Metóda modelovania

Obsah

- Definícia termínu *model*
- Návrh metódy modelovania
- Prípadová štúdia

Definícia

Model of A =

Established symplifying representation of a system A, which makes tracked features of that system explicit and which can be used for explanation or retrodiction or prediction.

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Metóda

- Method $=_{df}$ a system of goal-directed instructions which can, in principle, be executed more than once.

Metóda modelovania

1, Formulate the target system!

2, Pick out the modeling technique!

3, State the assumptions of modeling!

4, State the performance parameters!

5, State the criteria for model validity (credibility)!

6, Generate or obtain the candidate for model!

7, State the representation relation between candidate and the target system!

8, Check the credibility of the candidate!

9, If the candidate is credible, declare it a model of the target system!

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Prípadová štúdia

The case is the modeling of the semantic content of following two sentences (A):

(A) Paul is a logician. He is smart.

1, Formulate the target system!

The target system is the semantic content of the two sentences in (A).

The features, which I want to grasp by the model are:

- semantic relation between antecedent Paul and anaphoric expression He

- the truth conditions of the second sentence in (A).

I will call this target system III.

2, Pick out the modeling technique!

I will use the method of semantic analysis of expressions of the natural language within the system of TIL.

3, State the assumptions of modeling!

- I assume the compositionality principle of semantic content.

- I assume existence of two-dimensional hierarchy of types. I assume standard epistemic basis for TIL.

4, State the performance parameters!

- I will analyse the type of the constructed object.

- I will analyse the number of subconstructions of the proposed model.

- I will analyse the position of subconstructions within the proposed model.

5, State the criteria for model validity (credibility)!

For the model to be credible,

- It must be the construction of a proposition for each sentence.

- The number of the embedded subconstructions must be final and less than 1 and a half times greater

than the number of grammatically selfcontained expressions in the sentences.

- The model of semantic content of anaphoric expression must be placed in the model of the semantic content of the second sentence in A.

6, Generate or obtain the candidate for model!

I generated the following objects:

a) [λwλt [^{0}Logician$_{wt}$ ^{0}Paul]]

b) [λwλt [^{0}Smart$_{wt}$ ^{2}[^{0}SUB ^{0}Paul he he]]]

7, State the representation relation between candidate and the target system!

- Object a) is the candidate for the model of the semantic content of the first sentence of A.

- Object b) is the candidate for the model of the semantic content of the second sentence in A. The

- Subconstruction ^{0}Paul represents the content of term

Paul. Etc...

- The subconstruction ^{2}[^{0}SUB ^{0}Paul he he] represents the semantic relation between the semantic content of antecedent and the semantic content of expression he.
- The truth value conditions for the second sentence are those constructed by the object b).

8, Check the credibility of the candidate!

- Objects a) and b) are contructions of a propostion.

- The number condition holds.

- The model for the semantic content of the anaphoric expression is contained in the object b).

- The candidate is credible.

9, If the candidate is credible, declare it a model of the target system!

I declare objects a) and b) to be the model for the target system III.

- Vďaka za pozornosť.