Universität Rostock Traditio et Innovatio

SYSTEMS BIOLOGY BIOINFORMATICS ROSTOCK

SEMS simulation experiment management system

The CombineArchive Toolkit

facilitating the transfer of research results.

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http://sems.uni-rostock.de

SBI Research Seminar
WS 2014/2015

Universität Rostock

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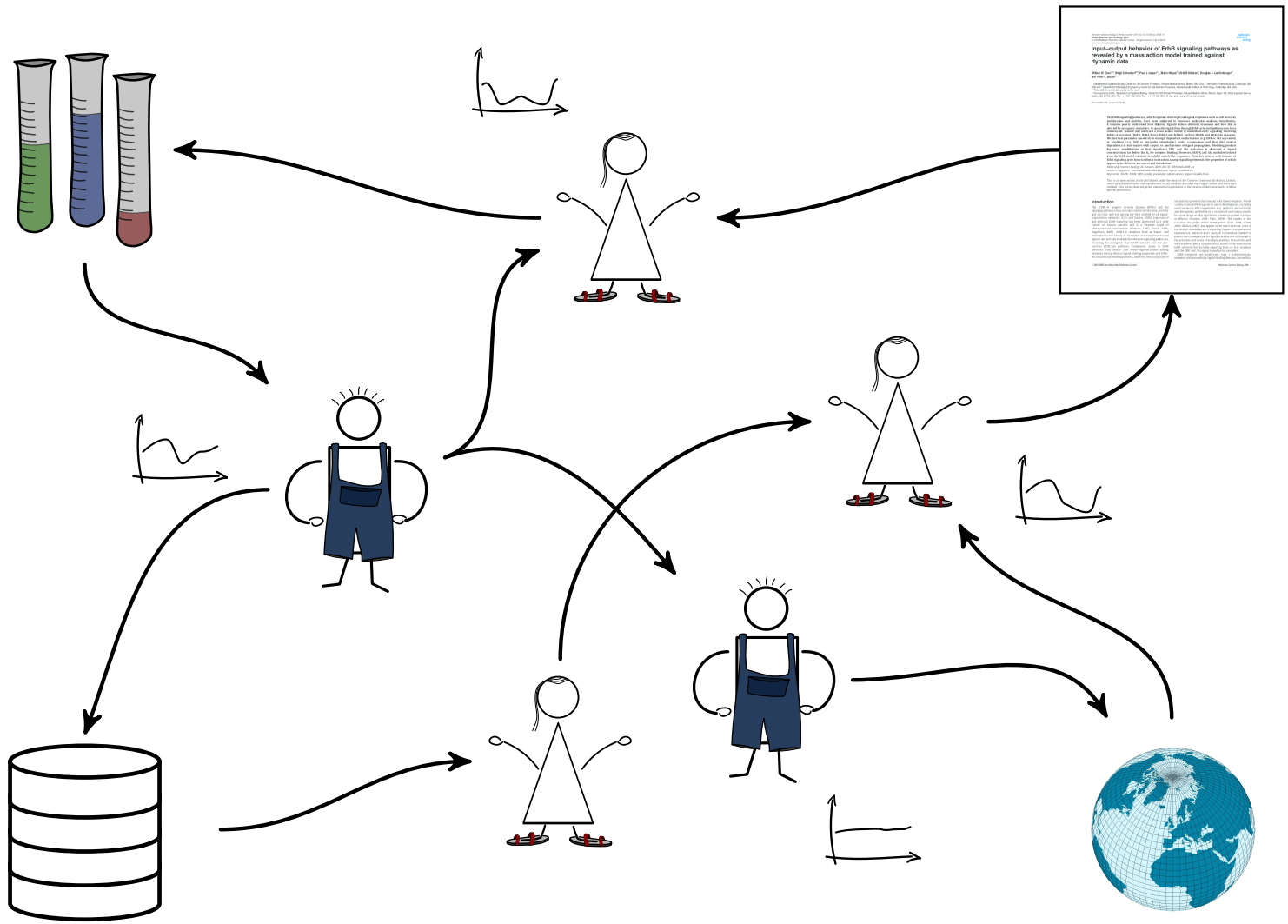
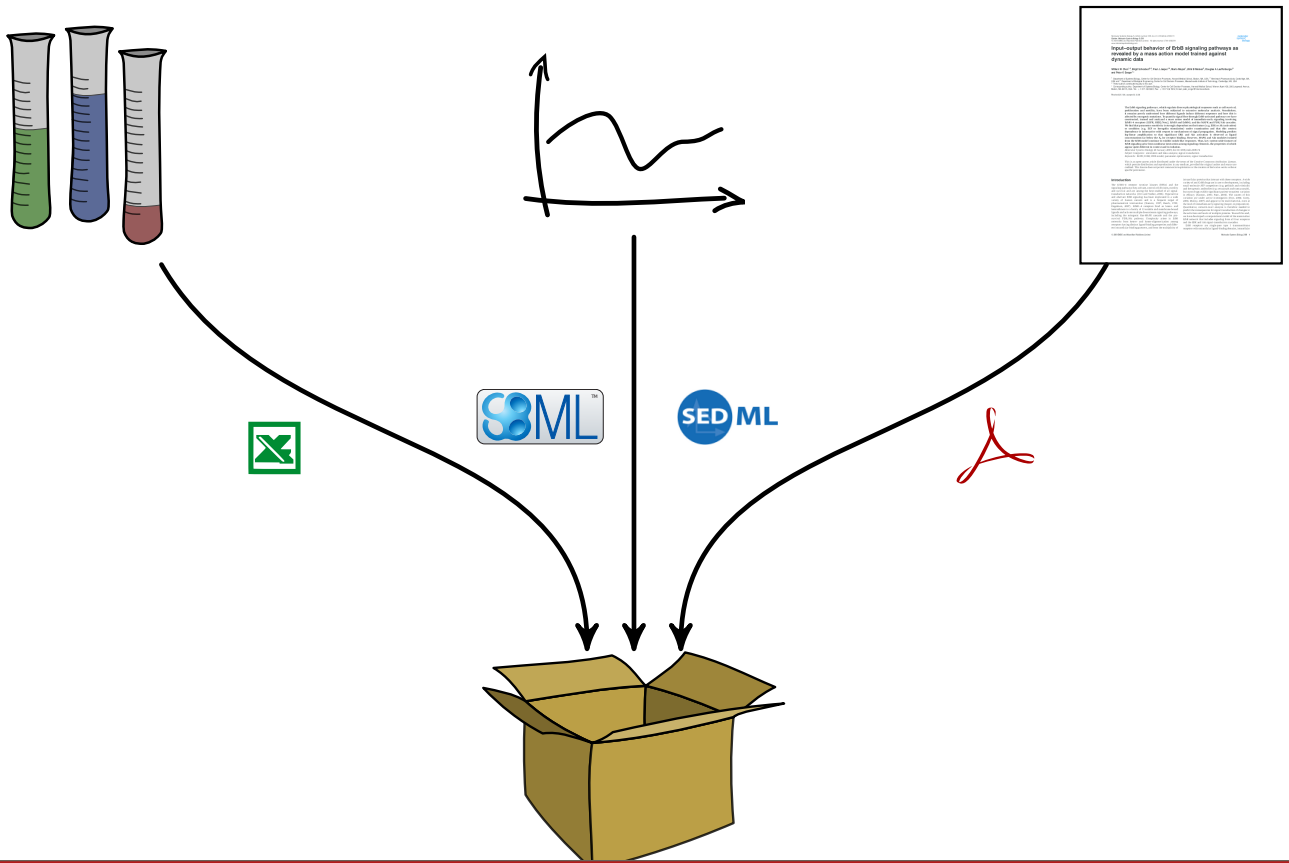
How do you share your data?



