

Building websites with the KB-Suite

Carl Alex Friis Nielsen
The Royal Library

Presentation Overview

- What is the KB-Suite ?
- The Component Concept
- Using Components
- Other KB suite stuff
- Questions

What is the KB-Suite ?

- Add-on modules for OpenCms
- Made for the Danish Royal Library
- KB = Kongelige Bibliotek
- Some available for free download (LGPL)
- The rest and source available on request

The Component Concept

- Components are building blocks from which pages are built.
- Any resource can be a component.
- If the system knows how to handle a resource it is a component.
- Rendering method
- Different rendering methods in different contexts
- Different rendering methods for different resource types

The Component Concept

- The “traditional” way:
 - resource->template
- The “new” way:
 - resource->component layer->template
- What we want to achieve:
 - Versatility
 - Simplicity



The Users Perspective

- How a cms user builds a page from components.



Books, Journals, and more Articles www.kb.dk

SUBJECTS

[Health Sciences](#) | [Humanities](#) | [Natural sciences](#) | [Social sciences](#) | [Theology](#) | [Library disciplines](#)

MATERIALS

[E-resources](#) | [Articles](#) | [Books](#) | [Journals](#) | [Newspapers](#) | [Aerial photographs](#) | [Judaica](#) | [Letters](#) | [Manuscripts](#) | [Maps](#) | [Music](#) | [Orientalia](#) | [Pamphlets and Corporate Publications](#) | [Pictures](#) | [Theatre texts](#) | [Features in Focus](#)

VISIT US

[Addresses](#) | [Opening hours](#) | [IT facilities](#) | [Food and drink at the Royal Library](#) | [Diamantboghandel](#)

COURSES

[Courses](#) | [Course overview](#) | [Guides and e-learning](#)

SERVICE

[Ask the Library](#) | [Remote Access](#) | [Comments and Complaints](#) | [New books](#) | [Suggest a Title](#) | [Write the Webmaster](#) | [Interlibrary loans](#)



A New Mermaid makes a Splash at the Black Diamond

The Royal Library has placed a bronze copy of Anne Marie Carl-Nielsen's sculpture "Mermaid" on the harbour front. May 5, 2009



The new Faculty Library of the Social Sciences opened May 4

Visit the new Social Sciences Library, Gothersgade 140, which is open every day of the week.



Juli Zeh

Monday 8 June 2009 at 20:00

Zeh represents the younger German generation of authors and will be talking about her authorship against the German reality she grew up in



Ben Okri

Thursday 27 August 2009 at 20:00

Meet the acclaimed Nigerian Booker Prize winner

Related websites from the Royal Library



Venstre spalte:	Komponent [3]:	Farveholdning: Standard01	Billedvisning: Intet billede	
		Overskrift: (Klik på "Ny"-knappen til højre for at aktivere dette element)		
	Komponent [4]:	Komponentvalg: /en/frontpage_/visit_us.html		
		Farveholdning: Standard01	Billedvisning: Intet billede	
		Overskrift: (Klik på "Ny"-knappen til højre for at aktivere dette element)		
	Komponent [5]:	Komponentvalg: /en/frontpage_/courses.html		
		Farveholdning: Standard01	Billedvisning: Intet billede	
		Overskrift: (Klik på "Ny"-knappen til højre for at aktivere dette element)		
Komponent [6]:	Komponentvalg: /en/frontpage_/service.html			
	Farveholdning: Standard01	Billedvisning: Intet billede		
	Overskrift: (Klik på "Ny"-knappen til højre for at aktivere dette element)			
Komponent [7]:	Komponentvalg: /en/frontpage_/about_us.html			
	Farveholdning: Standard01	Billedvisning: Intet billede		
	Overskrift: (Klik på "Ny"-knappen til højre for at aktivere dette element)			
Komponent [8]:	Komponentvalg: /en/frontpage_/lending.html			
	Farveholdning: Standard01	Billedvisning: Intet billede		
	Overskrift: (Klik på "Ny"-knappen til højre for at aktivere dette element)			
	Overskrift: (Klik på "Ny"-knappen til højre for at aktivere dette element)			
Komponent [1]:	Komponentvalg: /en/news/mermaid.html	Farveholdning: Focus03	Billedvisning: 1 kolonnes billede	
	Overskrift: (Klik på "Ny"-knappen til højre for at aktivere dette element)			
Komponent [2]:	Komponentvalg: /en/news/samf.html	Farveholdning: Standard02	Billedvisning: 2 kolonnes billede	

