

GRASP: grammatikbaserad språkinlärning

Peter Ljunglöf – DART & Göteborgs universitet

Interactive textbook

GRASP will work as an interactive textbook, where the user can read texts and experiment with them:

- it can be used for second language learning, as a complement to a traditional textbook
- or for first language training, for people with communicative disabilities

Experimentation

The user can read different texts, but can also experiment with them, such as:

- change the word order
- change inflection
- delete, add and replace words

The sentence rearranges and inflects itself to always stay grammatical

Graphical interaction

GRASP is a GUI-only system:

- the user cannot enter text from the keyboard
- this avoids unknown or unusual words and phrases; systems with free text input often have problems with these

Grammar-based

The texts are stored in GF, a multilingual grammar format:

- sentences can be edited on a grammatical level
- translations to another language can be shown in parallel
- translations can also be a symbol language such as Bliss, or simplified Swedish

Advantages

- *positive learning*: the user learns from only positive examples (conceptually easier for communicative disorders)
- *initiative*: the user is in control and decides what to do and how
- *versatile*: the system can be used for many different tasks and exercises

Possible extensions

- *query mode*: the system asks questions about the content of the updated story
- *examination mode*: the user has to change inflection and rearrange the sentence until it is correct

Example interactions

På små kullar i solen
ligger några lustiga
hus. Där bor Bamse
och hans vänner.

inflect words

en liten
den lilla
På små kullar i solen
ligger några lustiga
hus. Där bor Bamse
och hans vänner.

På den lilla kullen i solen
ligger några lustiga hus.
Där bor Bamse och
hans vänner.

remove words

insert words

På små kullar i varm solen
ligger några lustiga
hus. Där bor Bamse
och hans vänner.

På små kullar i den
varma solen ligger några
lustiga hus. Där bor
Bamse och hans vänner.

På små kullar i solen
ligger några lustiga
hus. Där bor Bamse
och hans vänner bor.

På små kullar i solen
ligger några lustiga
hus. Bamse och hans
vänner bor där.