Universität Bielefeld Center of Excellence Cognitive Interaction Technologies

CITEC

Making Research Visible

Cross Platform Linking of Semantically Enriched Research Artifacts

Cognitive Interaction Toolkit

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Central Lab Facilities

CITEC

Bielefeld University

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CLF

Agenda

- Introduction
  - The vision
  - Cognitive Interaction Technology (CITEC)
- Collaborative Research Environment
  - Collaborative development environment
  - Continuous integration server and Open research/data server
  - Pub service by Bielefeld University Library
- Cognitive Interaction Toolkit Platform + **Live Demo**
- Conclusion and Discussion

The vision

1 Julian is a researcher in the field of neurocognition and has developed a new method with corresponding software toolset that he has evaluated thoroughly. Julian likes the idea of Open Research and makes his software and his test data available. He marks the current state of both software and data and adds a description that links both research output artifacts to each other, the field of research and his institution and himself. He presents the method on a conference. After the conference he releases the paper to the public, too, and adds it to the description.

2 Jack is a researcher in the field of neurocognition, too, and is especially interested in the coordination of motion of human upper limbs and hands. He attends Julian's talk that addresses a problem field he is working on for a long time and, hence, has great interest in. The new method introduced in the talk may save Jack a lot of work in further research. Jack marks the talk in his conference programme to come back to the talk later.

3 Back at his office computer, Jack quickly locates the paper on the internet. After a quick check of the reference data he is sure he has picked the right paper. Jack is able to obtain the full paper and thus is able to study the research work in detail. Jack fetches the corresponding software source code and executable in the version that corresponds to the paper and the test data set that was used as basis for the work described in that paper.

The vision

Julian

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Data set

Tool

Paper

Jack

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participates Julian's talk

Information!

Jack

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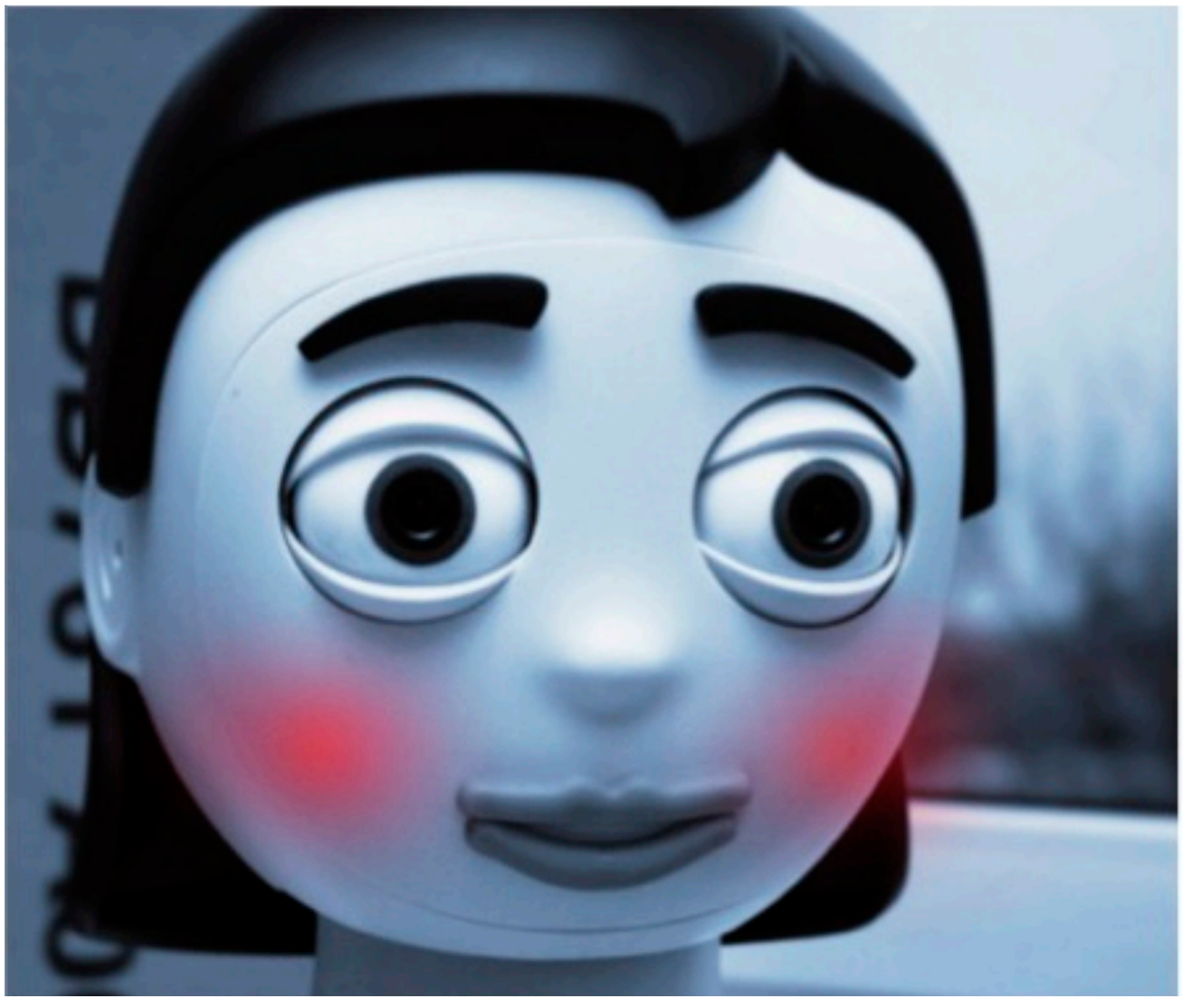
finds and downloads Julian's

