

Das Web als Plattform für wissenschaftliche Software

Erfahrungen aus der Entwicklung und Pflege einer HTML5
Anwendung

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Slides: <https://tr.im/CMDIMakerForge>

Wissenschaftliche Software

- Cross-Plattform
- Nutzerfreundliche Interfaces
- Nachhaltig wartbar
- (Einsetzbar im Feld, also offline)



ELAN (MPI Nijmegen, Java): Desktop-Tool (offline),
Cross-Plattform, nicht-natives User Interface

FLeX (SIL, C#): Desktop-Tool (offline), Windows (partiell auf
Linux via Mono), natives User Interface (auf Windows)

Comedi (CLARINO, HTML/LISP): Webapp (nur online),
Cross-Plattform, HTML User Interface

Arbil (MPI, Java): Desktop-Tool (offline), Cross-Plattform,
nicht-natives User Interface

Web als App-Technologieplattform

*The “write once, deploy anywhere” promise of HTML5
and the Open Web platform*

W3C



CMDI Maker



eine offline-fähige HTML5-Anwendung zur schnellen Generierung von CMDI-Metadaten

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5. Juli 2016



The screenshot shows a web browser window with the address bar displaying "cmdi-maker.uni-koeln.de". The browser's tab is labeled "CMDI Maker". The page has a light blue background. At the top, there is a navigation bar with a green header containing the "CMDI Maker" logo and icons for "Corpus", "Resources", "Actors", "Sessions", and "XML Output". In the top right corner of the page, there are language links: "EN DE ES RU". The main content area features a large "Hola!" greeting, followed by a welcome message: "Welcome to CMDI Maker! Please note, that this is an offline web application. You can use it without an internet connection. When you load this page, you can pick up where you left off." Below this, there is a section titled "Select your profile" with a dropdown menu showing "IMDI" and the text "and get started!". A "Need help?" link is also present. Further down, a message states: "On the help pages you will find video tutorials in several languages, a mailing list, go-to persons and much more!". At the bottom, it says "CMDI Maker is supported by" and lists four sponsors: the Federal Ministry of Education and Research, the University of Cologne, the CCeH logo, and the CLASS logo.

CMDI Maker

Corpus Resources Actors Sessions XML Output

EN DE ES RU

Hola!

Welcome to CMDI Maker!

Please note, that this is an offline web application. You can use it without an internet connection.
When you load this page, you can pick up where you left off.

Select your profile

IMDI

and [get started!](#)

[Need help?](#)

On the help pages you will find video tutorials in several languages, a mailing list, go-to persons and much more!

CMDI Maker is supported by

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 Federal Ministry of Education and Research







AI CMDI Maker

Corpus Resources Actors Sessions XML Output

Drag and drop files here

Browse... No files selected.

Usage

Click

Select resource, click again to deselect a single resource

Shift

Hold shift to select multiple resources

Escape

Press escape to deselect all resources

20130221_1005_lowQual.WAV audio/x-wav Size: 13.6 MB Last modified: 23/02/2013	20130221_1005.eaf n/a Size: 24.8 KB Last modified: 24/02/2013	20130221_1005.WAV audio/x-wav Size: 22.3 MB Last modified: 20/02/2013
20130221_1006_lowQual.WAV audio/x-wav Size: 5.1 MB Last modified: 23/02/2013	20130221_1006.eaf n/a Size: 7.8 KB Last modified: 24/02/2013	20130221_1006.WAV audio/x-wav Size: 8.3 MB Last modified: 23/02/2013
20130221_1007_lowQual.WAV audio/x-wav Size: 5.0 MB Last modified: 24/02/2013	20130221_1007.eaf n/a Size: 6.3 KB Last modified: 24/02/2013	20130221_1007.WAV audio/x-wav Size: 8.1 MB Last modified: 20/02/2013

☐ Create one session per file
 ☐ Sort Files alphabetically
 ☐ Remove
 ☐ Clear File List

CMDI Maker

cmdi-maker.uni-koeln.de

AI CMDI Maker

Corpus Resources Actors Sessions XML Output

Session: 20130221_1005

Session

Name
20130221_1005

Title

Date
YYYY MM DD

Description

Location

Continent
Unspecified

Country

Region

Address

Project

Name
Corum

Title

ID

Description

Contact

Name

Address

Email

Organisation

Content

Genre
Unspecified AI

Sub Genre

Task
Unspecified AI

Description

Communication Context

Event Structure
Unspecified

Planning Type
Unspecified

Interactivity
Unspecified

Social Context
Unspecified

Involvement

Actors

Description of Actors

Felix
Researcher

Felix (Researcher)

