

# Games for the Promotion of NLP to the Public

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NLP lab seminar  
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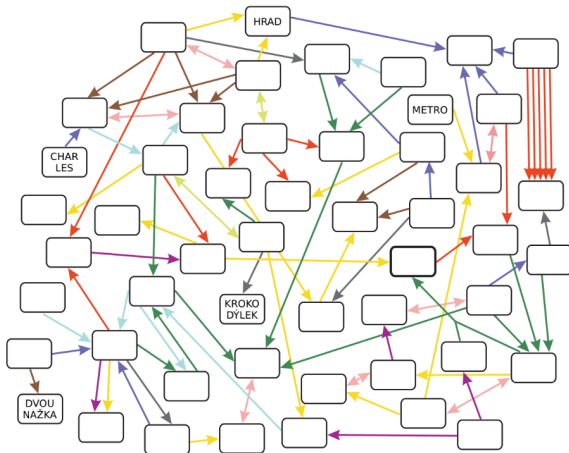
- train linguistic abilities
- explain NLP tools & resources
- software by NLPC  
<https://nlp.fi.muni.cz/cs/LangToolsLinks>
  - X-Plain (Activity)
  - 20 questions (guess the animal)
  - Guess the word (thesaurus)
  - Sherlock Holmer & Dr. Watsonson (paraphrasing & entailment)
  - and more

- cards to place on a canvas, no pen & paper
- team, fun
- puzzle (adapted from real puzzle hunt competitions)
  - find a single-word solution
  - the answer is hidden
  - multiple steps to reveal one by one
  - no instructions, only the design
- more gamesome than a real NLP
  - e.g. multiple word senses and homonyms in a single entry
    - impractical in NLP
    - the ambiguity is an element of the game – you have to disambiguate
- the real NLP can be shown after the game



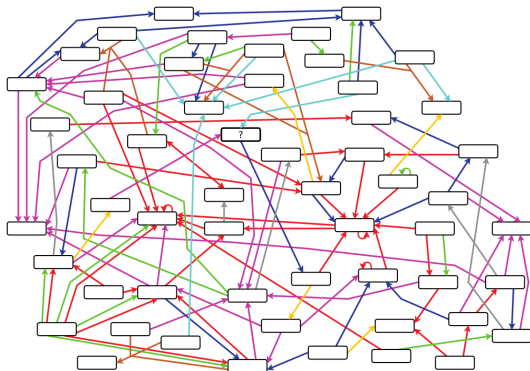
# Lexical-Semantic Network

- content: lexicon, semantic relations, homonymy, word-sense disambiguation (WSD) – nouns, adjectives
- resources used: WordNet (lexical database of semantic relations)
- NLP to show: WordNet, DEBDict, Lexonomy



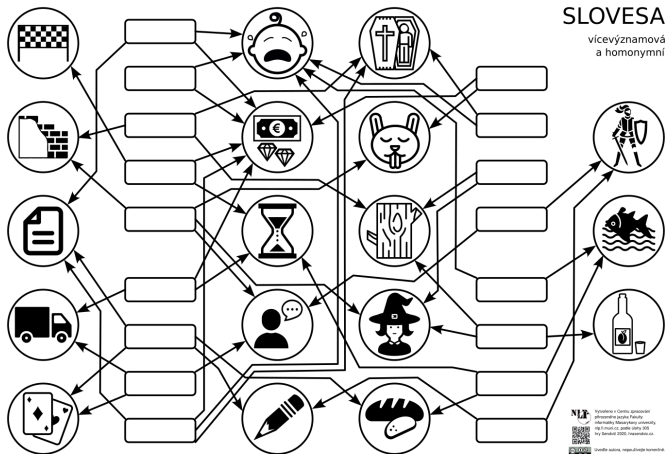
# Lexical-Semantic Network

- content: lexicon, lexical and semantic relations, homonymy, WSD – nouns, adjectives, prepositions
- resources used: WordNet (lexical database of semantic relations), Word Sketches (summary of a grammatical and collocational behaviour of words)
- NLP to show: WordNet, DEBDict, Lexonomy



# Lexical Network with a Heavy Use of Homonymy

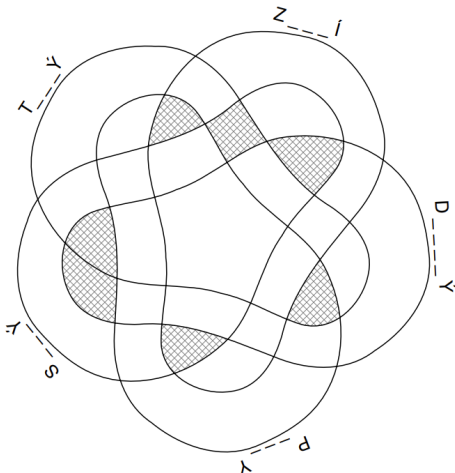
- content: lexicon, lexical relations, homonymy, WSD – verbs, nouns
- resources used: lexicon (SSJČ, SSČ, Internet language guide)
- NLP to show: Language guide, VerbaLex, DEBDict, Lexonomy



# Collocation Diagram (future production)

- content: collocations – nouns, adjectives
- resources used: Word sketches (collocations); inspired by XKCD 2122
- NLP to show: Word sketches in Sketch Engine, talk about strong collocations

2/5 barvy ●  
1/5 blbost  
4/5 cesta ●●  
2/5 čepice ●  
5/5 den  
2/5 chvíle  
2/5 fronta  
3/5 kabát ●●  
1/5 kašel ●●  
2/5 květina ●●●●  
4/5 léto ●●  
3/5 místo ●●●  
1/5 mléko ●  
2/5 pneumatiky  
4/5 počasí  
2/5 podnebí ●●  
2/5 příroda ●  
1/5 radovánky  
4/5 spacák ●●  
2/5 spánek ●●  
4/5 šála ●●  
3/5 vlasy ●●●  
3/5 výlet ●●  
1/5 životnost





# Language Model (future production)

- content: a simple character n-gram language model, text generation
- resources used: lexicon (list of words from a web corpus)
- NLP to show: text generator, sentence finisher, ChatGPT or any text generation software, explain how it works

