

adaptTo()

APACHE SLING & FRIENDS TECH MEETUP
BERLIN, 26-28 SEPTEMBER 2012

Sling Dynamic Include

declarative caching of partially personalized pages

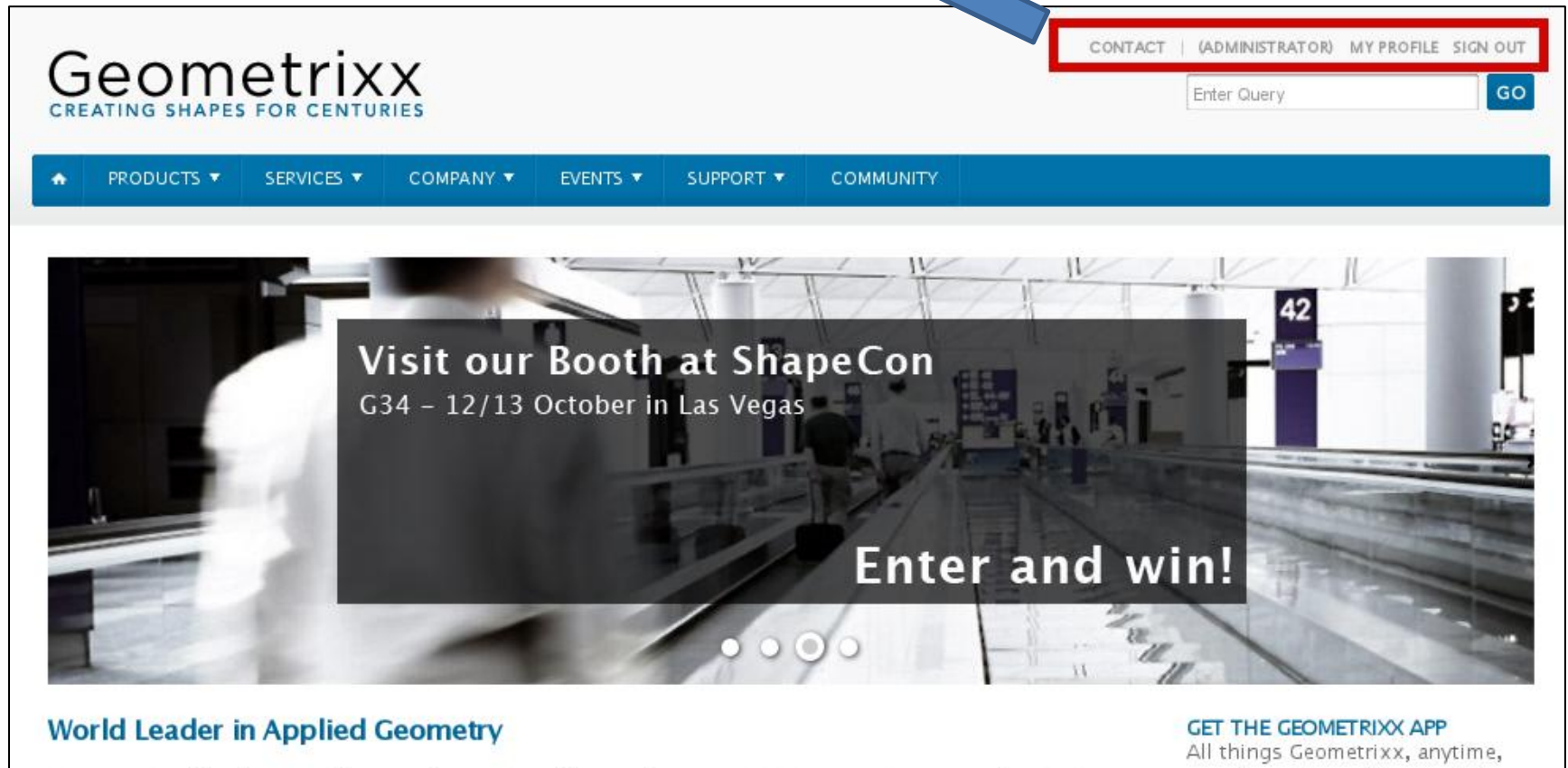
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Introduction

- Our CQ site contains a lot of static pages
- Therefore they can be cached
- Unfortunately, there is one small dynamic component
 - Current user info
 - Latest news
 - Random article
 - External content
 - ...