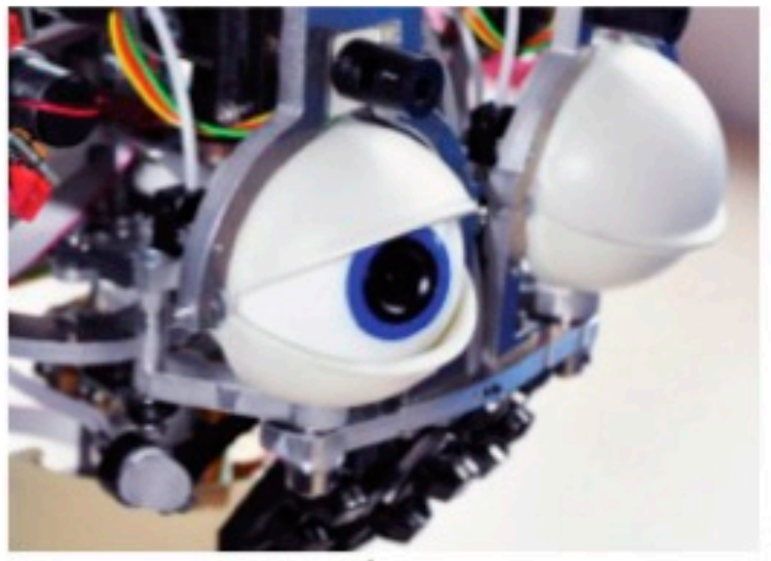
Toolkit

Introduction to CITEC

- The CITEC was founded at Bielefeld University as one of 37 german clusters of excellence.
- Creating cognitive abilities in technical systems.
- Advancing our scientific understanding of the principles and mechanisms that enable seamless cognitive interaction.
- Creating bridges between the cultures of engineering and humanity.

