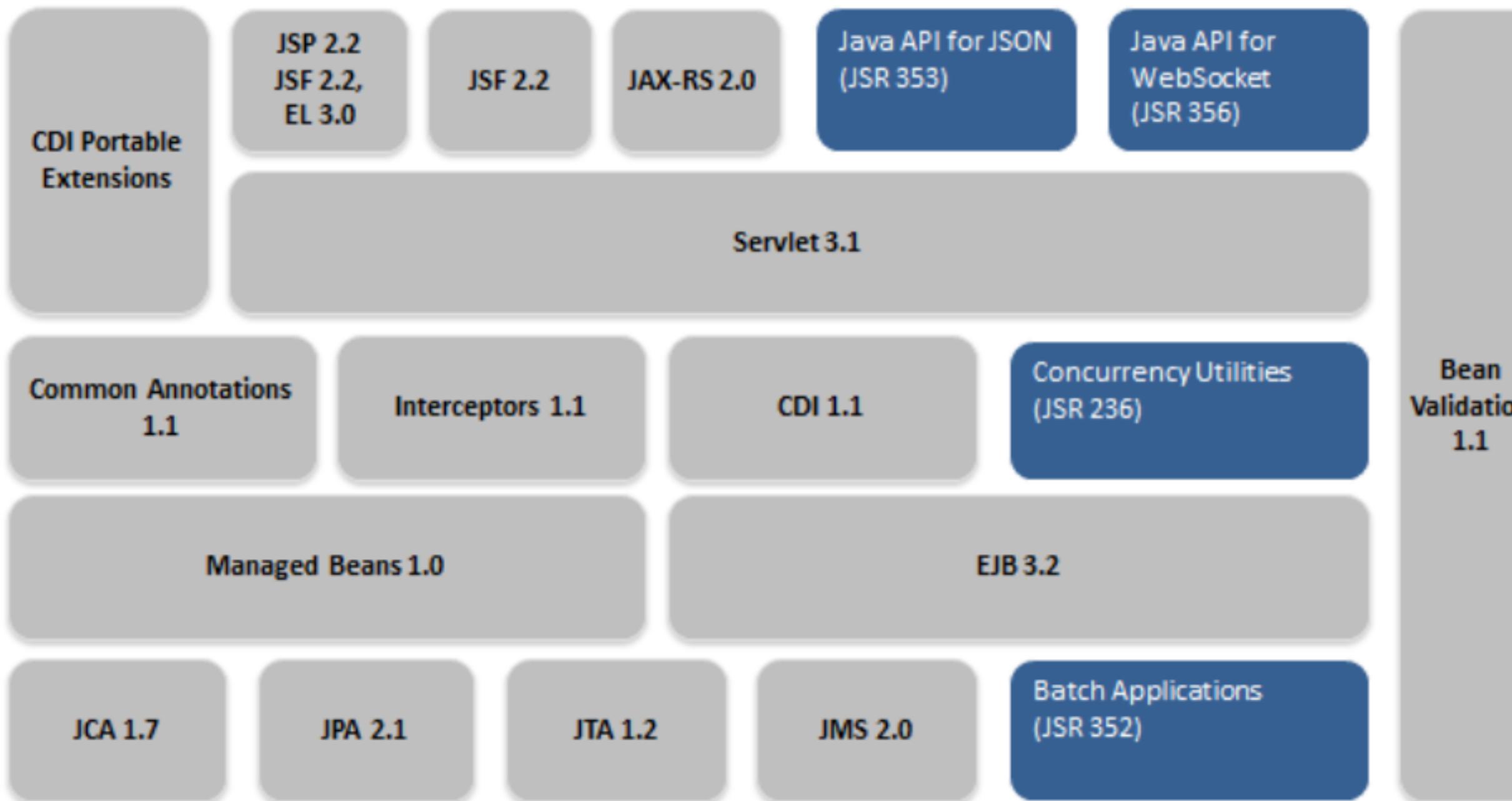
Forum <http://discuss.asciidoctor.org>

Java EE 7 WebSocket

April 13-17, 2014 San Francisco, California

DEVNATION

Java EE 7 - Overview



HTTP

half-duplex verbose hack for push

“WebSocket is a *full-duplex bi-directional protocol, over a Single TCP Connection.*

