

Wild@Ace

Workshop on Industry and Labor Dynamics.
The Agent-based Computational Economic approach

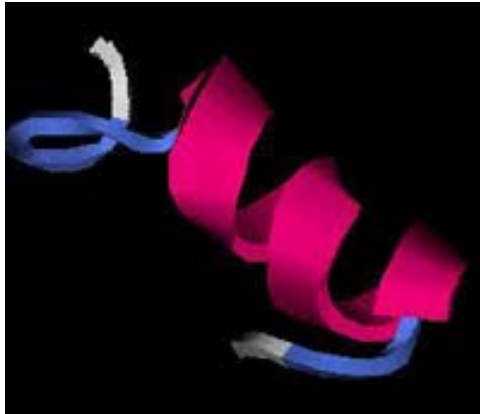
Introduction by Pietro Terna

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From the simulation as a (assisted, opaque) mental
experiment ...



folding of an alpha helix using distributed dynamics

helix30.mpeg

From www.stanford.edu/group/pandegroup/folding/

- Folding the smallest protein one could imagine: a single alpha helix.
- A complex structure generated from elementary rules about inter-molecular interaction

... to ACE, Agent-based Computational
Economics and, more generally,
ABS, Agent-based Simulation

From www.icosystem.com/

pt looks at **A** as its
defender at to **B** as an
offender

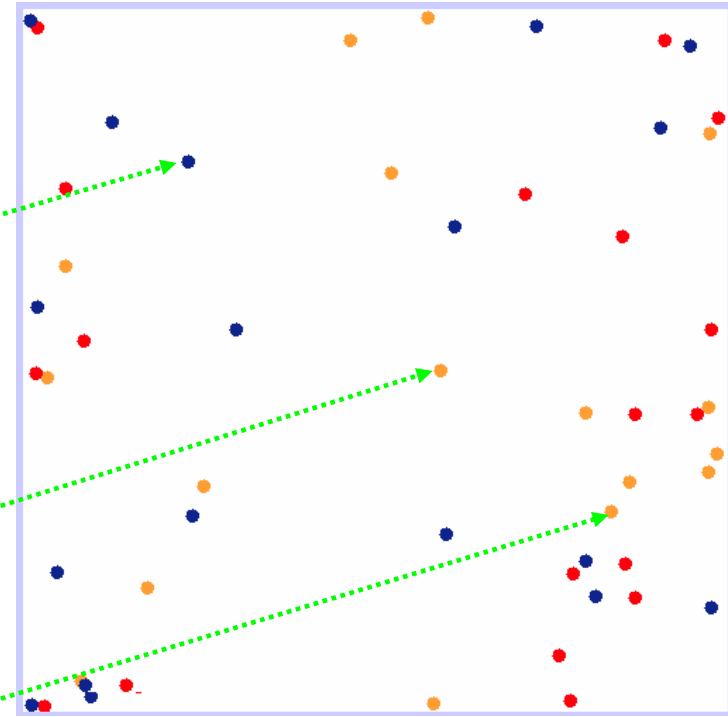
or

pt has to defend **A** from
B

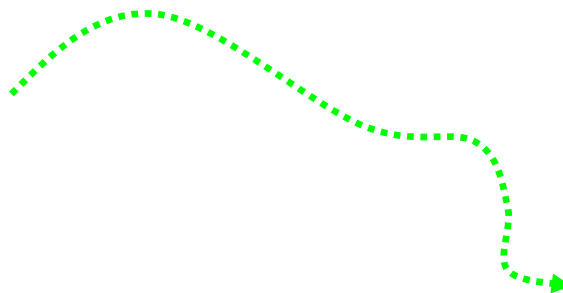
pt

A

B



action



[Collegamento a game_launch.htm.lnk](#)

Social simulation as a computer based way
to **execute complex mental experiments,**