Geometrixx example – userinfo component

CONTACT | (ADMINISTRATOR) MY PROFILE SIGN OUT



The screenshot shows the Geometrixx website. At the top right, a navigation bar contains the links: CONTACT | (ADMINISTRATOR) MY PROFILE SIGN OUT. This bar is highlighted with a red rectangle. A blue arrow points from this bar to a larger, detailed view of the same bar shown above. Below the navigation bar is a search bar with the text "Enter Query" and a "GO" button. A main navigation bar below the search bar contains links: HOME, PRODUCTS, SERVICES, COMPANY, EVENTS, SUPPORT, and COMMUNITY. The main content area features a large banner for "Visit our Booth at ShapeCon" with the text "G34 – 12/13 October in Las Vegas" and "Enter and win!". Below the banner, there are two sections: "World Leader in Applied Geometry" on the left and "GET THE GEOMETRIX APP" on the right, with the text "All things Geometrixx, anytime," below it.

Geometrixx
CREATING SHAPES FOR CENTURIES

CONTACT | (ADMINISTRATOR) MY PROFILE SIGN OUT

Enter Query GO

PRODUCTS SERVICES COMPANY EVENTS SUPPORT COMMUNITY

Visit our Booth at ShapeCon
G34 – 12/13 October in Las Vegas
Enter and win!

World Leader in Applied Geometry

GET THE GEOMETRIX APP
All things Geometrixx, anytime,

Problem

- Dispatcher is great in caching static pages
- However, even a small dynamic component makes it useless
- We want to cache the *almost* whole page
- Selected component should be included dynamically, directly from the CQ

Solution

- Dispatcher should cache site with some static placeholder
- We replace placeholder with the dynamic content after dispatcher serves the site
- Helpful Sling feature: we can render only a part of the page using its URL

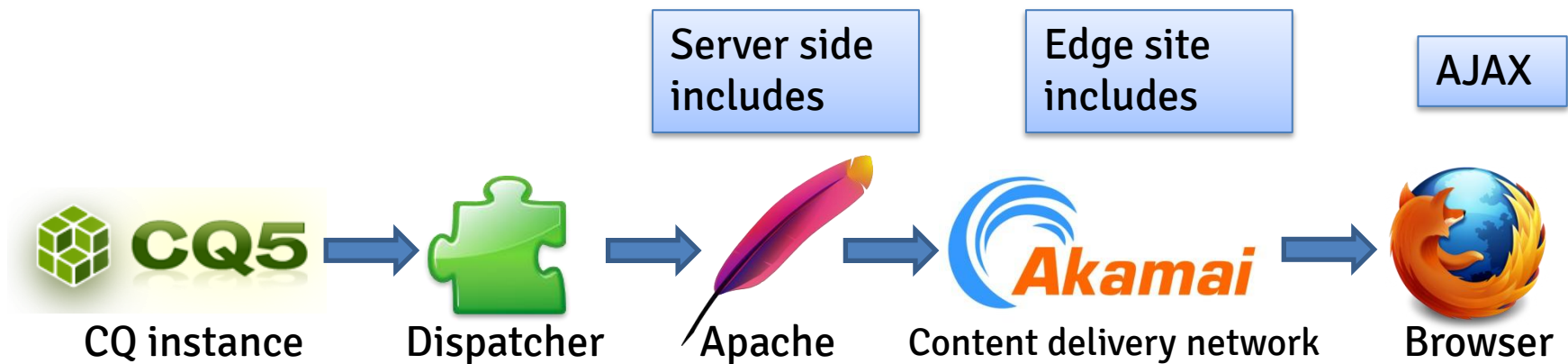
http://localhost:4503/content/geometrixx/en/_jcr_content/userinfo.html