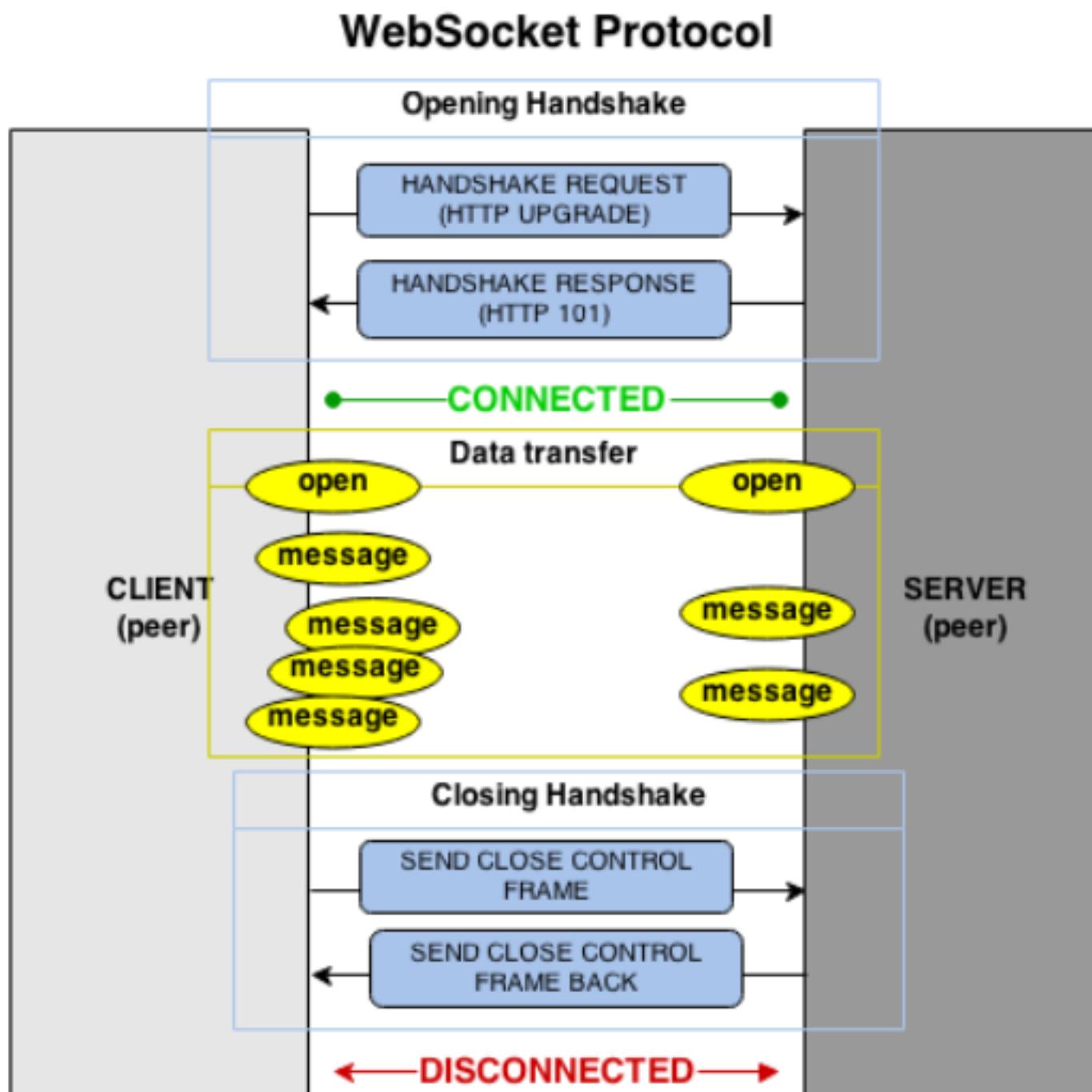
— Arun Gupta (RedHat)

1 Protocol - RF6455

1 Java API - JSR 356

1 Javascript API - W3C

WebSocket lifecycle schema



WebSocket - Handshake Request

```
GET /usopen/matches/1234 HTTP/1.1      (1)
Host: wildfly-mgreau.rhcloud.com:8000  (2)
Upgrade: websocket (3)
Connection: Upgrade (4)
Origin: http://wildfly-mgreau.rhcloud.com
Sec-WebSocket-Key:0EK7XmpTZL341o0h7x1cDw==
Sec-WebSocket-Version:13
```

