

STATECHARTS

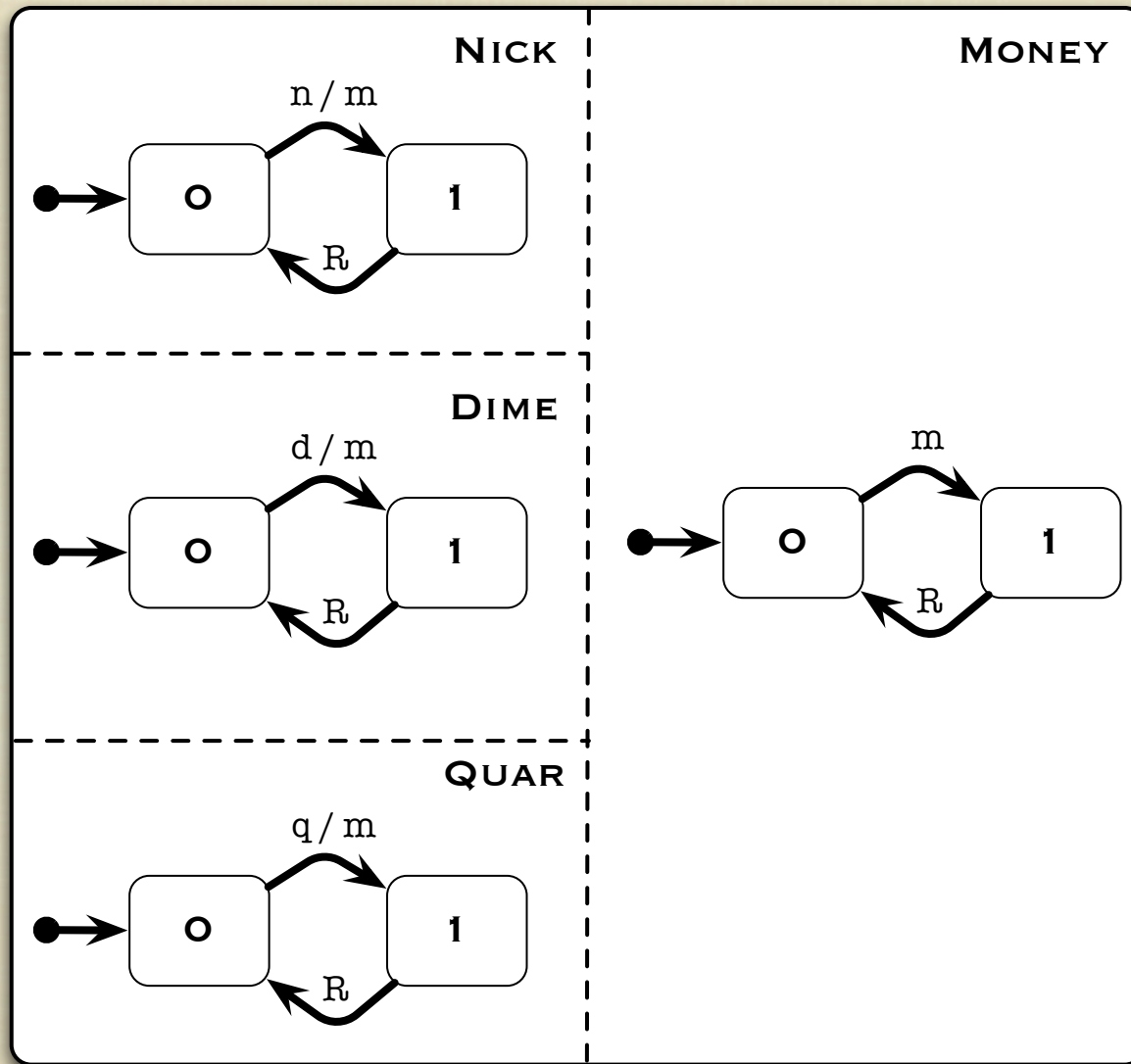
CURT CLIFTON

ROSE-HULMAN INSTITUTE OF TECHNOLOGY

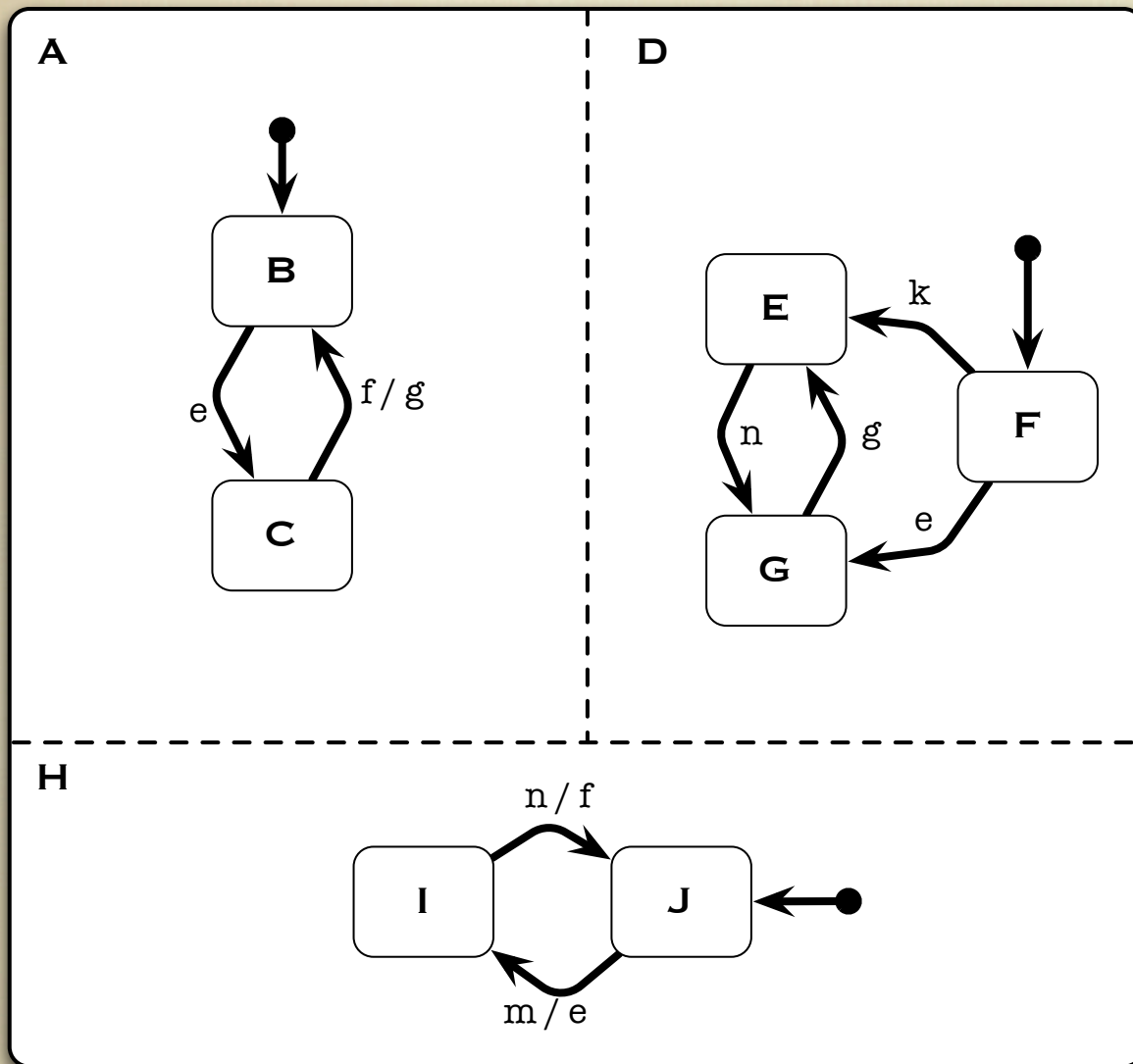
PROPAGATION

- SUPPOSE A CHANGE IN ONE SUB-STATE SHOULD TRIGGER A CHANGE IN ANOTHER SUB-STATE
- HOW SHOULD WE REPRESENT THIS?