-
- [My Profile](#)
- [Sign Out](#)

Solution

- So, we can place some *include tag* which will be replaced with the component
- Include tag types available on different service layers between dispatcher and the client:



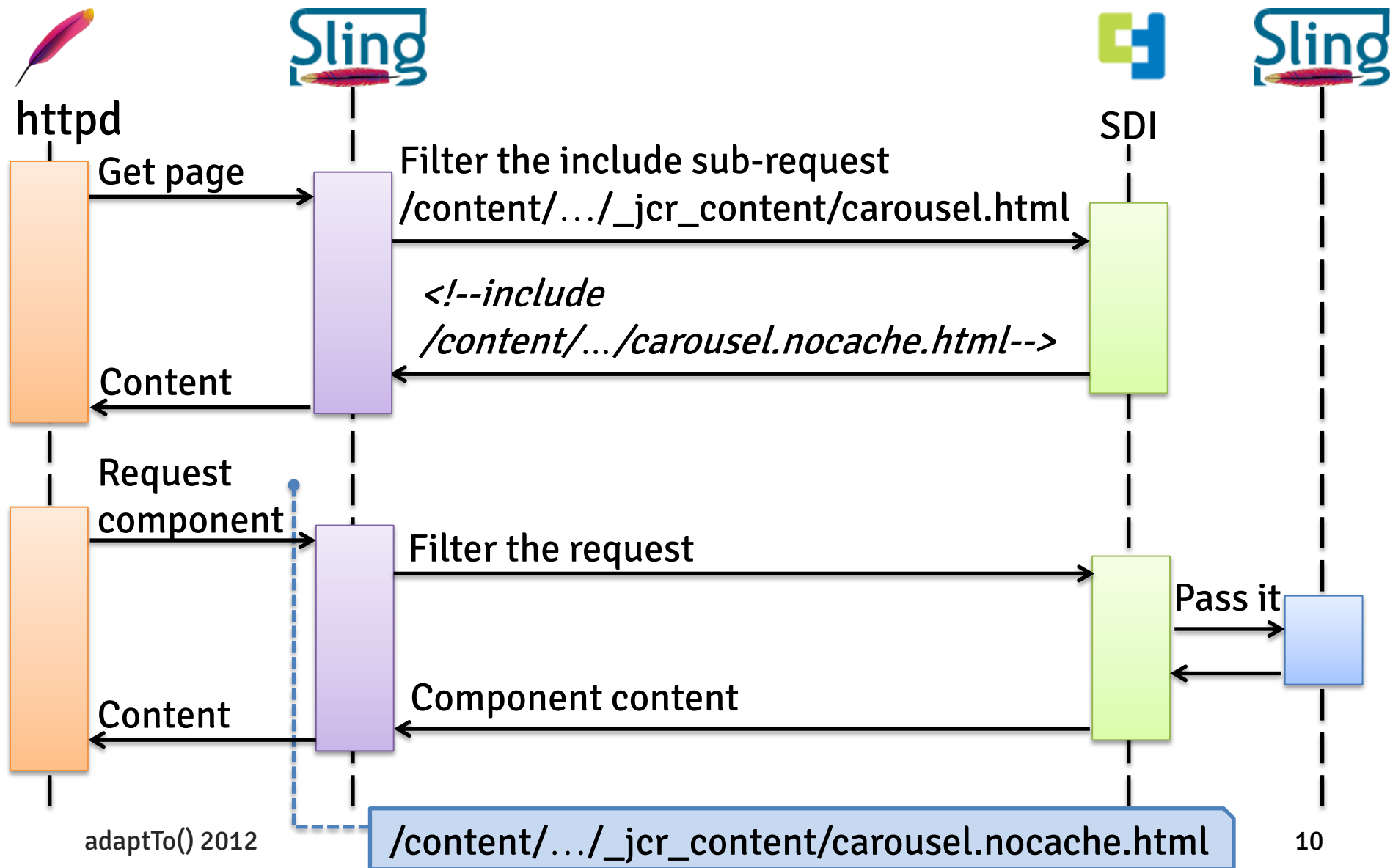
- AJAX is a common solution here
- Drawbacks
 - problems with components containing JS
 - may not work (smoothly or at all) on mobiles
 - not SEO friendly
 - slows down the site
 - flickering components

