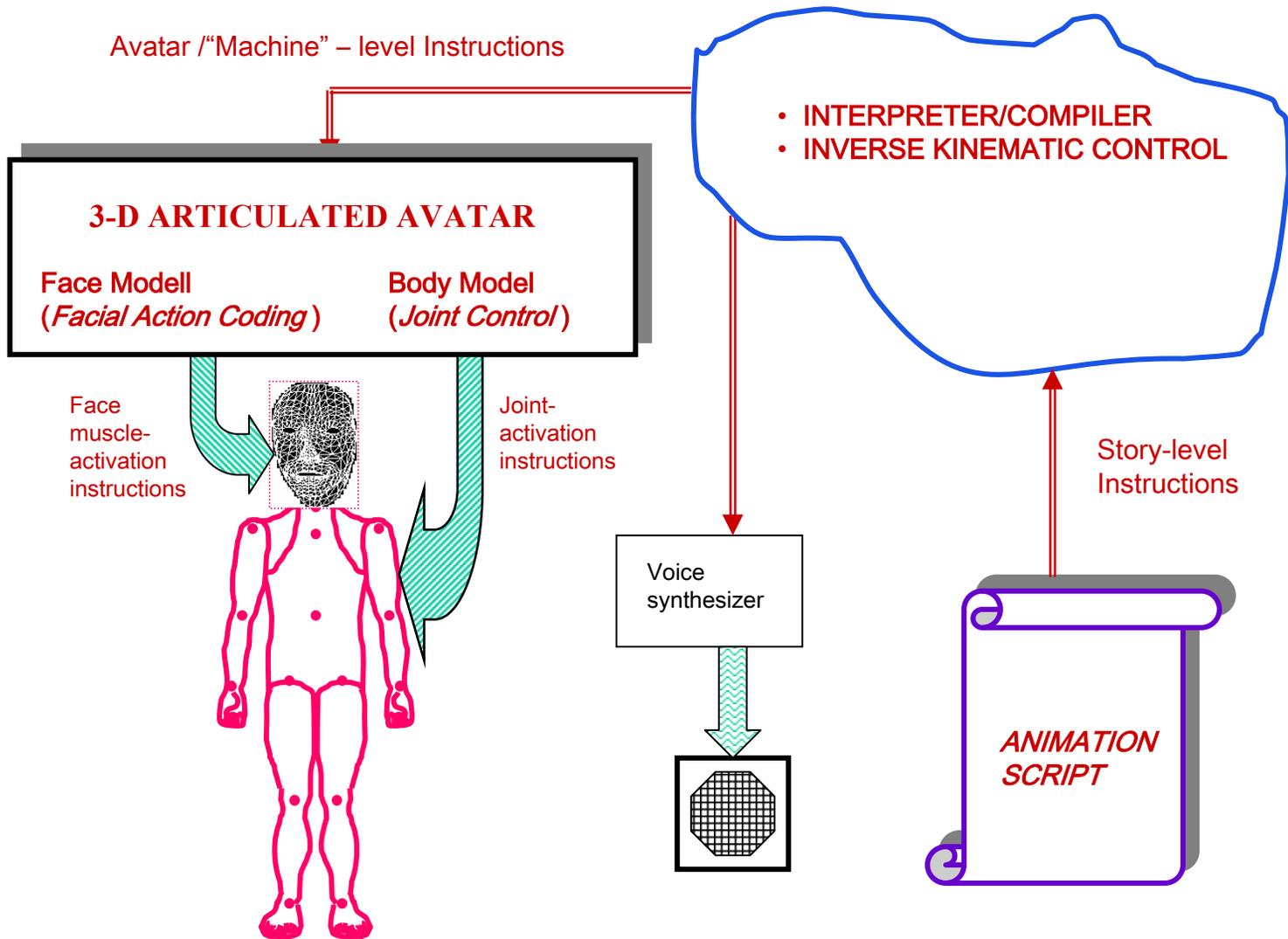




**HIGH-LEVEL SCRIPTING
AVATAR ANIMATION**



STORY-LEVEL INSTRUCTIONS

.....

DaneelA sits on the chair#4.

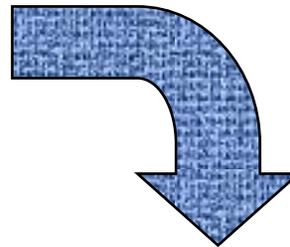
DanielA writes “Hello” on stationary.

He sees HappyCat under the white table .

DaneelA starts smiling.

HappyCat grins back.

.....



SKILL-LEVEL (“MACRO”) INSTRUCTIONS

.....

DanielA’s right hand moves the pen to follow the trace representing “H”.

DanielA’s right hand moves the pen to follow the trace representing “e”.

DanielA’s right hand moves the pen to follow the trace representing “l”.

DanielA’s right hand moves the pen to follow the trace representing “l”.

DanielA’s right hand moves the pen to follow the trace representing “o”.

.....

SKILL-LEVEL (“MACRO”) INSTRUCTIONS

...

DanielA’s right hand moves the pen to follow the trace representing “H”.

...

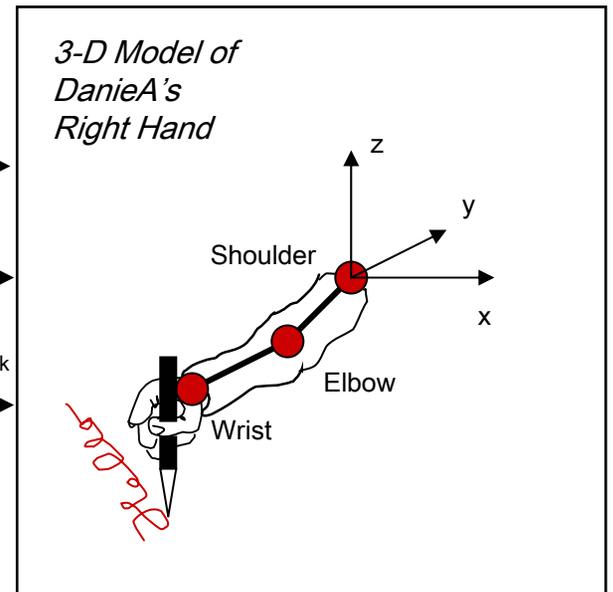


DanielA’s specific style
of moving his right arm
joints to write “H”
(NN model capturing
DanielA’s writing personality)

Rotate Wrist to α^i

Rotate Elbow to β^j

Rotate Shoulder to γ^k



Behavior-Based Script Language for Anthropomorphic Avatar Animation in Virtual Environments

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Scripting language for avatar animation

- Highest level of abstraction: **story-level description**
 - constrained English-like description
 - syntactic and semantic analysis to extract information such as: main player(s), action, subject and object of the action, relative location, degree, etc.
 - translate in a set of skill-level instructions, that may be executed sequentially or concurrently
- Middle level: **basic skills**
 - describe basic body and facial skills (such as walk, smile, wave hand, etc.)
 - each skill involves a number of muscle/joint activation instructions that may be executed sequentially or concurrently
- Lowest level: **muscle/joint activation instructions**
 - activation of individual muscles or joints to control the face, body or hand movement

