SNIK tutorial
Semantisches Netz des Informationsmanagements im Krankenhaus (SNIK)
Outline

• What is SNIK?
• How to work with SNIK
• How to play SNIK Bingo
What is SNIK?
Project information: DFG project SNIK

• Cooperation partners:
  • Institute for Medical Informatics, Statistics and Epidemiology (Prof. Dr. Alfred Winter, Leipzig)
  • Institute for Computer Science, Software Engineering (Prof. Dr. Barbara Paech, Heidelberg)
• You will find SNIK here: www.snik.eu
Project information: motivation and purposes of SNIK

- SNIK is a project that combines knowledge about hospital information systems and their management from different sources into one big ontology.
- The ontology is visualized in a web application to look up the ontology’s concepts.
- SNIK is developed to support software engineering and requirements as well as to be used in teaching and studying.
Sources (current state November 2017)


Abbreviation: bb (blue book)


Abbreviation: ob (orange book)


Abbreviation: he (Heinrich)


Abbreviation: it4it


Abbreviation: it

Based on interviews about the Health Information System with Department B1, the Department for Information Management, of the Universitätsklinikum Leipzig.

Abbreviation: ciox
How to work with SNIK
Open SNIK graph

- You will find the graph here: http://www.snik.eu/graph/
- Use Mozilla Firefox if possible! Some functions may not be supported by other browsers. No support for Internet Explorer.
- Please allow some time to load.
- Using a mouse would be helpful.
- To take a closer look, use the mouse wheel to zoom.
Switching to day mode

- If you like to work with white screen as background instead of the black one, you can change to day mode. It is located beneath Options in the menu bar. Just activate the check box.
Using filters

- If you want to work with just specific parts/sources of the SNIK ontology, you can use Filters. You’ll find them in the menu bar on top of the page. Just click on the checkboxes.
Recalculate Layout

- After using a filter (or other ways to make the graph smaller – you will learn about them later on during this tutorial), you can use the Recalculate Layout option to get a more compressed and nicer graph.

- You might have to zoom with the mouse wheel to find the new graph again in the working screen.

- Be aware that recalculating a big graph needs quite a lot of time (up to a couple of minutes) or you might get error messages from your browser.
Searching

- You can search for a specific term in the text field. Just fill in the term and press “enter”. Then there will be a list, where you can choose from. Take care to look at the prefixes (abbreviations of the sources), if you look for the term from a specific source.
Circle

- This circle is quite helpful to work with the SNIK graph. If you right-click on an object it will open and shows you possible actions.

- Please be aware that SNIK is still a project “under construction”. Please only use description, star, role use and ticket. We will explain them later on during this tutorial.

- To navigate within the circle you need to keep the mouse clicked and now you can move the cursor to the section you would like to use.
• Use the circle on the term you want a description of, move your cursor to *description* and release the mouse button. The description will open in a new tab, as you can see on the next slide.
Description

extracted information:

- label (English/German), synonyms
- definition
- object type
- source: page, chapter
- SNIK relations (see next slide)
SNIK relations/meta model

- To understand the graph and the whole SNIK ontology it is helpful to take a closer look at the meta model (see next page).
- There are functions, roles and entity types which are connected with specific SNIK relations.
- Legend for the graph:
  - △ Function
  - □ Entity type
  - ○ Role
Meta model
Star

- A *star* shows a term and all its neighbours including the relations between all objects shown.
- Use the circle on your chosen object, move the cursor to *star* and release the mouse button. The star will be shown as the new graph. Now *recalculate layout* (see page 11) might be useful.
Expand star and reset view

• You can open even new stars from the endings of the previous star.
• If you want to see the whole graph again, click on reset view.
Role use

- The *Role use* shows a chosen role with all its subclasses, top classes and close matches in a first centered circle. In a second circle there are all functions which are connected to the role(s). The third circle shows all entity types which are changed or used by these functions.
- Be aware: it is just useable for roles.
- Use the circle on your chosen object, move your cursor to *role use* and release the mouse button. The result will be shown as the new graph.
- If you want to see the whole graph again, click on *reset view*. 
Export and import graph

- You can export the (sub-)graph and its layout as .json file and import it later again.
- You also can save an image of your graph.
- All this options are listed under File on top of the webpage.
- Please note that after loading a subgraph you cannot go back with Reset view to see the whole graph but have to reload the snik.eu/graph webpage.
Export graph into Cytoscape

• You can export the graph as .cys file to import it into Cytoscape (http://www.cytoscape.org/).
• You’ll find this option beneath Help in the menu bar.
Have fun using SNIK!

