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Satellite system

Visualization tool

for

Concept analysis
Basic form

Center node: Core concept

Satellite node

Satellite node

Satellite node

Satellite node

Satellite node

Satellite node

Satellite node

Satellite node
Mapping the concepts of my TKE article

1. Analysis

2. Synthesis
Satellite model

1. Origin
2. Visualization method
3. Product: satellite system
4. Method
5. Uses

structure
content
1. Origin of the satellite model

- **Origin**
  - **(reasons for creation)**
    - (lack of) comprehensive visualization tool
  - **(field of origination)**
    - terminology
      - terminology work
      - concept analysis
  - **(purpose)**
    - visualization
      - concepts relations
      - concept systems
      - "big picture" alternatives
  - standardized graphical presentations (except for)
    - generic relations
    - partitive relations
    - associative relations (shared)

Satellite model

Understanding
2. Satellite model as a visualization method

Other disciplines, see the call for papers

Satellite model is a visualization method

- types according to origin

- (terminology)
  - (mentioned in the terminological literature)
  - satellite model
    - (Nuopponen)
    - mind mapping
      - (Buzan)
    - concept mapping method
      - (Novak et al.)

- tree diagram
  - for generic concept systems
  - for partitive concept systems

- flowcharts
- field diagrams
  - charts
  - lists
  - tables
  - etc.
Mind mapping

Scuba diving

Concept mapping

Scuba diving

is a mode of underwater diving

is performed by scuba diver

who uses
dives into self-contained underwater breathing apparatus (scuba)

which contains breathing gas

開放 circuit

Types of which are

rebreather

with

breathing

which is usually compressed air

breathing gas

Breathing apparatus

Suit

Mask

Depth gauge

Pressure gauge

Dive computer

BCD

Weights

Fins

e tc.

Breathing gas

Health

Safety

Important

Breathing

Reasons

Work

Hobby

Vacation

Learning

Certification

Diving schools

NAUI

PADI

Coral reefs

Fish

Coral
turtles

Wrecks

Seas

Places

Lakes

Rivers

Caves

Quarries and mines

Seeing

Seas

Reefs

Wrecks

Scuba diving

open circuit

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3. Satellite model/satellite system
## Comparison with related visualization methods

<table>
<thead>
<tr>
<th></th>
<th>Mind mapping</th>
<th>Concept mapping</th>
<th>Satellite model</th>
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</thead>
<tbody>
<tr>
<td><strong>Origin</strong></td>
<td>education</td>
<td>Education</td>
<td>terminology</td>
</tr>
<tr>
<td><strong>Who</strong></td>
<td>Tony Buzan</td>
<td>Joseph D. Novak</td>
<td>AN</td>
</tr>
<tr>
<td><strong>Formality</strong></td>
<td>free association</td>
<td>formal, structured</td>
<td>structured, flexible</td>
</tr>
<tr>
<td><strong>Form</strong></td>
<td>radial diagram, organic structure, visual means for remembering (pictures, thickness of the lines, colors etc.)</td>
<td>top-down diagram, boxes</td>
<td>radial diagram or all the branches on the same side</td>
</tr>
<tr>
<td><strong>The most important concept or theme</strong></td>
<td>in the middle</td>
<td>on the top</td>
<td>in the middle</td>
</tr>
<tr>
<td><strong>Relationship expressions</strong></td>
<td>single word notations</td>
<td>phrases</td>
<td>relation names, phrases, questions, concept roles, etc.</td>
</tr>
<tr>
<td><strong>Relationship expression location</strong></td>
<td>on lines (along)</td>
<td>on lines (across)</td>
<td>in auxiliary nodes; color coding of lines, on lines etc.</td>
</tr>
<tr>
<td><strong>Cross-referencing</strong></td>
<td>welcomed</td>
<td>important</td>
<td>not recommended; a concept can be placed in several locations</td>
</tr>
<tr>
<td><strong>Relation knowledge</strong></td>
<td>learned knowledge</td>
<td>analyzed from the text</td>
<td>analyzed from sources, based on a set of concept relation and system models</td>
</tr>
</tbody>
</table>
4. Satellite model: method

- Tools:
  - Pen and paper
  - Mind mapping software

- Instruments:
  - Concept relation typology
  - Concept relation models
  - Selecting the core concept, departure concept

- Process:
  - Selecting the starting point model(s)
  - Preliminary satellite system
  - Organizing the satellite system
  - Detailed analysis of satellite nodes and their satellites
  - Synthesis

- Model types:
  - Typology
  - Structure
  - Origination
  - Activity
  - Development
  - Causation
  - Transmission
5. Uses of satellite models

- Concept analysis
  - Mind mapping type of brainstorming tool
  - Planning preliminary mapping of the domain
  - Delimiting the scope of the project
- Systematic terminology work
  - Extracting concepts
    - Candidate terms
    - Equivalents
    - Material for definitions etc.
  - Preliminary organizing extracted information
  - Analysing characteristics
  - Delimiting concepts from each other
  - Refining the concept system
    - Specifying the relations between the concept
  - Presenting the end result
- Other uses
  - Research
  - Writing articles
  - Teaching
  - Planning
  - Designing
  - Coordination
  - System design
  - Information design and modelling
  - Technical communication
  - Translation etc.
The future

Coreon
https://app.coreon.com/52a048ba636f7202530c0000

EcoLexicon
http://ecolexicon.ugr.es/visual/index_en.html

Others: i-Model/i-Term, WIPO Pearl etc.
Conclusion
References