[NATIONAL LIBRARY](#)[COPENHAGEN UNIVERSITY LIBRARY](#)[THE BLACK DIAMOND](#)[Subjects](#)[Materials](#)[Visit us](#)[Courses](#)[Service](#)[News](#)[About us](#)[Catalogue](#)[Lending](#)[Log on](#)[\[Dansk\]](#)

You are here: > Home > The Black Diamond

A A

[Concerts](#)[The International Authors' Stage](#)[Exhibitions](#)[The Diamond Ensemble](#)[The National Museum of Photography](#)[Guided tours](#)[Contact](#)

What's on



Juli Zeh

Monday 8 June 2009 at 20:00

Zeh represents the younger German generation of authors and will be talking about her authorship against the German reality she grew up in

Exhibitions



A Building is not a Building

29 May 2009 - 29 August 2009

Architectural abstractions by Ola Kolehmainen

Copyright : About The Web Site : Aid for Disabled :

The Royal Library, Postbox 2149, DK-1016 Copenhagen K, (+45) 33 47 47 47, kb@kb.dk, EAN: 5798 000795297

Lokal forsides overskrift:

Vis overskrift:

Ukontrol. emneord:

Teasertekst:

- Teaser:
- 3 kolonnens billede: (Klik på "Ny"-knappen til højre for at aktivere dette element)
 - 2 kolonnens billede: (Klik på "Ny"-knappen til højre for at aktivere dette element)
 - 1 kolonnens billede: (Klik på "Ny"-knappen til højre for at aktivere dette element)
 - 0,5 kolonnens billede: (Klik på "Ny"-knappen til højre for at aktivere dette element)

Globale styringsord:

Lokale styringsord:

Overskrift: (Klik på "Ny"-knappen til højre for at aktivere dette element)

Komponent:

Farveholdning:

Billedvisning:

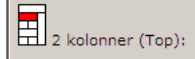


Overskrift: (Klik på "Ny"-knappen til højre for at aktivere dette element)

Komponent:

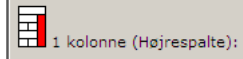
Farveholdning:

Billedvisning:



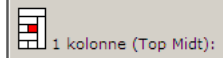
Overskrift: (Klik på "Ny"-knappen til højre for at aktivere dette element)

Komponent: (Klik på "Ny"-knappen til højre for at aktivere dette element)



Overskrift: (Klik på "Ny"-knappen til højre for at aktivere dette element)

Komponent: (Klik på "Ny"-knappen til højre for at aktivere dette element)



Overskrift: (Klik på "Ny"-knappen til højre for at aktivere dette element)



- Concerts
- The International Authors' Stage
- Exhibitions
 - Future exhibitions
 - Past exhibitions
- The Diamond Ensemble
- The National Museum of Photography
- Guided tours
- Contact



Ola Kolehmainen: Minimal Interventions of Linear Elements, 2007

Last update: 05-29-2009 04:50 PM



A Building is not a Building

Ola Kolehmainen
29 May 2009 - 29 August 2009
The National Museum of Photography

Photo artist Ola Kolehmainen is one of the central figures in the spectacular and very successful Finnish contemporary photography.

Kolehmainen only photographs architecture, but rather than just documenting it he lifts surprising details out of the buildings into monumental abstractions of form and colour.

The title of the exhibition plays with the fact that in the photographs of Kolehmainen a building is not first and foremost a building but rather a patchwork of colours, shapes, surfaces and depth, repetition and composition - an exploration of the building blocks of sight and image

Exhibitions in The Diamond

ATTENTION: The Black Diamond is closed Monday June 1st and Friday June 5th due to national holidays

Hours: Mon-Sat 10 AM - 7 PM

Admission: DKK 40 (students DKK 25, children under 16 free, school classes DKK 40 per class)

Tickets are sold at the reception and are valid for all exhibitions

(cfm) - Redigering /en/dia/udstillinger/building.html - Windows Internet Explorer

Arrangementets overskrift: ? A Building is not a Building

Undertitel: ? Ola Kolehmainen

Forfatter: ? (Klik på "Ny"-knappen til højre for at aktivere dette element)

Kontakt info: ? (Klik på "Ny"-knappen til højre for at aktivere dette element)

Startdato: ? 29/5/2009 1:00

Slutdato: ? 29/8/2009 23:59

Sted: ? The National Museum of Photography

Arrangement Type: ?