BROADCAST



MORE BROADCAST



■ START?

■ EVENT M

■ ...

■ EVENT N

■ ...

■ END?

CONDITIONS, SUBSTATES

- INPUTS CAN BE “GUARDED” BY CONDITIONS

- SYNTAX:
input [condition] / output

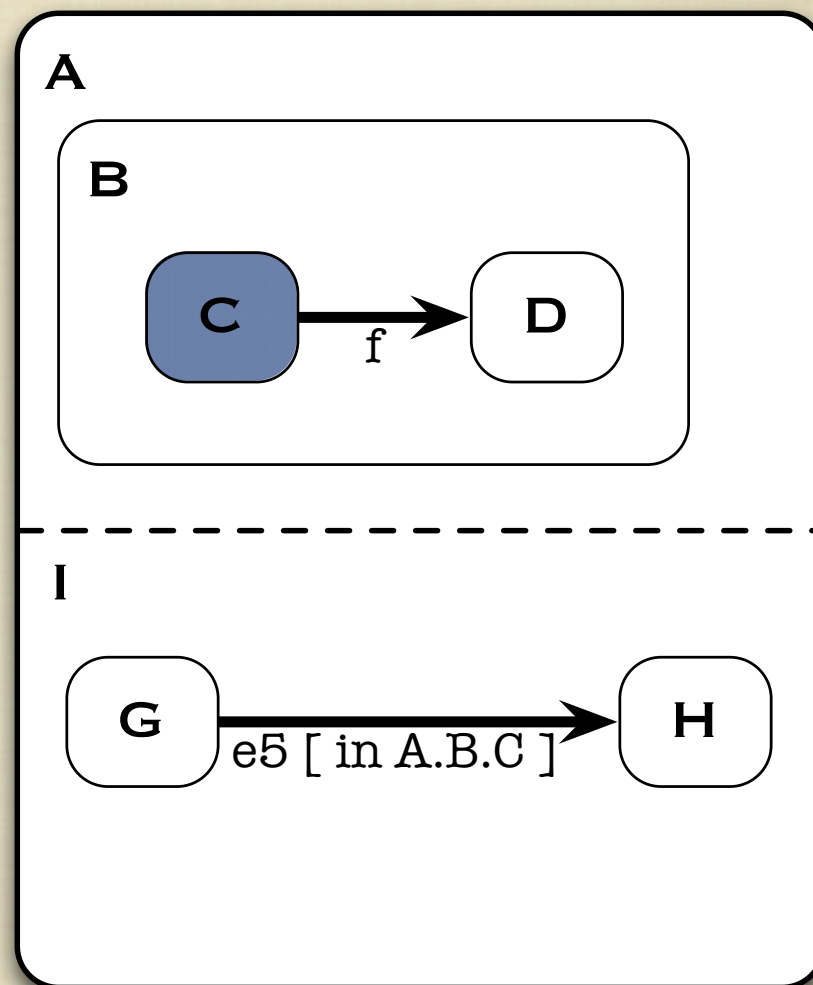
- EXAMPLES

- foo [x > y]

ARBITRARY
BOOLEAN
EXPRESSION

- e5 [in A.B.C]

