

tkenen Client-Server Model

Have spoken about agents with respect to

- the real-world
- definite scripts (execution of)
- LSD descriptions

→ concurrency implied.

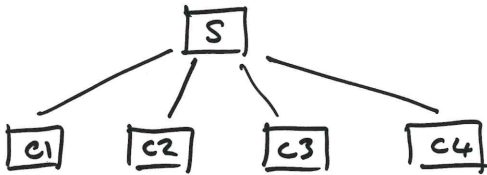
Distributed tkenen allows concurrency to be represented explicitly.

Two versions of tkenen -

tkenen.S server

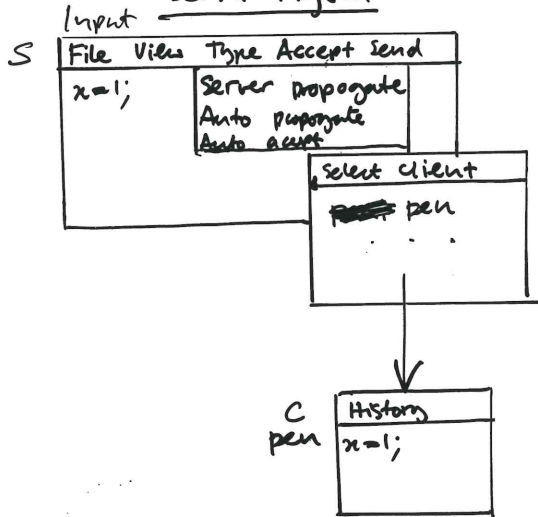
tkenen.C client

When executed interpreters act as agents in a distributed network.



tkenen.C - C u

Server Agent

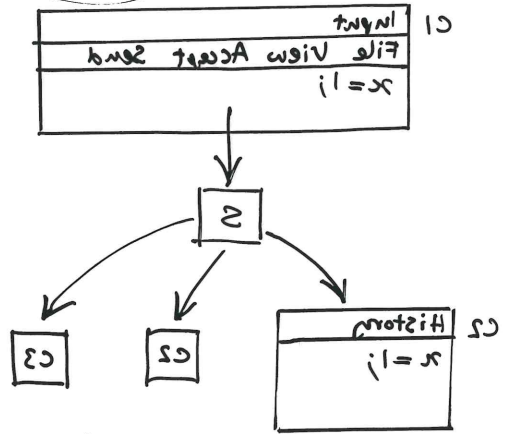


Alternatively -

send Client ("pen", "x=1;");

tkenen A tkenen B

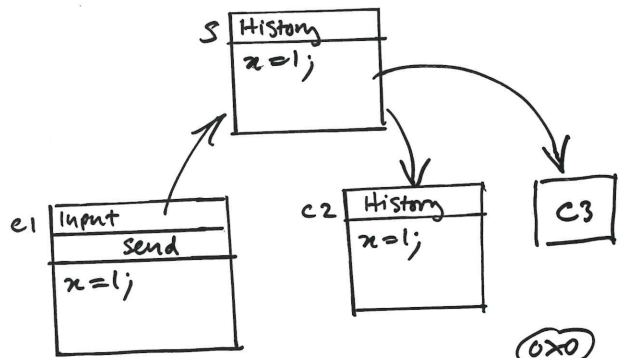
File Views Type Accept send



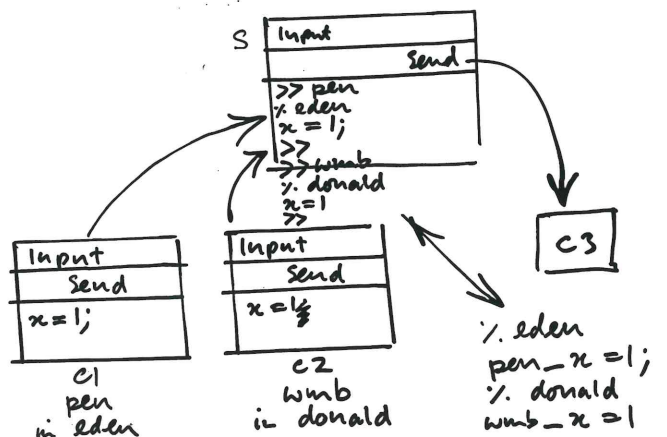
- alternative

("x=1;", "pen") reverse

Auto propagation



Server propagation



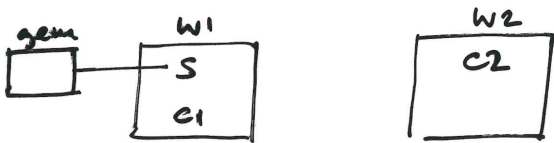
Distributed OXO

Recommend -

working in your groups - 1 group to 2 machines

choosing a group number n

Files in `~sun/msc97/oxo/`



Server set "auto propagation" mode
login to 'gem' and change
DISPLAY env. variable

`+keden.S -c n`

Client

`+keden.C -c n`

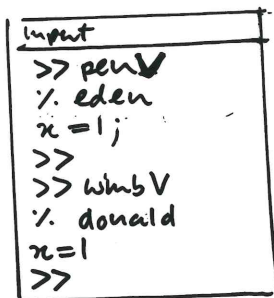
One ONE client do

include "game.e.2" and Send
Type "init_game();" and Send

Play as before ...

Virtual Agents

Nothing to stop user typing in
input generated by "virtual agents"
rather than actual clients
(cf. server propagation).

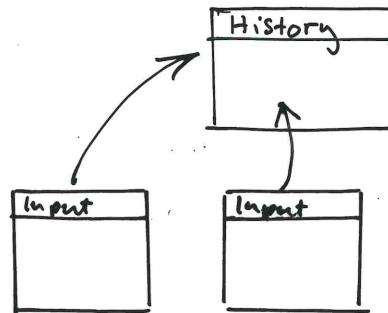


Distributed systems can be
simulated in this way.

What is the effect of mixing
real and virtual agents in a
keden distributed system?

Auto accept

Same as server propagation
except tkeden messages sent
from clients registered directly
in server History.



∕.

Distributed Jugs

Files in `~sun/msc97/jugs/`



server `+keden.S -c n`

include "jugs.include" press Accept

Enter "init_cells();
ORACLE_LIST = ["capA", "capB"];
press Accept

select "Auto accept" mode

Client

`+keden.C -c n jugs.e jugs.S
jugs.button.e.1`

On BOTH clients do

type "init_game();" press Accept

Play as before ...

(Distib. jugs contd...)

Things to try

1. Change the values of "cap A" and "cap B" at the clients.
2. Change the variable ~~"ORACLE_LIST"~~ "ORACLE_LIST" to include "input" at the server.
3. Try sending jug capacities to clients from server.

Question:

What is the effect of sending "cap A = cap A - 1;" to clients?