# AUTONOMOUS SYSTEMS

## SEMINAR 03
## Mind mapping

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# How to act in case of the project?

- Phase 1: Topics of projects
- Phase 2: Literature research, state of the art
- **Phase 3: Mind mapping**
- Phase 4: PEAS, ODD+D
- Phase 5: MAS conceptualisation
- Phase 6: Verification and validation

# Visualisation of scientific works/theses into the hierarchical structure

- **Mind maps are going to be used for mapping scientific sources (journal papers, books, proceedings papers, …) into the mind map**
- Mind mapping: technique of the subjective classification, categorisation and visualisation of the ideas
- Purpose of the mind maps:
  - representation, organisation of information and knowledge
  - one-page method – everything important is on the one page
  - facilitation of the orientation in the topic and remembering important facts during learning
  - presentation of the own point of view on the particular topic
  - support for brainstorming

# Example 1
# What are the mind maps?

# Example 2
# What is the literature?



Source: Created by Krystian Morgan - http://www.thinkbuzan.com/us/support/mindmapgallery

# Mind maps and their purpose

- **Mind map is subjective**:
  - we cannot say that the mind map is well prepared or is not well prepared
  - it does not matter which ideas my colleagues/friends have about my mind map – „My map is the my map! ☺"
  - usability of the mind map is judged according of the view of its creator
  - on the other hand, mind map is going to be judged by the teacher ☺
- It is supposed that the creativity is going to be used during mind mapping (You can use colours, pictures, links to online web sources, etc.)
- Mind map should be clear for its „developer", but also for the readers of the mind map

# Mind map structuralisation

- The key topic is in the centre of our mind map
- Keywords (nodes) are mentioned on the lines (branches) leading to the centre of the map
- Keyword: some word, picture, file (document, song, movie, …) or their combinations
- Keyword has to have only one predecessor node – mind map should lead to the hierarchical structure having star-like shape
- No keyword has to be alone, i. e. without any lines leading to the other keywords
- Node that is on the lower levels of the hiearchy (child node) should correspond with the node that is on the higher level of the hierarchy (parental node)

# Suggestions from T. Buzana
## (The Mind Map Book (1991))

1. Buzan suggests the following guidelines for creating mind maps:
2. Start in the center with an image of the topic, using at least 3 colors.
3. Use images, symbols, codes, and dimensions throughout your mind map.
4. Select key words and print using upper or lower case letters.
5. Each word/image is best alone and sitting on its own line.
6. The lines should be connected, starting from the central image. The lines become thinner as they radiate out from the center.
7. Make the lines the same length as the word/image they support.
8. Use multiple colors throughout the mind map, for visual stimulation and also for encoding or grouping.
9. Develop your own personal style of mind mapping.
10. Use emphasis and show associations in your mind map.
11. Keep the mind map clear by using radial hierarchy or outlines to embrace your branches.