- Koncert
- Udstilling
- Forelæsning
- Diamantklubben
- Andet

Brodtekst: ?

Photo artist Ola Kolehmainen is one of the central figures in the spectacular and very successful Finnish contemporary photography.

Kolehmainen only photographs architecture, but rather than just documenting it he lifts surprising details out of the buildings into monumental abstractions of form and colour.

The title of the exhibition plays with the fact that in the photographs of Kolehmainen a building is not first and foremost a building but rather a patchwork of colours, shapes, surfaces and depth, repetition and composition - an exploration of the building blocks of sight and image

Ukontrol, emneord: ?

Topillustration: ?

Billedtekst: ?

Teasertekst: ? Architectural abstractions by Ola Kolehmainen

Teaser:

- 3 kolonnens billede:
 - Sti til billedet: ? <http://www.kb.dk/GUIDResolver/Uid.dk:kb:doms:2006-09/99999/1/>
 - Beskrivelse: ?
- 2 kolonnens billede:
 - Sti til billedet: ? <http://www.kb.dk/GUIDResolver/Uid.dk:kb:doms:2006-09/99999/1/>
 - Beskrivelse: ? Ola Kolehmainen: Minimal Interventions of Linear Elements, 2007
- 1 kolonnens billede:
 - Sti til billedet: ? <http://www.kb.dk/GUIDResolver/Uid.dk:kb:doms:2006-09/99999/1/>
 - Beskrivelse: ?
- 0,5 kolonnens billede:
 - Sti til billedet: ? <http://www.kb.dk/GUIDResolver/Uid.dk:kb:doms:2006-09/99999/1/>
 - Beskrivelse: ?

Globale styringsord: ? (Klik på "Ny"-knappen til højre for at aktivere dette element)

Lokale styringsord: ?

- Diamanten - styringsord
- Udstilling
- Fotomuseum?

Prioritering: ? (Klik på "Ny"-knappen til højre for at aktivere dette element)

Frigivelsesdato: ? (Klik på "Ny"-knappen til højre for at aktivere dette element)

Udløbsdato: ? (Klik på "Ny"-knappen til højre for at aktivere dette element)

Komponenter:

- Sidefod:
 - Overskrift: ? (Klik på "Ny"-knappen til højre for at aktivere dette element)
 - Komponent: ? (Klik på "Ny"-knappen til højre for at aktivere dette element)
- Sidens højrespalte:
 - Overskrift: ? (Klik på "Ny"-knappen til højre for at aktivere dette element)
 - Komponentvalg: ? /en/dia/komponenter_kult/billetinfo_udstillinger.htm
 - Farveholdning: ? Neutral
 - Billedvisning: ? Intet billede

Bruger Carl Alex Friis Nielsen (cfm) logget på 09-06-08 12:47 fra 10.6.1.159

Local intranet | Protected Mode: Off | 100%

The System Design Perspective

- Components in a given context are handled by a set of handlers.
- A component is associated with the proper handler by a mapping from the components type to the handler.

Handler

```
public interface I_KBResourceHandler {  
  
    public void handleResource(  
        String path,  
        Map< String , String > param,  
        CmsResourceUtil resu,  
        JspWriter out,  
        CmsJspXmlContentBean cms,  
        CmsMessages messages )  
        throws JspException , IOException;  
  
}
```

Handlermap

```
public interface I_KBResourceHandlerMap {

    public Map< String , I_KBResourceHandler > getMap();

    public void addHandler( String resTypeName , I_KBResourceHandler handler )
        throws KTypeAlreadyHandledException;

    public void removeHandler( String resTypeName , I_KBResourceHandler handler )
        throws KTypeNotHandledException;

    public void replaceHandler( String resTypeName , I_KBResourceHandler handler )
        throws KTypeNotHandledException;

    public boolean handles( String resTypeName );

    public boolean handles( String resTypeName , boolean includeDefault );

    public boolean hasDefaultHandler();}

    public void handleResource(
        String path,
        Map< String , String > param,
        JspWriter out,
        CmsJspXmlContentBean cms,
        CmsMessages messages )
        throws CmsException , JspException , IOException , KTypeNotHandledException;
```

Component Types in the KB suite

- “Default”
- Jsp/plain text
- Collector configuration
- (link) list
- Agent
- Slideshow

Local Component Types of the Royal Library

- Content pages
 - Standard
 - Arrangement
 - News
 - Course
- Front Pages
- "Pure" components
 - Spot
 - Fact Box.