The COMBINE Archive

one file to share them all



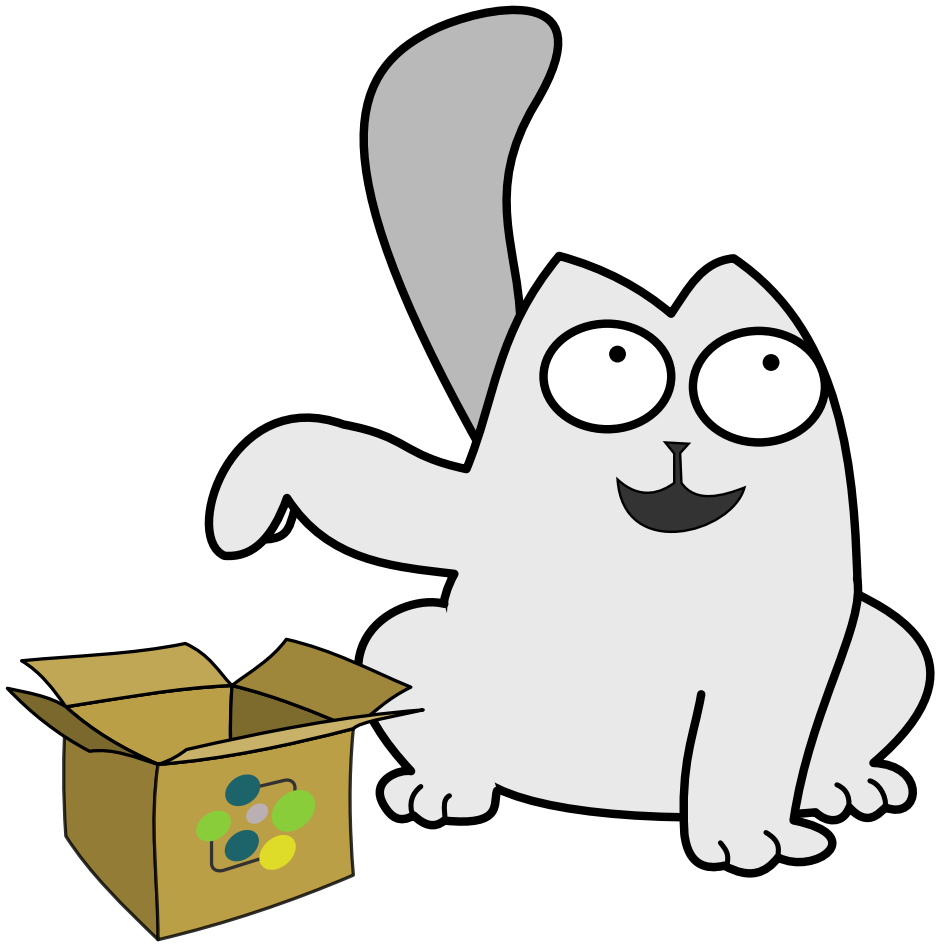
arXiv.org > cs > arXiv:1407.4992 Search or Article-id

Computer Science > Digital Libraries

COMBINE archive: One File To Share Them All

Frank T. Bergmann, Richard Adams, Stuart Moodie, Jonathan Cooper, Mihai Glont, Martin Golebiewski, Michael Hucka, Camille Laibe, Andrew K. Miller, David P. Nickerson, Brett G. Olivier, Nicolas Rodriguez, Herbert M. Sauro, Martin Scharm, Stian Soiland-Reyes, Dagmar Waltemath, Florent Yvon, Nicolas Le Novère

- **OMEX: O**pen **M**odelling **EX**change Format
- Contents:
  - manifest.xml – information about files and their formats
  - Meta data files – clerical information
  - The files – necessary to reproduce a modelling result
- Already convinced



Martin Scharm

Dagmar Waltemath

Florian Wendland

Tom Theile

Martin Peters

Markus Wolfien

- Java library:
  - Oragnise files
  - Attach and retrieve meta data
  - Build, validate, and repair archive
- Desktop Application
- Web Interface