Please be aware:
Due to its size and permanent revision of the SNIK ontology ongoing quality assurance is performed. But there still might be some mistakes.

If you find one, please let us know! We have different ways to send us feedback as shown on the next slides.
We are happy to get feedback to improve the SNIK ontology! 😊 Thank you!
Feedback regarding the ontology

• There are different ways to send us feedback regarding the ontology (e.g. contextual mistakes):
  – You can use the circle on an object or a relation and move to ticket. The GitHub page will open automatically.
  – You can also use Submit Feedback about the Ontology beneath the Help menu.
  – Or just visit our GitHub page directly via https://github.com/IMISE/snik-ontology//issues
Feedback regarding the web application

- There are different ways to send us feedback regarding the ontology (e.g. technical mistakes):
  - You can use Submit Feedback about the Visualization beneath the Help menu.
  - Or just visit our GitHub page directly via https://github.com/IMISE/snik-cytoscape.js/issues
Help us with the evaluation

• We want to improve the SNIK ontology by evaluating our content.

• You can help us with the evaluation by participating in the SNIK Evaluation Campaign:
  – You’ll find it beneath Services in the menu bar. Just click on *Data Quality Evaluation*.
  – You can also use the direct link: [http://www.snik.eu/evaluation/](http://www.snik.eu/evaluation/)

• The person with the highest participation is going to receive a price 😊
Other ways of contribution

- Contact us via email, if you are interested in programming or other ways of contribution (e-mail: info@snik.eu)
- Some project ideas can be found via these links:
  - http://www.snik.eu/graph/contribute.html
  - http://www.snik.eu/graph/troubleshooting.html
How to play SNIK Bingo
Concept of SNIK Bingo

- Learning targets:
  - To learn and remember terms from chapter 8 from the textbook “Heath Information Systems” about quality of information systems
  - connect the new information with things you already know
  - critical discussion about terms from the textbook
- Every student gets a handout with a short chain, which contains:
  - 1 term you already know (e.g. “3LGM²”)
  - 1 term that is new (e.g. “Key Performance Indicator”) as well as some neighbors of this term
  - the short chain of terms that connect the two given terms
The spider worm

- … visualization of the correlation between two terms

At home each student prepares with snik.eu (see next slide) and the textbook

- The 2 given terms including their definitions
- The connection between the two terms (both terms and relations)
- Neighbors of the “new” term and associated relations

Please write each term on one prompt card (if possible use a maker) and use the backside for notes and explanations.
How to find your spiderworm in SNIK

Here is a short algorithm to work through the snik.eu graph and find your spiderworm. We will use the example “3LGM²” to “Key Performance Indicator”.

1. Use the search function to find the known term (here “3LGM²”, please just write “3LGM” in the search bar). Be aware to choose the term from the right source (prefix “bb”)!
How to find your spiderworm in SNIK

2. Use the *circle* with the option *description* to find the definition you have to write on your card. If there is no description in SNIK so far, please use your textbook.

3. Use the *circle* with the option *star*. As seen before, you can use *Recalculate Layout* to get a nicer view.

4. Look for the next term from your spiderworm in the *star*. Now you can see the relation between your terms. Please write it down in your notes as well.
5. Repeat steps 2, 3, 4 and 5 until you reach the central new word of your spiderworm (here “Key Performance Indicator”).

6. Now repeat step 2 for all terms left in your spiderworm. Don’t forget to look for the relations of these terms as well.
Rules of SNIK Bingo

1. student A presents spiderworm A until

2. student B hears term from spiderworm B (Bingo!); student A continues with his/her spiderworm

3. student B presents spiderworm B (after A finished his/her spiderworm)
Example: part of the SNIK ontology with 3 spider worms
Have fun playing SNIK Bingo!