WebSocket - Handshake - Response

```
HTTP/1.1 101 Switching Protocols
Connection:Upgrade
Sec-WebSocket-Accept:SuQ5/hh0kStSr6oIzDG6gRfTx2I=
Upgrade:websocket
```

Javascript API

```
var wsUri = "ws://echo.websocket.org/";
function testWebSocket() {
    websocket = new WebSocket(wsUri);
    websocket.onopen = function(evt) { onOpen(evt) };
    websocket.onclose = function(evt) { onClose(evt) };
    websocket.onmessage = function(evt) { onMessage(evt) };
    websocket.onerror = function(evt) { onError(evt) }; }
}
function onOpen(evt) {
    writeToScreen("CONNECTED");
    doSend("WebSocket rocks");
}
function onClose(evt) {
    writeToScreen("DISCONNECTED");
}
function onMessage(evt) {
    writeToScreen('<span style="color: blue;">RESPONSE: ' +
evt.data+'</span>');
    websocket.close();
}
```

Java API - JSR356

API for WebSocket Server and Client Endpoint

Annotated: `@ServerEndpoint`,
`@ClientEndpoint`

Programmatic: `Endpoint`
WebSocket opening handshake negotiation

API for WebSocket Server and Client Endpoint

Annotated: `@ServerEndpoint`,
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Programmatic: `Endpoint`
WebSocket opening handshake
negotiation

Lifecycle callback methods

Java API - JSR356 - @ServerEndpoint

EchoServer.java

```
import javax.websocket.OnMessage;
import javax.websocket.ServerEndpoint;

@ServerEndpoint("/echo")
public class EchoServer {

    @OnMessage
    public String handleMessage(String message) {
        return "Thanks for the message: " + message;
    }
}
```