- Advantages over AJAX
 - Transparent for the browser / search engine
- Drawbacks
 - requires developers to have configured additional servers (Apache or Varnish)
 - developers should be aware of the environment
 - components should be written in a special way

Sling Dynamic Include

- Java servlet filter
- It affects components with specific resource types only
- Replaces it with:
 - SSI
 - ESI
 - AJAX include markup

SDI – how does it work?



SDI – advantages

- Approach transparent for the components
 - and developers as well
- Configured using OSGi console
 - can be disabled on the author / developers instances
 - include tag type can be easy changed
- Support for the nonexisting resources

Nonexisting resources

- Nonexisting (or synthetic) resource – resource without any JCR node

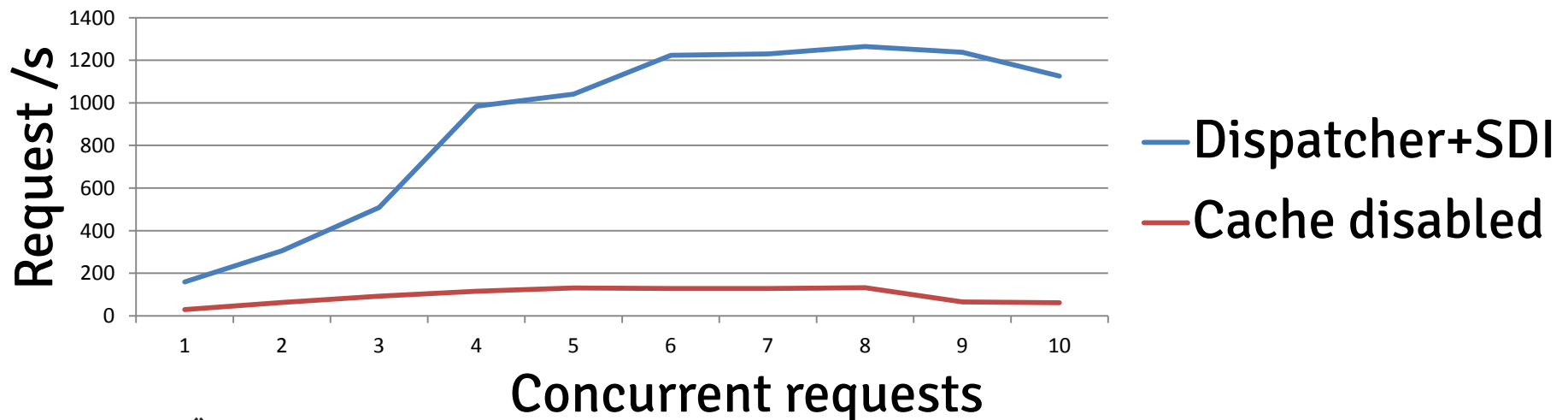
- JSP file excerpt:

```
<cq:include  
  path="footer"  
  resourceType="foundation/components/footer"/>
```

- But footer node doesn't exist
- Component is rendered normally, because it doesn't need any data
- However, requesting http://.../_jcr_content/footer.html will return 404
- SDI is able to recognize nonexisting resources and render them

Performance comparison

- Number of requests per second vs number of concurrent requests
- Geometrix site
- SDI includes *userinfo* component
- 8 threads: 1265 req/s with and 131 req/s without SDI
- Basically, it's a difference between rendering the whole page and a small part of it



- SDI is available on our Github
 - <https://github.com/Cognifide>
- Any questions?

Thanks