The Default Handler

```
public class DefaultResourceHandler implements I_KBResourceHandler {

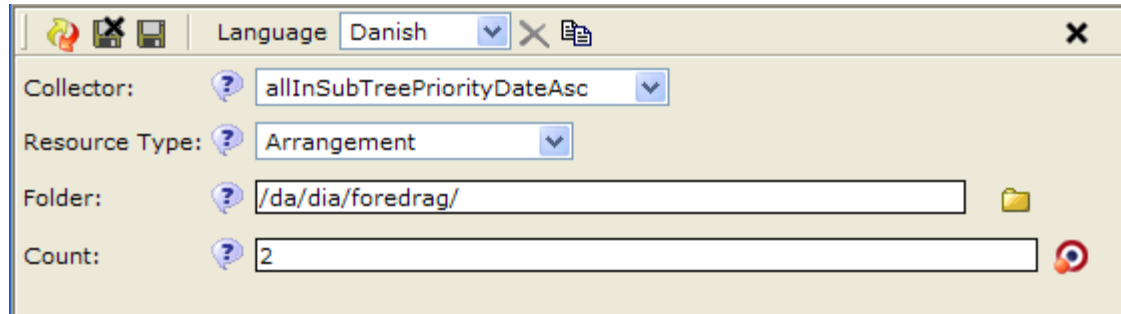
    public void handleResource( String path,
                               Map<String,String> param,
                               CmsResourceUtil resu,
                               JspWriter out,
                               CmsJspXmlContentBean cms,
                               CmsMessages messages ) throws
        JspException, IOException {
        out.write( "<a href=\"\" + cms.link( path ) + \"\">\" +
resu.getTitle() + "</a>\n" );
    }

}
```

JSP/Plain Text

```
public class JspResourceHandler implements I_KBResourceHandler
{
    public void handleResource(
        String path,
        Map< String , String > param,
        CmsResourceUtil resu,
        JspWriter out,
        CmsJspXmlContentBean cms,
        CmsMessages messages ) throws JspException ,
        IOException {
        cms.include( path , null , param );
    }
}
```

Collector Configuration



- Will work recursively
- Circles NOT handled
- Needs to know map
- Map provides handlers from the collected resources

List

Language Danish

Header: Kurser

List Style: Continuous

List Item [1]:

- Header: (Click on the "New" button on the right side to activate this element)
- Component: /da/kub/kurser/
- Farveholdning: Standard01
- Illustration: half column image

List Item [2]:

- Header: (Click on the "New" button on the right side to activate this element)
- Component: /da/kub/kurser/oversigt.html
- Farveholdning: Standard01
- Illustration: half column image



List Item [3]:

- Header: (Click on the "New" button on the right side to activate this element)
- Component: /da/kub/kurser/bestiletkursus/bestiletkursus_index.html
- Farveholdning: Standard01
- Illustration: half column image

List Item [4]:

- Header: (Click on the "New" button on the right side to activate this element)
- Component: /da/kub/kurser/multimedie/
- Farveholdning: Standard01
- Illustration: half column image

List

	
KURSER	Jacob A. 24. oktober 2009 Den dansk pioner i er
Kurser Samlet oversigt over alle de kommende kurser Bestil et kursus Veiledning og e-læring	
NYHEDSOVERSIGT	FRA STØ 11. november december Se udstilling GULD i bibliotek nyskabene Montana-s
<ul style="list-style-type: none">▶ Wien - og den musikalske etikette▶ Niels Erik Rosenfeldt får pris for fremragende formidling▶ København som fristed for forfulgte forfattere▶ Daells Varehus katalogerne digitaliseret▶ Peter Øvig Knudsen møder politichefen til en debat om terror▶ Alle nyheder	
SERVICE	

Agent

- Very complex
- Used to handle sets of components
- Driven by a collector configured by a structured content
- Lucene based search
 - Keywords
 - Categories
 - Multiple folders
- Sorting
- More.....
- Handled like collector configs
- Developed by Codedroids

Creating a HandlerMap

- Extend `A_KBResourceHandlerMap`
- "only" the constructor needed
- Handlers can be specified as local classes
- Handlers can be included
- Handlers can be loaded dynamically
- The map can be manipulated

