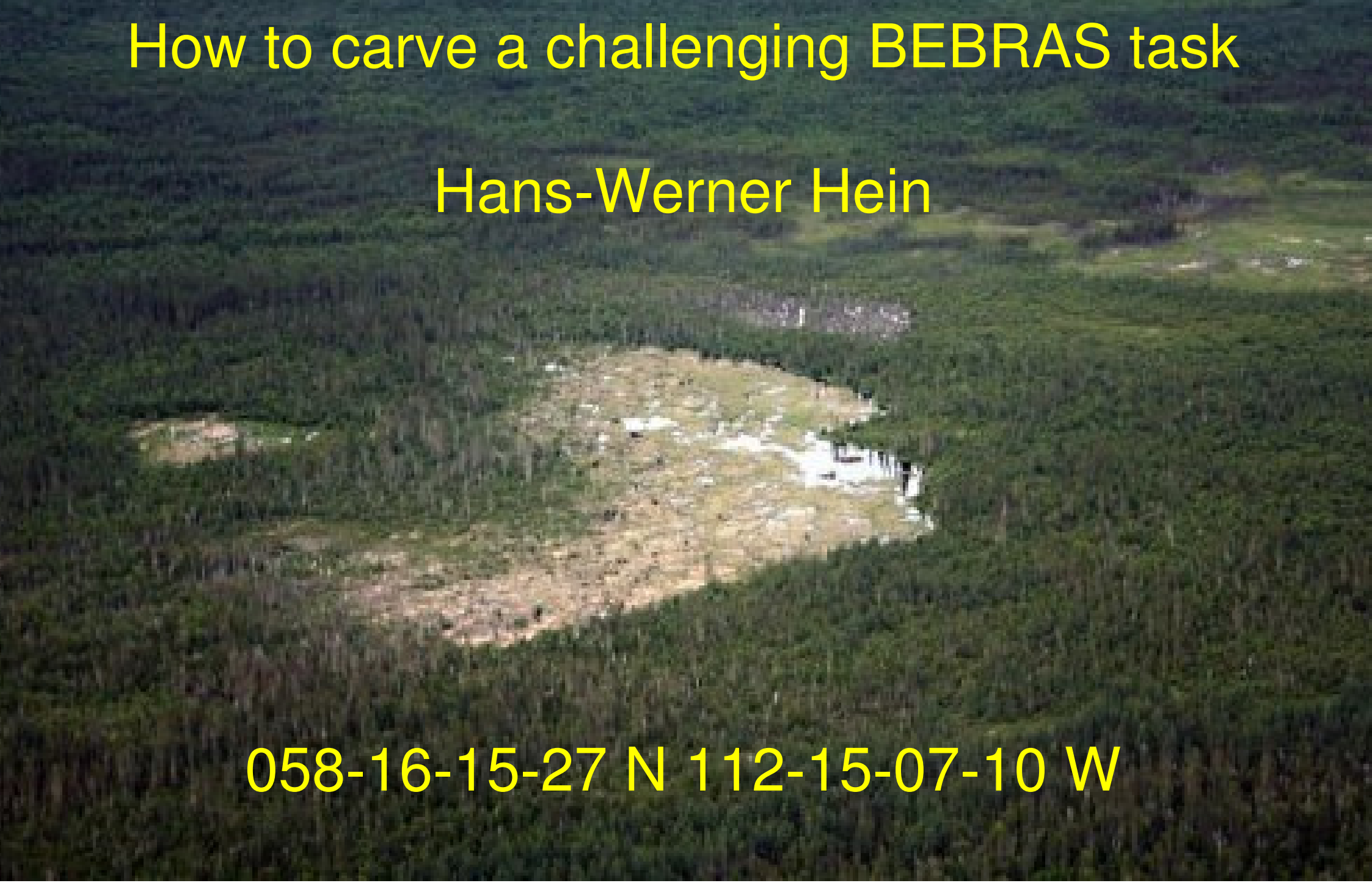
How to carve a challenging BEBRAS task

Hans-Werner Hein



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In this talk a "BEBRAS Task" is seen as an informational object

Each "BEBRAS Task" is used in at least four target scenarios

to be an inspiration for controversial and integrating
discussions on
What is Informatics?", "How to present Informatics?"
"What is important in Informatics?" etc ...

... at the international BEBRAS worksh

"Computer Science is no more about computers than astronomy is about telescopes."