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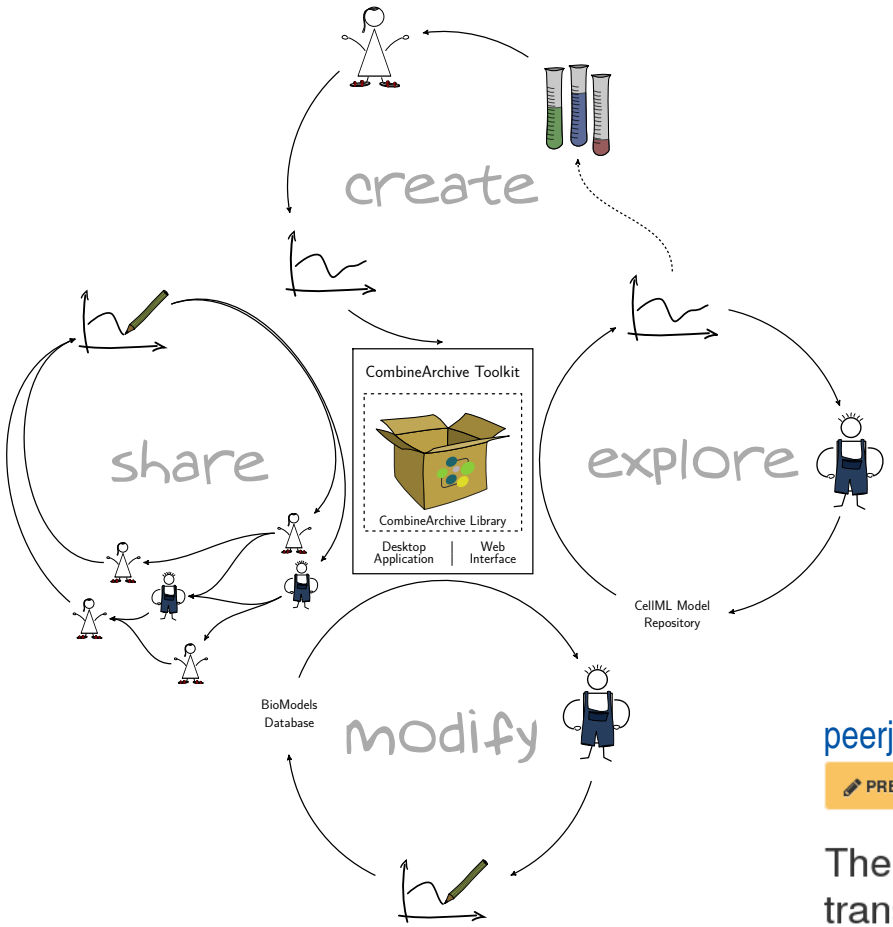
Florian Wendland

Tom Theile

Martin Peters

Markus Wolfien

Website: sems.uni-rostock.de/cat



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peerj.com/preprints/514

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The CombineArchive Toolkit - facilitating the transfer of research results

Martin Scharm, Florian Wendland, Martin Peters, Markus Wolfien, Tom Theile, Dagmar Waltemath

What does my tool do? The CombineArchive Toolkit facilitates the transfer of research results.

What are the neighbors of the tool? Our library can be integrated in websites, databases, and other software projects to add support for COMBINE Archives. The user interfaces provide intuitive access to COMBINE Archives for end users.

Who are the users of the tool? Every scientist can use the CombineArchive Toolkit to share reproducible research results. Software developers may integrate our library into their tools.

What is the current sustainability concept? The format as well as our tools are open and free to use for everyone interested in reproducibility.

How does this fit in with ELIXIR/ISBE/National efforts? The combine archive format was co-developed by active members of ELIXIR, ISBE, and the BMBF. Thus, this format is supposed to become the standard format in these societies.

Thank you for your attention!

SEMS group

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Markus Wolfien
Rebekka Alm
Olaf Wolkenhauer

combine
SysMO DB Systems Biology of Microorganisms
SEEK
cellML
BioModels

@SemsProject
http://sems.uni-rostock.de

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Bundesministerium für Bildung und Forschung