Add to session

Resources

Written Resource

File Name
20130221_1005.eaf

Size
24.8 KB

Media File

File Name
20130221_1005_lowQu

Size
13.6 MB

Media File

File Name
20130221_1005.WAV

Size
22.3 MB

20130221_1005_low

Add to session

+ New Session Copy Session 1 metadata to all sessions Sort by name

Browser window showing the CMDI Maker interface. The URL is `cmdi-maker.uni-koeln.de`. The interface has a navigation bar with links: Corpus, Resources, Actors, Sessions, and XML Output. The main content area displays the XML output for the IMDI Corpus.

IMDI Corpus

```
<?xml version="1.0" encoding="UTF-8"?>
<METATRANSSCRIPT xmlns="http://www.mpi.nl/IMDI/Schema/IMDI"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  Date="2015-03-19"
  FormatId="IMDI 3.04"
  Originator="CMDI Maker by CLASS - Cologne Language Archive Services"
  Type="CORPUS"
  Version="1.0"
  xsi:schemaLocation="http://www.mpi.nl/IMDI/schemas/xsd/IMDI_3.0.xsd">
  <Corpus>
    <Name>Gtaq_Chicago</Name>
    <Title>The Chicago Gta?</Title>
    <Description LanguageId="ISO639-3:eng">Gta? (Diday) field recordings as gathered by Chakravarti in 1962-1964 and preserved
    by the Chicago Munda Language Project.

    The variety recorded is so called Plains Gta? as spoken in Oringi village. </Description>
    <Corpuslink Name="Chakravarti_Gtaq_Data_1">Chakravarti_Gtaq_Data_1.imdi</Corpuslink>
    <Corpuslink Name="Chakravarti_Gtaq_Data_2">Chakravarti_Gtaq_Data_2.imdi</Corpuslink>
    <Corpuslink Name="Chakravarti_Gtaq_Data_3">Chakravarti_Gtaq_Data_3.imdi</Corpuslink>
  </Corpus>
</METATRANSSCRIPT>
```

Download Corpus including all Sessions Download ZIP archive

Offline HTML5 web apps

- Cross-plattform
- Minimale Voraussetzungen an das System
- Keine Installation
- Web User-Interfaces
- Reine HTML/CSS/Javascript-Anwendungen (ohne Backend)
- Persistente Datenspeicherung (Web Storage)
- Tool-Development durch Web-Entwickler

Probleme von HTML5 web apps

- Konzeptuelle Probleme
- Security-Features
- Die Webplattform ist ein moving target
- Hohe Dynamik bei Javascript frameworks



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Konzeptuelle Probleme

- Wo sind meine Daten?
 - Browser gewechselt
 - Computer gewechselt
 - Hohe Security-Settings (Storage wird automatisch gelöscht)
- Wo muss ich mich einloggen um meine Daten wiederzuholen?
- (Metadaten-Editor vs. Metadaten-Generator)

Security-Features

- Warum gibt es kein automatisches Speichern?
- Warum kann ich nicht einfach mit Dateien in meinem Dokumenten-Ordner arbeiten?
- Warum warnt die App mich nicht, wenn mein Browser alle Daten löscht?

Die Webplattform als Moving Target

- Web Storage
 - Deprecated
 - Storage size (Mozilla)
- Service Workers
 - unstable
- File API
 - Partielle Implementierung (Safari)



Javascript Frameworks

- Große Anzahl an Optionen (AngularJS, ReactJS, Backbone, EmberJS, JQuery, ...)
- Grundsätzlich unterschiedliche Ansätze
- Hohe Dynamik macht Entscheidung schwierig (und potentiell wenig nachhaltig)

Mögliche Lösungen

- Daten-Sicherung und Synchronisations über Backend (bei Erhaltung der grundsätzlichen Offline-Fähigkeit)
- ...?

Danke!

CMDI Maker (App):

<http://cmdi-maker.uni-koeln.de/>

<http://cmdi-maker.uni-koeln.de/help/>

Source Code:

<https://github.com/cceh/CMDI-Maker>

Slides:

<https://tr.im/CMDIMakerForge>

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