Which prominent European Informatics scientist and Turing Award recipient said this?

sger Wybe Dijkstra from The Netherlands (* 11.05.1930, † 06.08.2002)
e-Johan Dahl from Norway (* 12.10.1931, † 29.06.2002)
ter Naur from Danmark (* 25.10.1928)
klaus Wirth from Switzerland (* 15.02.1934)

to be one in a set of BEBRAS tasks

to be understood and answered in short time

-> about 3 minutes per task

to be the inspiration
for a school class lecture or project,
which deals with the "It's Informatics!"
lying behind the task

Informatic

he "if-then-else" is a widespread used construct
ogramming languages. It decides, dependent fro
e current situation, about a program's next actio
he "if-then-else" with its platonic "tertium non datu
ggests, that being able to make a dual decision is th
andard case in life. This tempts programmin
eginners to use far to simple dualistic world models
eir apps. Using nesting "if-then-else" constructs or
uch better - "case" constructs, Informatics Didacti
aches, what the normal situation i
here is a third option to act, and a fourth, and a fifth .

to be the basis of an edutainmental app
for grown-ups, non-experts
which are motivated to understand
a bit more Informatics

(: app comes from appetite :)

actor to identify with:

- you
- the beaver (without name = ungendered)
- the beaver (with a name = gendered)
- peer group (school class, friends)
- a student (female or male)
- a famous person (historical or fictional)
- no actor (abstracted task)

... and lots of other actor types ...

factor to identify with: Hypotheses

younger students tend more to funny and fantastic actors

elder students tend to serious actors or abstracted tasks

in a contest it is boring, if all tasks use the same actor type

you can change the actor type of any task

terminology used in a task:

- as few terms as possible

- no various words for the same thing
- no similar words for different things

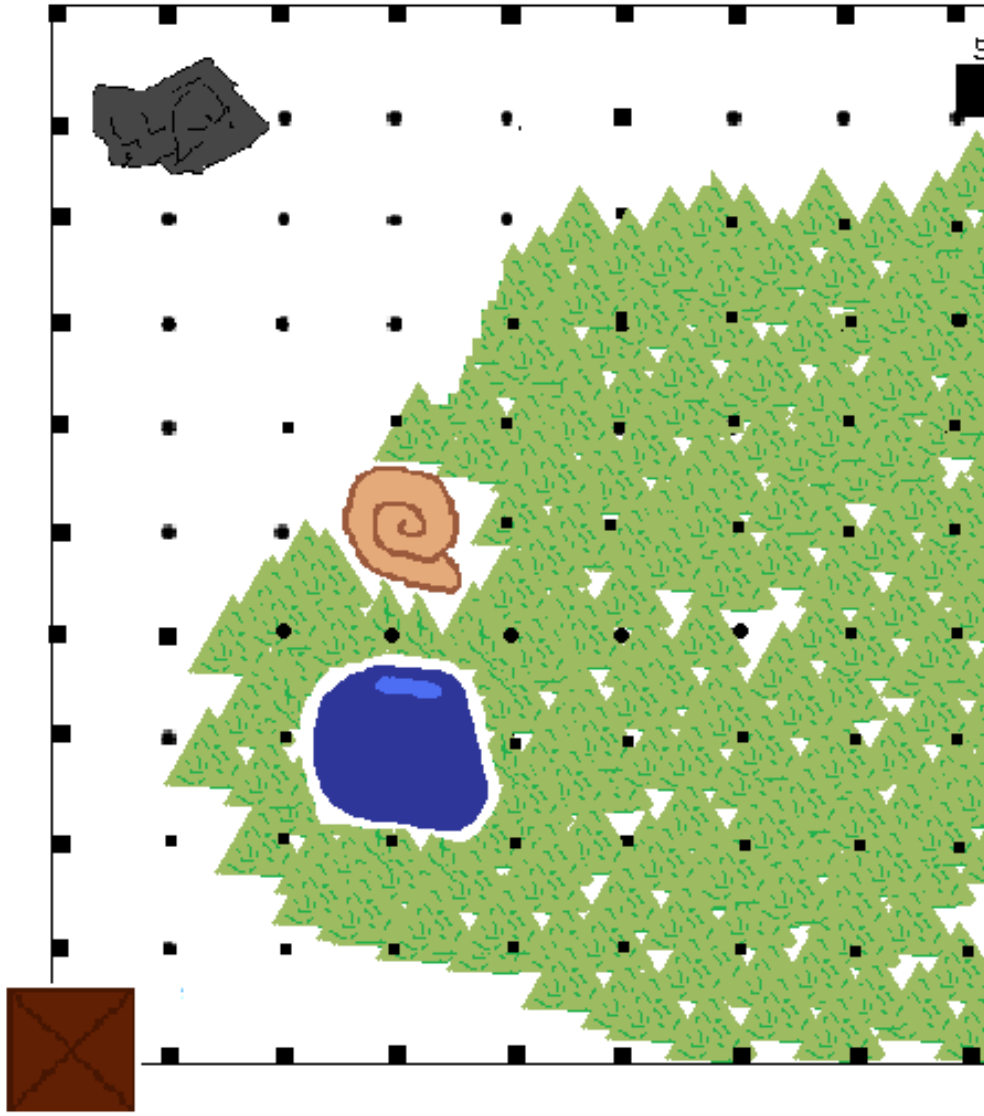
- no long and complicated words
- no abbreviations

- correct dualisms (if there is "left" then there is "right")

- terms have to be consistent with the pictures

e terminology used in a
sk:

u go on a treasure hunt.
egard the three hints. Look for
e treasure somewhere in the
rest. Starting at the rocks head
the flowers. The treasure is
dden 20 steps distant from the
ail. You start at the old cottage.
hich route hits the treasure
sition?