Java API - JSR356 - Annotations

@ServerEndpoint POJO to Server
Endpoint

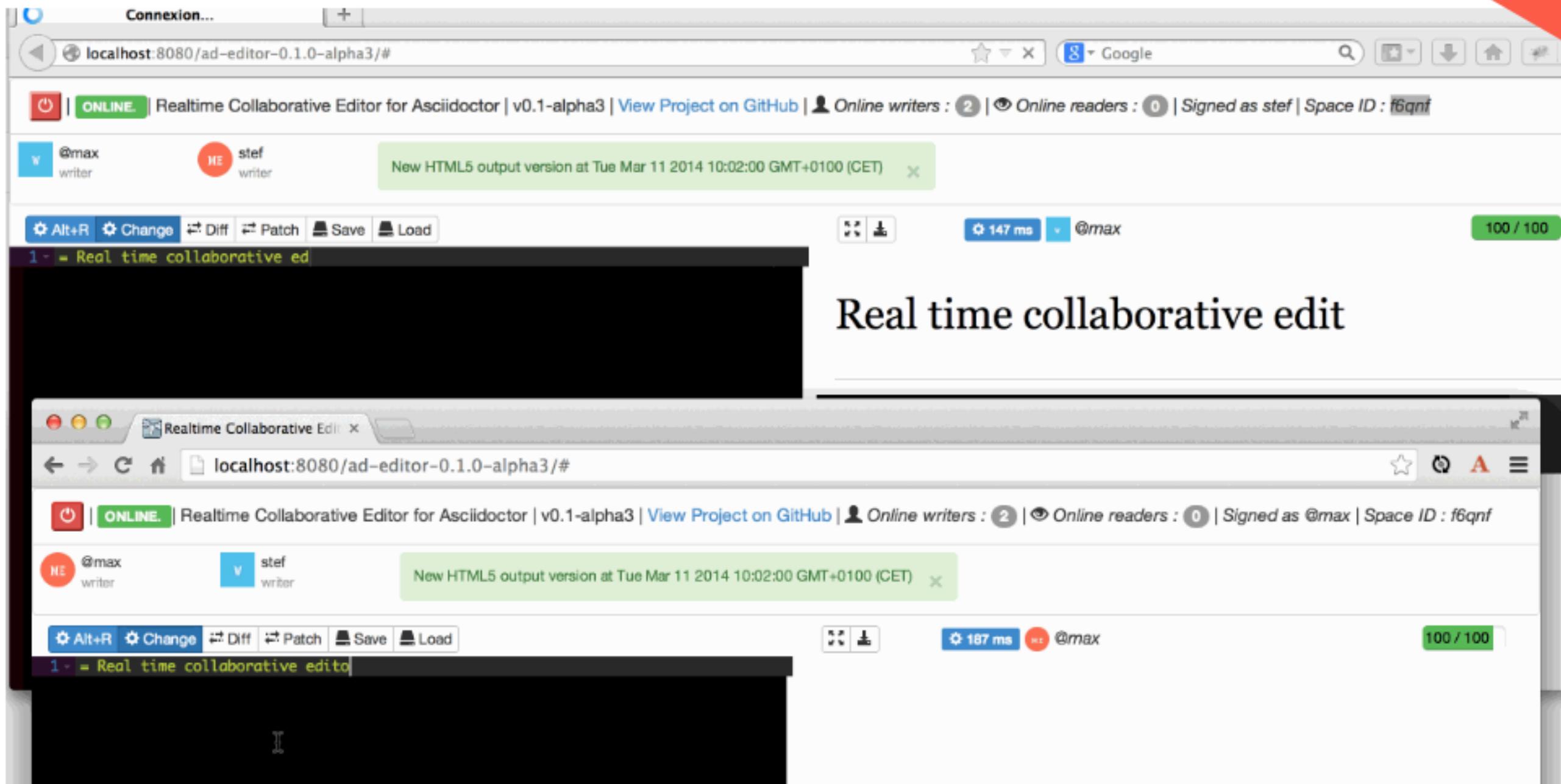
@ClientEndpoint POJO to Client
Endpoint

@OnOpen
Open
connection

@OnMessage
Close
connection

ad-editor : Asciidoctor via asciidoctor

DEMO TIME



ad-editor : JSR356

WWSMADEndpoint.java

```
@ServerEndpoint(value = "/adoc/{adoc-id}",
    decoders = { MessageDecoder.class },
    encoders = { AsciidocMessageEncoder.class,
        OutputMessageEncoder.class, NotificationMessageEncoder.class })
public class WWSMADEndpoint {

    static Set<Session> peers = Collections
        .synchronizedSet(                    new HashSet<Session>() );

    @Inject @Backend("html5")
    Event<AsciidocMessageEvent> html5Event;

    @Inject @Backend("dzslides")
    Event<AsciidocMessageEvent> dzEvent;

    @OnMessage
    public void message(final Session session, AsciidocMessage msg,
        @PathParam("adoc-id") String adocId) {
    }
}
```

ad-editor : CDI

AsciidocMessageConsumer.java

```
public class AsciidocMessageConsumer {

    @Inject
    AsciidoctorProcessor processor;

    public void html5RenderedEvent(@Observes @Backend("html5")
AsciidocMessageEvent event) {
    }

    public void dzslidesRenderedEvent(@Observes @Backend("dzslides")
AsciidocMessageEvent event) {
        ...
    }
}
```

ad-editor : Javascript

services.js

```
// Send an adoc source to see the generated output back
service.sendAdocSource = function(idAdoc, source, writer, backend) {
    var jsonObj = { "type" : backend, "source" : source,
"writer": writer};
    service.ws[idAdoc].send(JSON.stringify(jsonObj));
}

// Send 2 adoc source to see the diff
service.sendAdocSourceForDiff = function(idAdoc, source, writer,
sourceToMerge) {
    var jsonObj = { "type" : "adoc-for-diff", "source" : source,
"writer": writer, "sourceToMerge" : sourceToMerge};
    service.ws[idAdoc].send(JSON.stringify(jsonObj));
}
```

DevNation Killer feature ?

Asciidoctor AST Transformation

Asciidoctor AST Transformation

Asciidoctor propose an **AST feature...**

Asciidoctor AST Transformation

Asciidoctor propose an **AST feature**...

So easy to render one part of the document...

Asciidoctor AST Transformation

Asciidoctor propose an **AST feature**...

So easy to render **one part** of the document....

and we can render **HTML5 slides**...

Webinar without VIDEO

DEMO-TIME

What's next ?

**PDF renderer
Github worflow
Chat (audio, text)
OAuth**

Thanks to...

@alexsotob

@mojavelinux

@arungupta

@tgrall

when-websocket-met-asciidoc on Github

Maxime Gréau