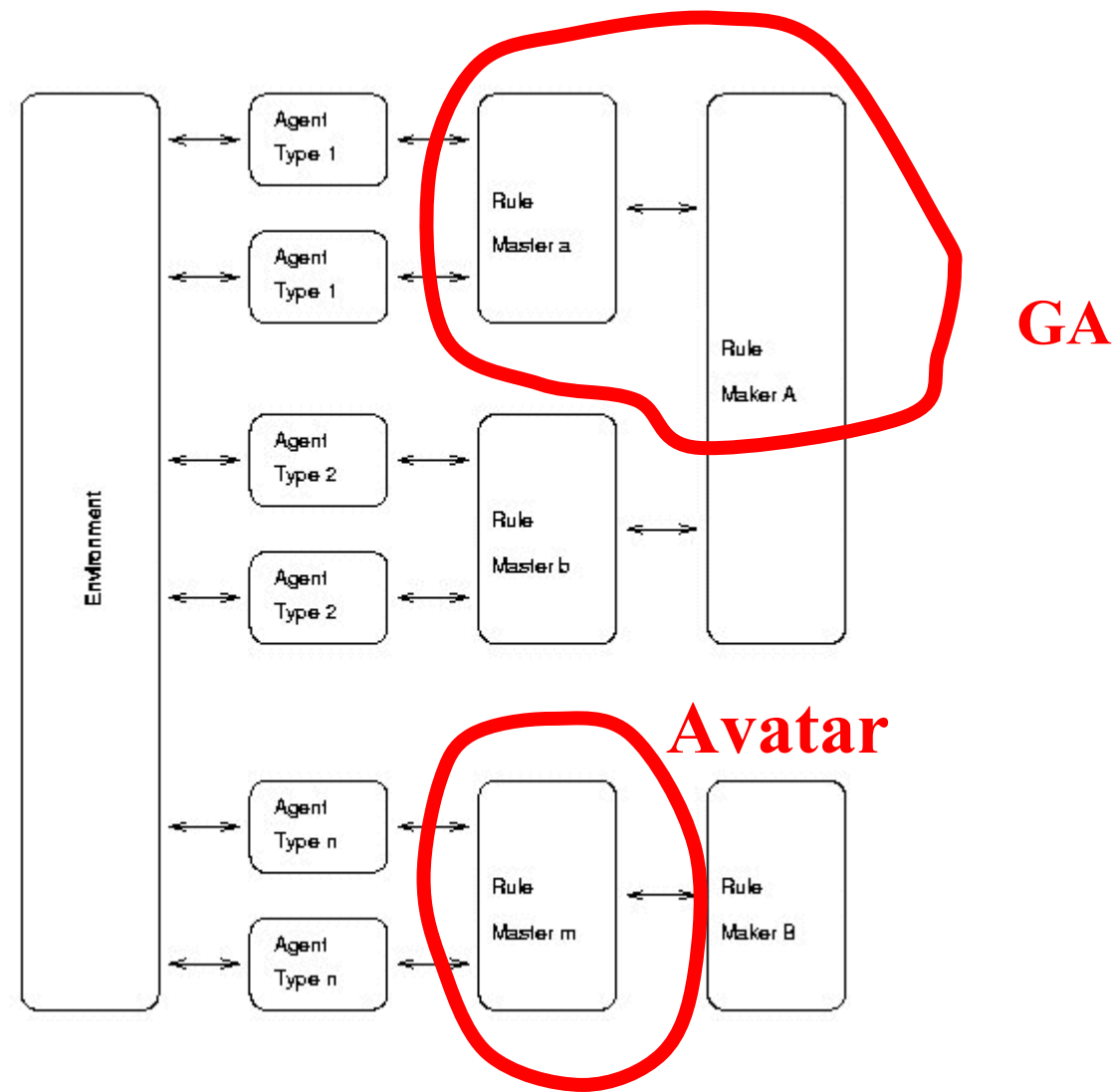
but also as a via **to represent the complexity of real world**

simulation = agent-based models

How to use agents in simulation models:
a radical view

The radical characterization of an ABM must be found into the possibility of real – direct or indirect – interaction amid the agents, instead of modeling it in a simplified way with aggregate simultaneous equations