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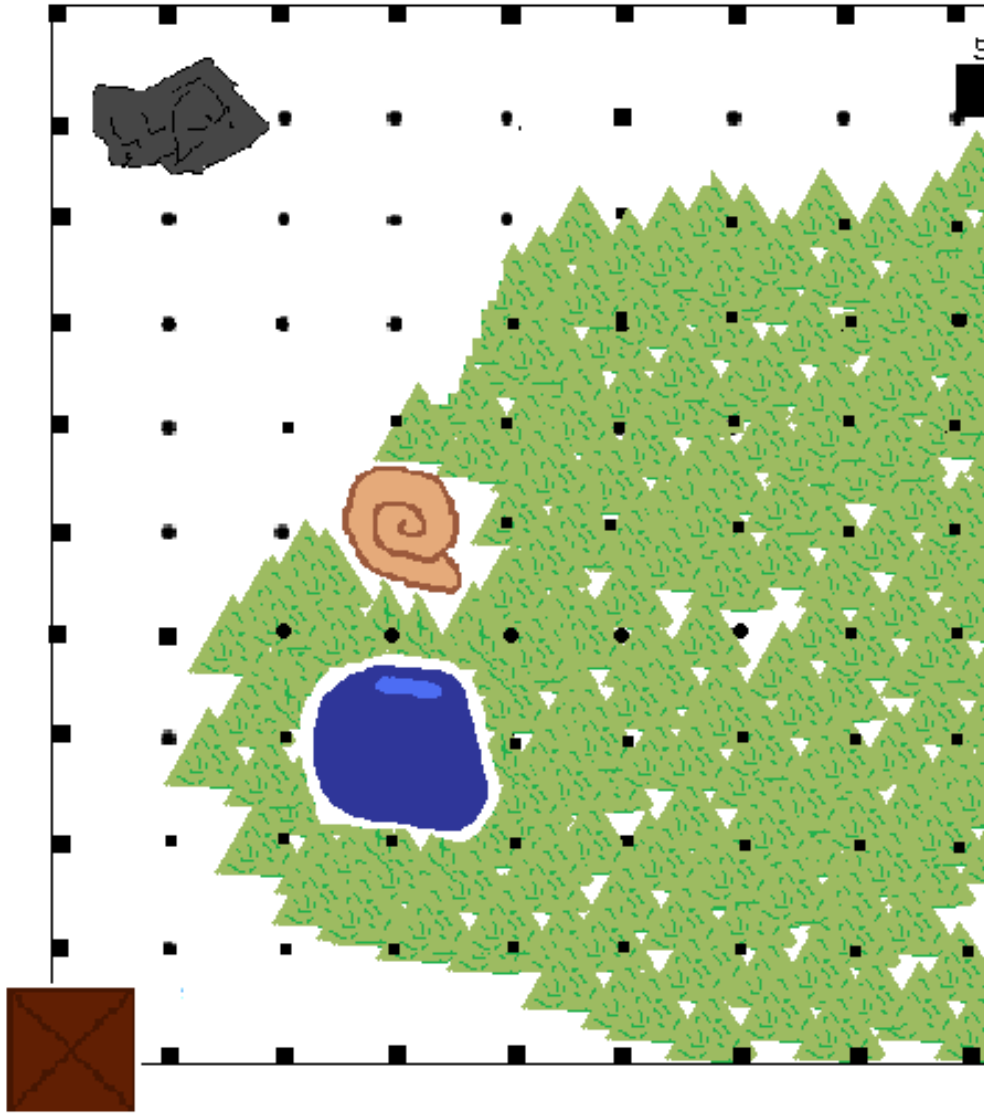

le cover story!

no redundancy

short sentences

the order of the few sentences is crucial for understanding

first sentence should be an awareness catcher

cover story.

mple programs are just a sequence of commands.

command describes something to do.

simple program only makes sense,
he commands are executed sequentially.

message as an immediate award.

ample:

maintain order and disorder in a set of things,
u need a sorting algorithm which uses
e common attributes of these things.

earning by solving a task

one basic insight per task (a meme, an "Ah!")

The next three days have fun with all those task proposals!