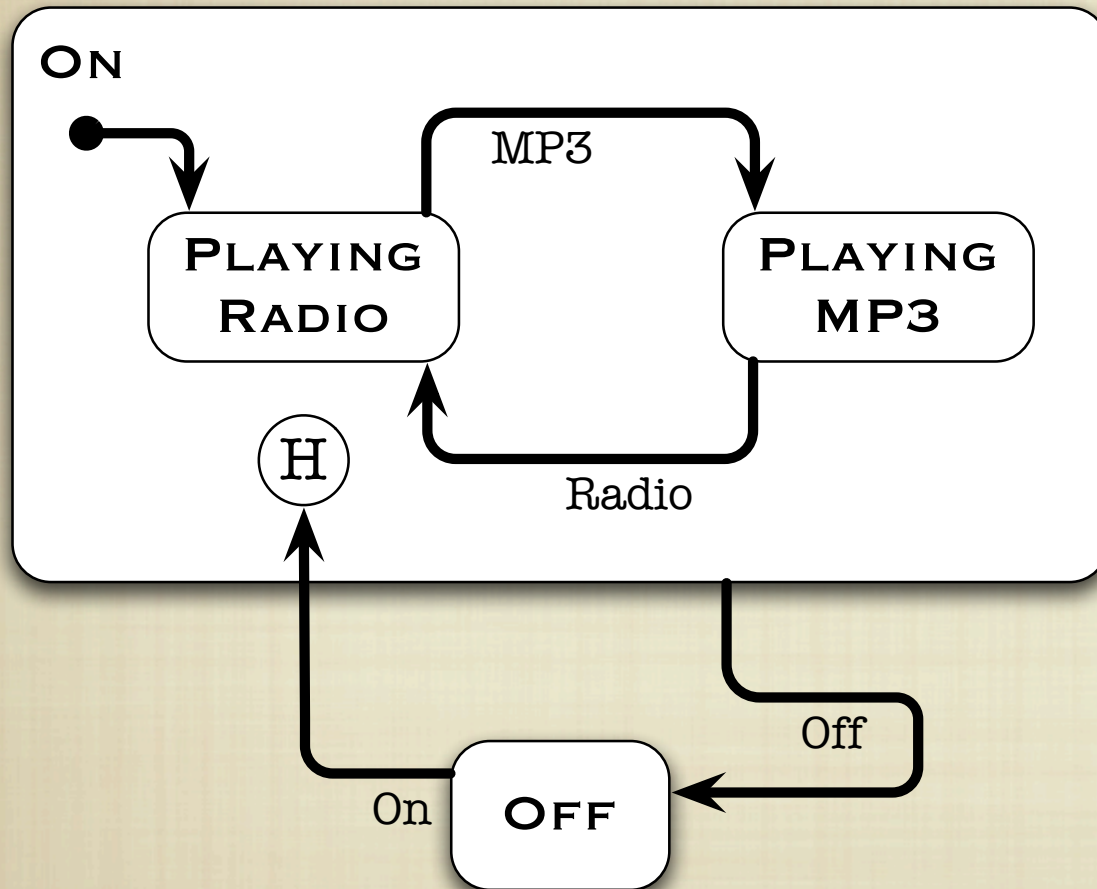
STATE
CONTAINMENT



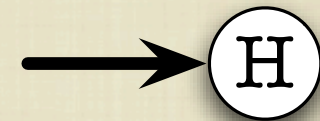


HISTORY

RECALL: HISTORY

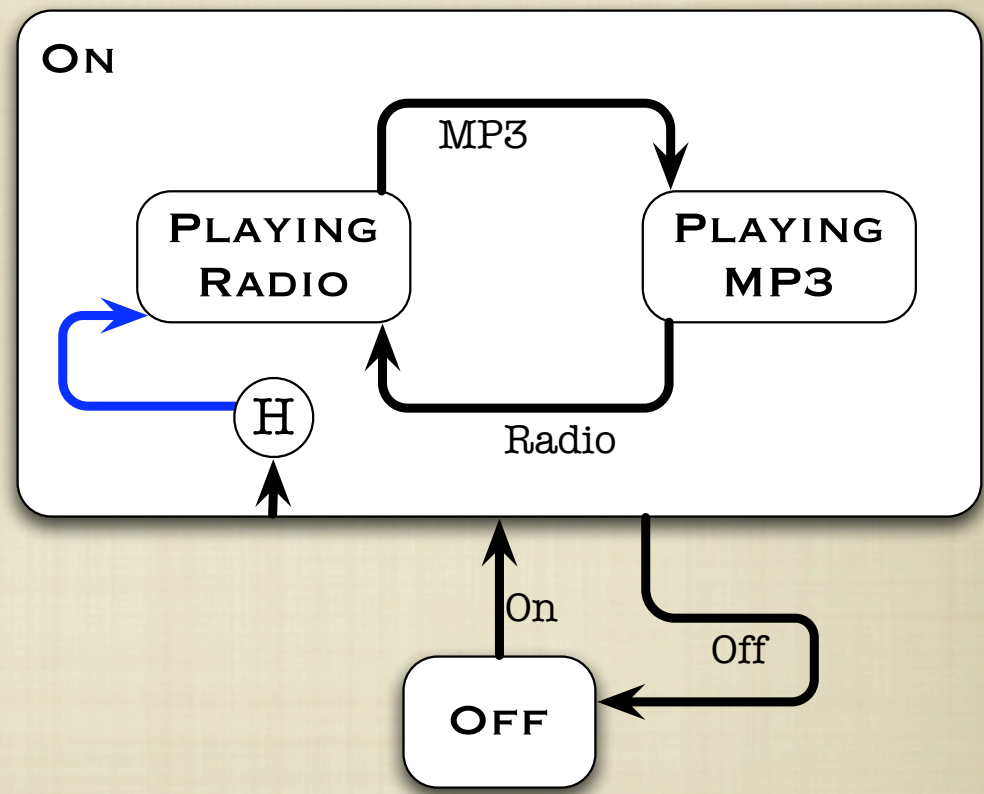
