Nauk.si metadata scheme and translation to LRE4 AP

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www.nauk.si

- Common repository for a number of e-learning projects
- Learning resources for
  - Mathematics (secondary schools)
  - Physics (primary/secondary schools)
  - Computer science (secondary schools/higher education)
  - Logic (part of primary school mathematics)
Resources in nauk.si

- Wiki-like language for resource composition with many additional elements
  - embedding images, videos, sounds
  - standard quiz types (single/multichoice, matching, text and numeric answers)
  - crosswords, logical puzzles, sudoku, futoshiki
  - measurement tools for physics

- Advanced answer checking and decisions based on general expressions

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Avto v ovinku!

Z avtomobilom smo zapeljali v ovinek, ki ga prikazuje slika. S pomočjo slike in orodja izmerite polmer ovinka.

\[ R = \text{? numeric:} \text{radij, width} = 50 \text{ ?} \text{m} \]

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![Avto v ovinku](./datoteke/ovinek.png)

--- tools ---

| tool:distance, name = “polmer”, description = “merjenje polmera”, unit = m, unitFactor = 3.3 |

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Prij določanju polmera ovinka je ključno, da se zavedamo, da je ovinek le del krožnice, katere polmer ščemo.

-?

| radij = 47±5 -> uspeh1
| -> narobe1
**Metadata scheme**

- Basic data (title, description, free keywords, author, reviewer)
- Set of standard licenses (most CC-NC-SA, some proprietary)
- Internal vocabularies: resource type, learning time, language, originating project
- Hierarchical classification (based on Slovene curriculum)
Conversion to LRE3/LRE4 issues

- Due to simplicity of original metadata the mapping was quite straightforward
- A problem is that some of our metadata is just in Slovene language (title, description)
  - should we try automatic translation?
- “Project” doesn’t have a corresponding mapping
- Slovene curriculum themes mapped to LRE Thesaurus – very lossy

Classification mapping

- LRE Thesaurus is not very precise (at least not for natural science education)
  - e.g. nearest match for “straight and curved motion” is “mechanics (physics)”
- We try to match our hierarchy, though hierarchy in LRE Thesaurus is completely different
  - “physics / secondary education / straight and curved motion” maps to “physics / secondary education / mechanics (physics)”
Formats

- Just mime-type and some standard packagings allowed in ILOX, difficult for non-standard or extended formats
- It would be useful to express things like
  - you can **play** this format with this program / web page / web service
  - you can **edit** this format with this program / web page / web service