Introduction to CITEC

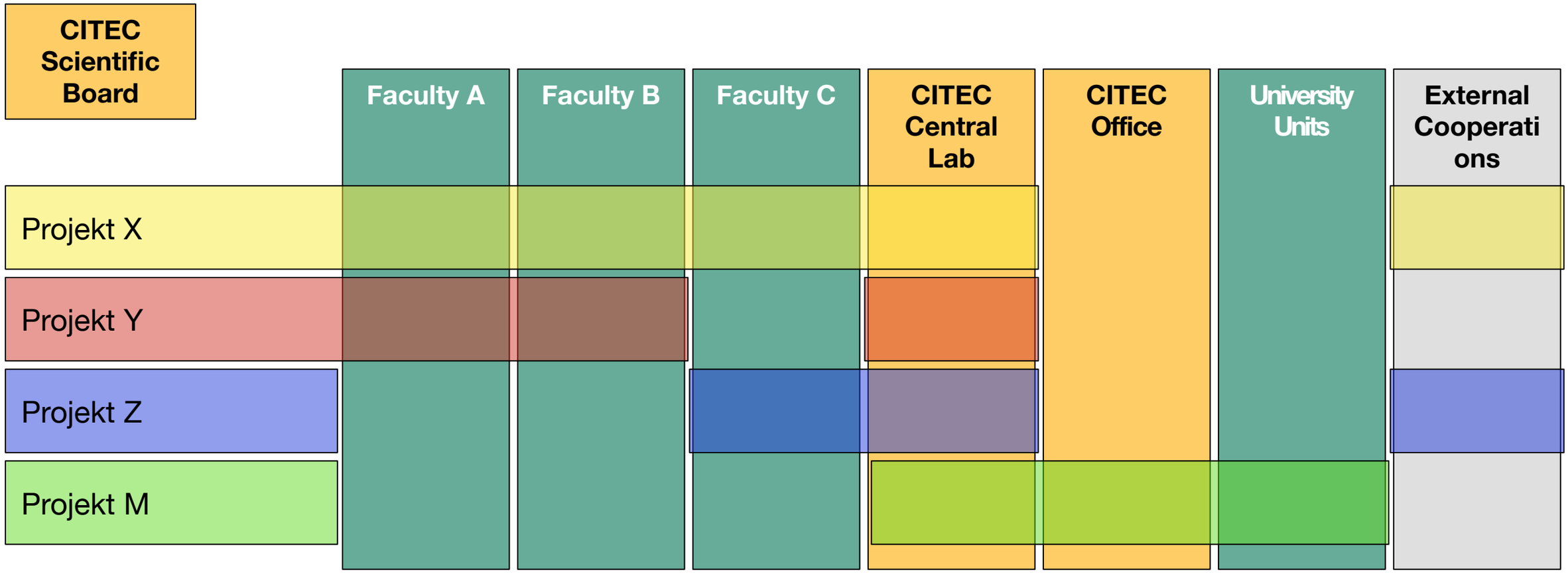




Introduction to CITEC

- Structure
  - 4 Research Areas
    - A: Motion Intelligence
    - B: Attentive Systems
    - C: Situated Communication
    - D: Memory and learning
- More than 35 groups from diverse fields of study
- 60+ Research projects and sub-projects
- Industry cooperations

Introduction to CITEC



CITEC has an interdisciplinary approach and brings together researchers from computer science and robotics, linguistics, biology and physics, and psychology and sport science.

CITEC Collaborative Research Environment

- Collaborative development environment: Redmine
  - Internal collaboration
  - 100+ projects
  - 500+ developers
  - Source code repositories (git and subversion)
  - Wiki
  - Bug/Issue tracker
  - Document storage
  - ...

Dialog-Demonstrator

Overview

New subproject

Subversion repository: https://projects.cit-ec.uni-bielefeld.de/svn/dialog-demo

Issue tracking

- Bug: 6 open / 18
- Feature: 2 open / 3
- Support: 1 open / 2
- Meeting: 0 open / 0
- Event: 0 open / 0
- Equipment: 0 open / 1
- To-Do: 0 open / 0

View all issues | Calendar | Gantt

Members

Spent time

0.00 hour

Details | Report

CITEC Collaborative Research Environment

- Open research/source also based on Redmine
  - Internal and external collaboration
  - Wiki
  - Subversion and git source code repositories
  - Bug tracker
  - Activities
  - Data sets as files, e.g.: XML, CSV, C3D for grasping data
  - ...