A general structure for agent-based simulation models

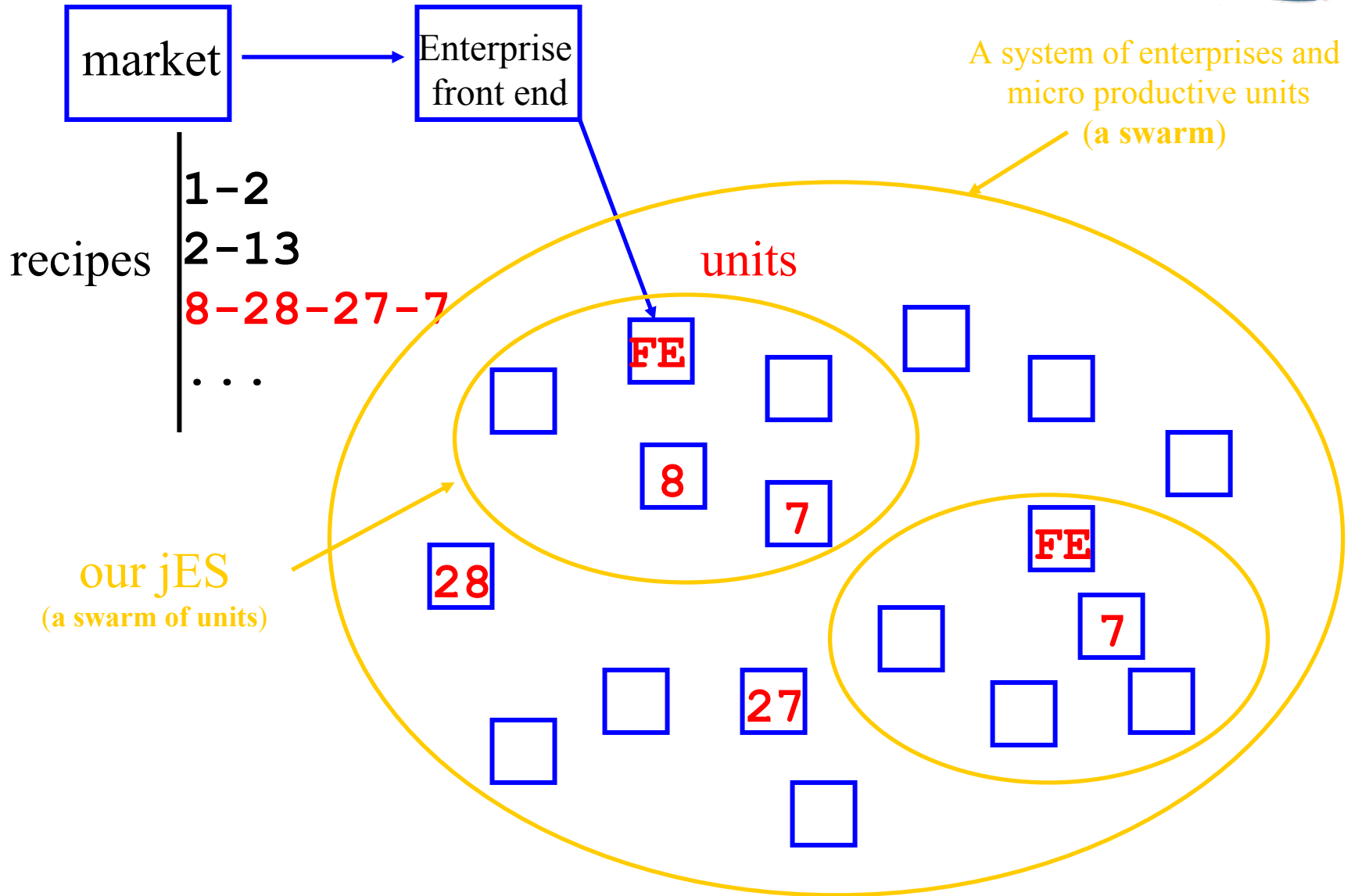


<http://web.econ.unito.it/terna/ct-era/ct-era.html>

An application: enterprise simulation

Recipes and production units

enterprise simulation (1)



8-28-27-7

a

we have the phases **a**, **b**, **c**, then

units

in **X** we have a choice problem

Avatar, genetic algorithms, classifier systems to experiment and to simulate the effects of decision making:

- **experiments in a usual context**
- ***soft computing* applications**

The orders are placed in the unit waiting lists and executed according to the FIFO criterion

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... relevance needed ...

the relevance of our work



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