

**Knowledge Engineering** 







**Faculty of Computer Science** 

## CONCEPTUAL MODELING WITH bee-up A Tool for Fundamental Conceptual Modeling Languages\*



bee-up is a tool realized using a meta-modeling approach, which integrates and extends several modeling languages that gained wide popularity in the community within one overarching, hybrid meta-model. It does not enforce a specific procedure when solving a problem. Instead it provides various functionalities for utilizing models. In addition

different types of models are available, which can be employed according to the requirements of the task

at hand.

### Annotate

UML BPAN

Keywords: BPMN, EPC, ER, PetriNets, UML ffiliation: University of Vienna

The "IMKER" Case Study - Case Text

Bee-Up

You can highlight parts of the text by selecting them with the mouse. Those highlights car be removed by simply clicking on them. Colors can be changed by selecting them or using the number keys 1-4. To permanently store the result in a readable format you car rint it, for example as a PDF (make sure that "print background" is enabled

onsider the text below to be the transcript of an interview with a beekeeper. While the erviewer might direct the conversations at times, the actual questions are omitted and the information from the beekeeper is kep

ves in places I can get to with my car, since they can be quite heavy and it is easier to nove them with my pickup truck from one apiary to a different one or back to the tool ed to perform some repairs. Currently I have thr enkins field. Sherwood Forest being west and McJenkins field being east of the piary. This should produce some interesting hon e field. Of course there is alw nectar mixed in from the forest, since we can't control the bees, but the majority of nectar from the forest comes from the lime trees. I also have two hives south of McJenkins field which will only produce sunflower honey. This apiary is provided by McJenkins to help

Annotate text to extract relevant information as a preparation for modeling.



Use models with functionalities, like Simulation or RDF export, to gain value.



Apply modeled scenarios with other environments, like cyber-physical systems.

# Extend **Natural Language Interaction**

### e.g. ADOxx speech

Extend available functionality through open interfaces, web- or micro-services etc.





The "IMKER" Case Stud

Practice with the Bee-Up to

The "IMKER" case study uses the domain of bee-keeping to provide students with a setting for the design of differ-Download from ent system aspects through modeling with the bee-up tool. Various modeling languages for different views on the the bee-up page system, like data, processes or IT, can be employed in this setting. Additionally the setting can be used for the application of models together with different environments, which can include objects like robotic arms or aerial drones.

\* Find out more in: D. Karagiannis, R. Buchmann, P. Burzynski, U. Reimer, M. Walch (2016) Fundamental Conceptual Modeling Languages in OMiLAB, in Domain-Specific Conceptual Modeling, Springer, ISBN 978-3-319-39417-6