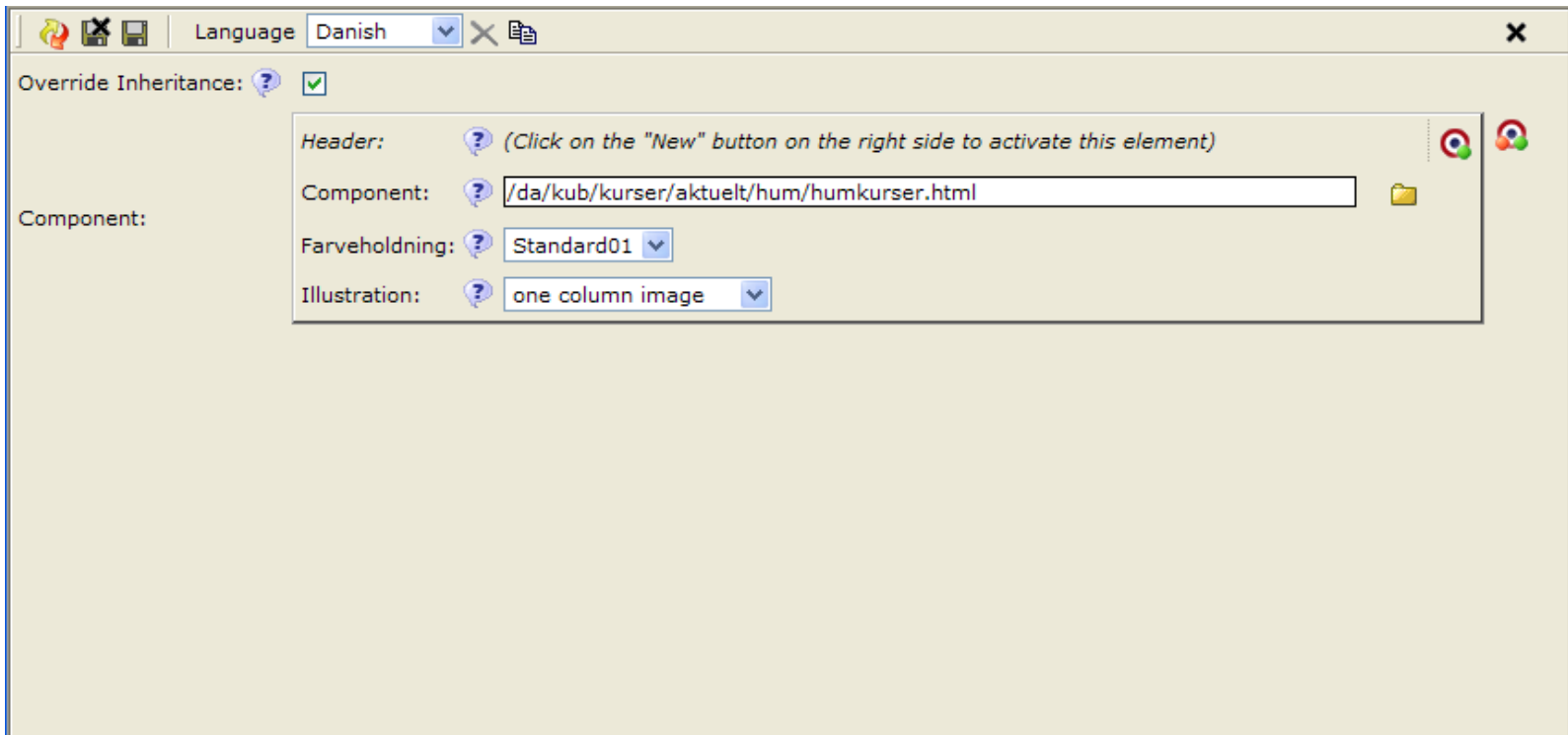
Restrictions of the Component Concept

- Direct edit probably hard to implement with components
- User wishes for embedding components in content in WYSIWYG editor cannot be met

Inherited Content

- A mechanism for sharing content between pages
- Sets of Components are shared
- Configured in structured content
- Components can be added at any node.
- Can be overridden (mostly)

Inherited Content



hoejrespalte.indhold	Hspalte.xml	<input checked="" type="checkbox"/>
hoejrespalte.messages		<input type="checkbox"/>
hoejrespalte.visning	dk.kb.cms.kb.StandardComponentKBResourceMap	<input checked="" type="checkbox"/>

Other KB suite stuff

- Menus configured in structured content
- Documentation and demo module

Availability

- The KB suite – free download from <http://www.kb.dk/en/kb/it/dup/KBSuite.html>
- Questions or comments – Carl Alex Friis Nielsen (cfn@kb.dk)
- Local KB modules – available on demand
- Source code – available on demand

Questions ?