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Open Research

Sign in

Home Projects Help

Search

XTT – eXtensible Task Toolkit

Overview | Activity | Roadmap | Issues | News | Wiki | Files | Repository

Overview

XTT implements the Task-State-Pattern, which provides a multi-stage communication interface for robot-task-servers. Servers can report both when a task begins and when it ends independently, and there are also (optional) functions for updating task goals and canceling tasks, all in one consistent interface. Furthermore, the toolkit supports both synchronous and asynchronous use.

At the moment, there is a full implementation in Java, based on XCF4J (xtt-java) and an experimental version on Python, for RSB (xtt-python).

Issue tracking

- Bug: 0 open / 0
- Feature: 4 open / 5
- Support: 1 open / 1

View all issues

Members

Manager: Ingo Lütkebohle

Developer: David Klotz, Jan Moringen, Maikel Linke

Latest news

XTT 2.0 beta

XTT 2.0 beta is now available, supporting both RSB and XCF.

Added by Ingo Lütkebohle about 1 month ago

View all news

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Search

Kinematic data of grasping movements directed towards virtual and real objects

Overview | Activity | News | Wiki | Files

Overview

Kinematic data of grasping movements directed towards virtual and real objects was generated for the MINDA and CORTESMA CITEC Projects.
Eleven right handed subjects (age: 24-39 years, 4 women) participated in a series of three experiments. All subjects had normal or corrected-to-normal vision and had no known impairments related to arm or hand movement. All subjects gave written informed consent to be part of the study. The experiment was carried out according to the principles laid out in the 1964 Declaration of Helsinki. Subjects performed all three experiments in the same order, starting with Experiment 1, directly followed by Experiment 2, and then Experiment 3.
The experiments were carried out at the Manual Intelligence Lab, making use of its sophisticated multimodal set-up for investigating manual interaction (Maycock et al., 2010). During the data collection, the subjects stood in front of a table (with dimensions 210 x 130 x 100 cm). Subjects wore an Immersion CyberGlove II wireless data glove (Immersion Corp., San Jose, CA; data acquisition rate: 100Hz; sensor resolution: <1°) on the right hand that allowed for the recording of whole hand kinematics (22 DOF). In front of the subject (at a distance of 40cm), a holding device for spherical objects (golf tee) was positioned on the table. A laptop computer screen was positioned behind the holding device. A small round bowl (10cm in diameter) located 40cm to the right of the holding device served as

Members

Manager: Jonathan Maycock

CLF

CITEC Collaborative Research Environment

- Continuous Integration Server
  - Internal use and external view
  - Software status and notifications
  - Dependency tracking
  - Binary artifacts
  - Test reports
  - Deployment

Jenkins

People

Build History

Leader board

Status Monitor

Job Import Plugin

Cognitive Interaction Technology

Cognitive Interaction Toolkit

CoR-Lab CI Server

CLF CI User Group

Dependency Graph

Build Queue

No builds in the queue.

Build Executor Status

Ubuntu32-Lucid	
1	Building AI-MMTracking-1.x #7
2	Idle
3	Idle
4	Idle
5	Idle
6	Idle
7	Idle
8	Idle
Ubuntu32-Oneiric	
1	Idle
2	Idle
3	Idle
4	Idle
Ubuntu64-Lucid	
1	Idle

Welcome to the Central Lab Facilities Continuous Integration Se

Preliminary Job convention scheme: **[Project | Department]**-JobName-**[trunk | version]**

For support, please contact: clfwww@techfak.uni-bielefeld.de

Please join: CLF CI User Group

Service brought to you by: Central Lab Facilities

Happy building!