# CmapTools

- The CmapTools software (available for download at: http://cmap.ihmc.us/products/) developed at the Institute for Human and Machine Cognition
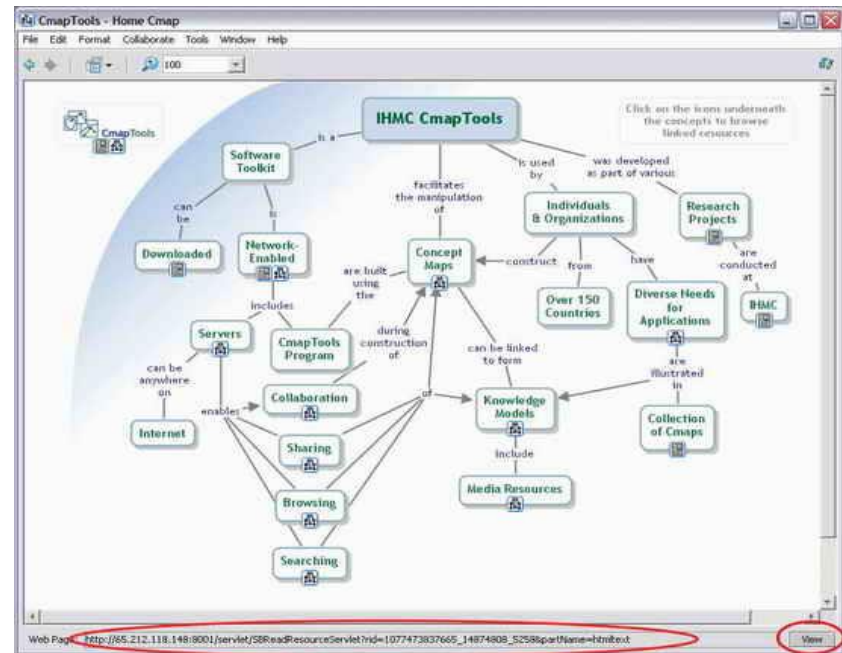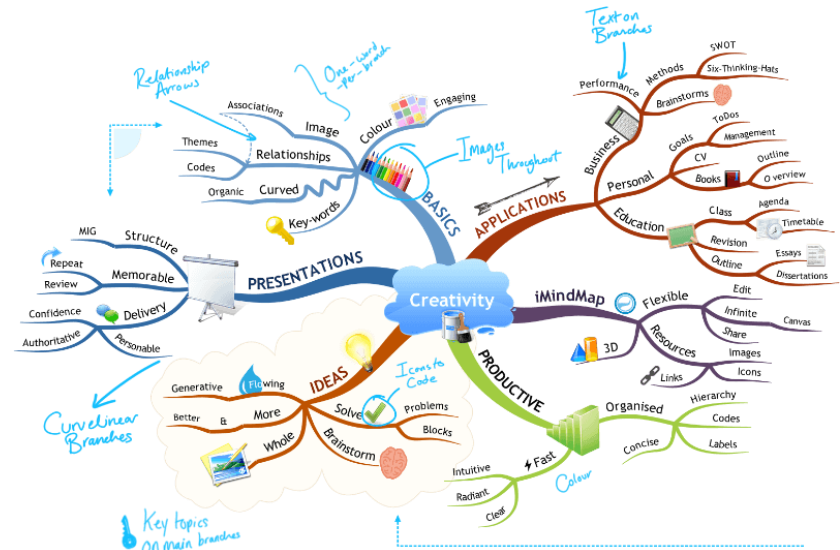
# CmapTools

- Mainly used for concept maps

- We will use it for mind maps

- Concept maps/mind maps differences?
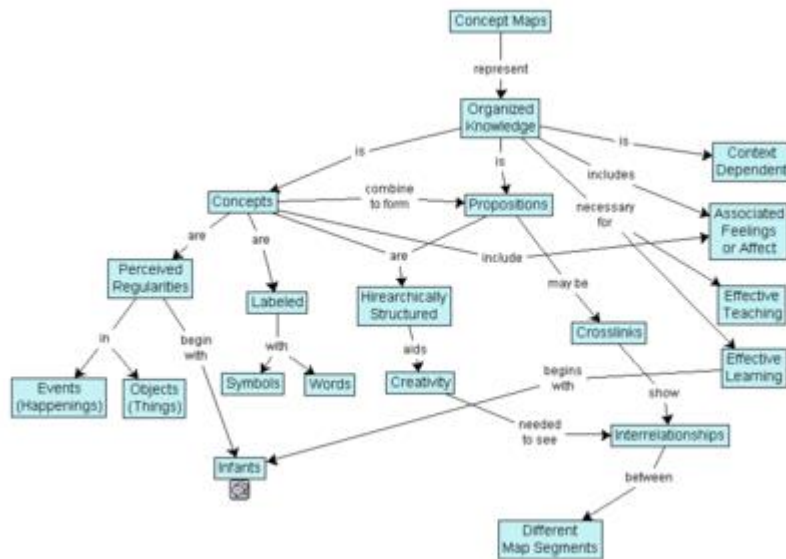


https://en.wikipedia.org/wiki/Concept_map



https://imindmap.com/how-to-mind-map/

# Homeworks

- Finish the state of the art (2x A4 min.)
- Complete exercises in the seminar 3
- Create the mind map for your state of the art
- Note: Writing of the state of the art is realised almost in paralel with the mind mapping
  - These phases should not be separated!

# Tutorial about the mind maps
# You can try it! ☺

- https://imindmap.com/how-to-mind-map/