AG AI | **All** | AmI | CIToolkit | CLF | CoR-Lab | SFBa4 | SoziRob | ToBI RoboCup

S	W	Name ↓
		AI-3DKinectGrab-0.1.0
		AI-3DKinectGrab-0.1.1
		AI-3DKinectGrab-trunk
		AI-AnchorLibrary-0.6.0
		AI-FilterTransformSelectEventFlowEngine-1.0
		AI-FlobiFaceVis-1.5
		AI-Jaxen-1.1.1
		AI-KinectServer-trunk
		AI-LegDetector-trunk
		AI-LookingBehaviors-2.0
		AI-LookingBehaviors-trunk
		AI-MMTracking-1.x

Back to Dashboard
Status
Changes
Storable configs
Dependency Graph
Dry Run

Project CIToolkit-BielefeldTypeLibrary-0.9.0

Last Successful Artifacts
BielefeldTypeLibrary-0.9.0.tgz 5396690

Recent Changes

Permalinks

- Last build (#23), 9 days 20 hr ago
- Last stable build (#23), 9 days 20 hr ago
- Last successful build (#23), 9 days 20 hr ago

Build History (trend)

#23	Nov 15, 2011 6:05:59 PM	5MB
#22	Nov 15, 2011 6:04:59 PM	5MB
#21	Nov 15, 2011 6:04:05 PM	5MB
#20	Nov 15, 2011 6:01:59 PM	5MB
#19	Nov 14, 2011 6:39:10 PM	5MB
#18	Nov 14, 2011 6:32:10 PM	5MB
#17	Nov 14, 2011 5:51:10 PM	5MB

RSS for all RSS for failures

CITEC Collaborative Research Environment

- PUB - Publications at Bielefeld University
  - Central University Library service integrated in CITEC infrastructure
  - Allows distributed management and maintenance of publications
  - Aggregation - per use case - also available via SRU interface

Navigation

- PUB Home
- Embed Publication Lists
- FAQ
- Search Publications
- PUB OA
- PUB Theses
- PUB Blog
- PubLister Symposium and Workshop

PUB – Publications at Bielefeld University

PUB represents the central publication data service of Bielefeld University. It serves Bielefeld academics to easily create and administer their personal publication lists and make them available on the web.

PUB in a Nutshell

By default, the lists are publicly available as part of the contact page within the directory of staff and departments of the university **(PEVZ)**. Moreover, **individuals**, **chairs**, **faculties** and **central academic institutes** use the flexible and discipline specific presentation options for their publication activities.

Embed Publication Lists

We regularly update the PUB database from **Web of Science** and import publication data from **PubMed**, **arXiv.org** or **Inspire** on request. PUB enables data to be imported from several reference management systems as well.

Import from Reference Management Systems

Login / Registration

» Login
» Registration (first time users)

News

PUB – Uni Bielefeld
PUBUniBielefeld

PUBUniBielefeld Enthält Ihr Dokument ein Abstract, können Sie es im Add/Edit-Formular über "Suggest **#DDC**" automatisch klassifizieren
http://t.co/NHZ4xKin
23 hours ago · **reply** · **retweet** · **favorite**

PUBUniBielefeld Aufgrund der hohen Nachfrage: APA-Stil nun für Publikationslisten verfügbar, z.B **http://t.co/1xWe8j0K #csl #apa**

PUB

Navigation

- PUB Home
- Embed Publication Lists
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- Search Publications
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- PUB Theses
- PUB Blog
- PubLister Symposium and Workshop

PUB – Publications at Bielefeld University

Search Bielefeld Publications

Entire Document

Article Title Keyword(s)

Author

Publication year

Language: All languages

Document type: All Document Types

Affiliation: All

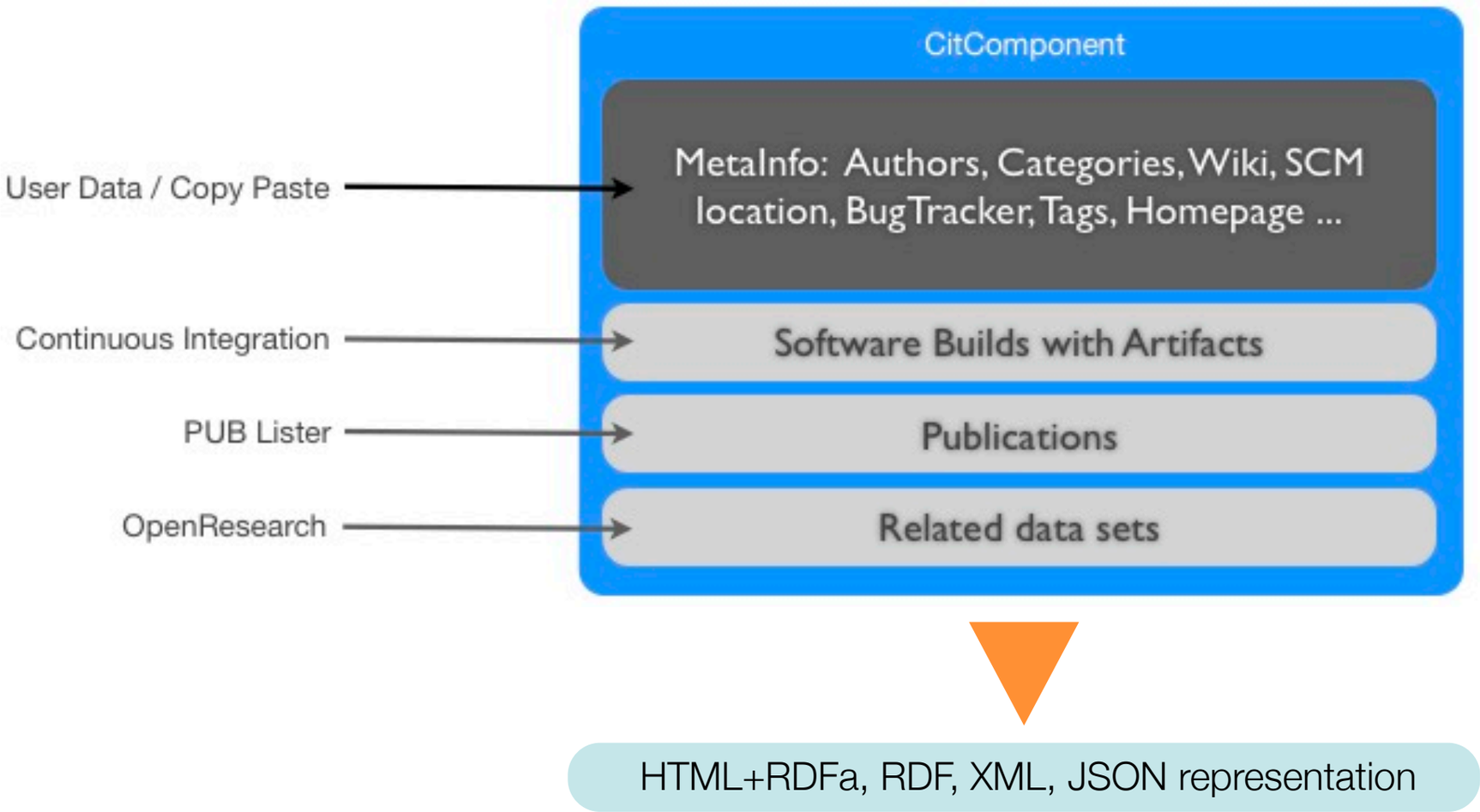
Search | Clear fields

CITEC Collaborative Research Environment

- Workspace: All researchers have their own research culture, established practices, infrastructures, and produce or work with diverse kinds of research artifacts: publications, open data sets, software ...


Cognitive Interaction Toolkit Platform

...so let's aggregate ...



Entity modules:

A CitComponent serves a container.
A »build« is an entity and can be attached to any CITComponent, also a publication and of course a data set.

Cognitive Interaction Toolkit Platform

...and combine.

HTML+RDFa, RDF, XML, JSON representation

Cognitive Interaction Toolkit Platform

LIVE DEMO

Cognitive Interaction Toolkit Platform

Still BETA ;)

Cognitive Interaction Toolkit Platform

- Conclusion
  - Several research artifacts can be retrieved and linked in our platform
  - Almost every artifact can be easily imported, enriched and published
  - There's still some work to be done on the RDF renderer
  - We need "source" back links, e.g.: CIServer --> ToolKit
  - More data!
  - SPARQL interface (coming soon)

Cognitive Interaction Toolkit Platform

Thank you for the attention!