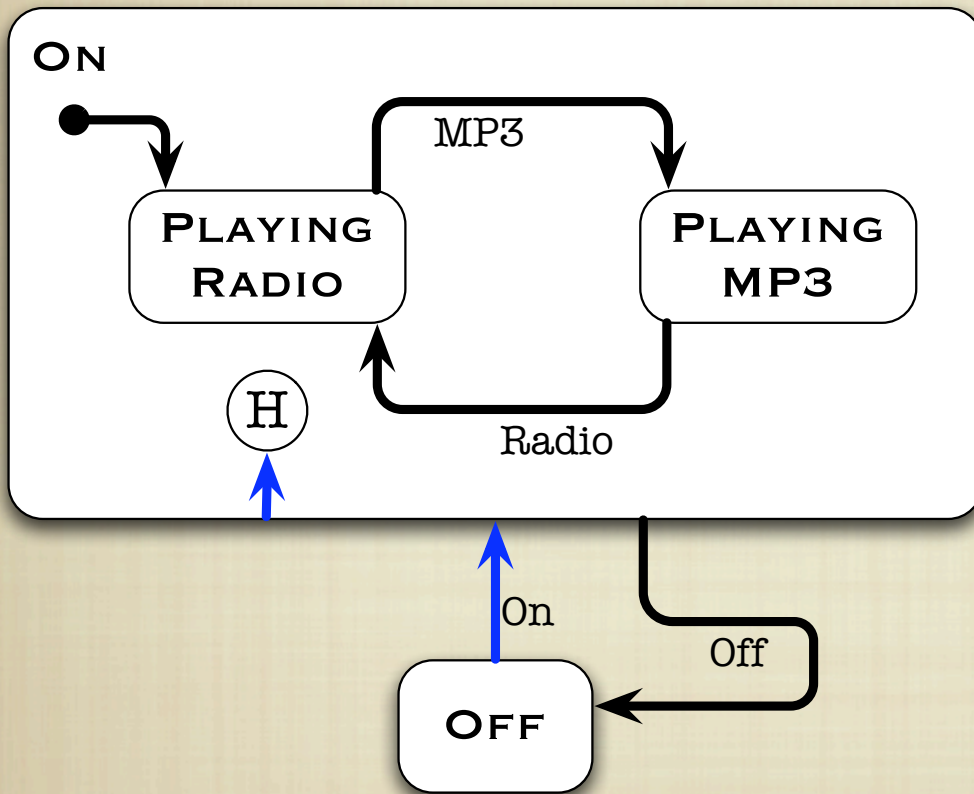


- CAN DENOTE RE-ENTERING LAST SUB-STATE



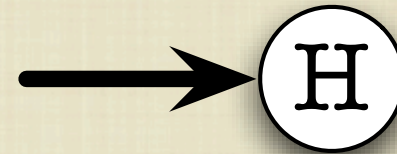
- AN ALTERNATIVE TO DEFAULT INITIAL STATE

ALTERNATIVE HISTORY NOTATIONS

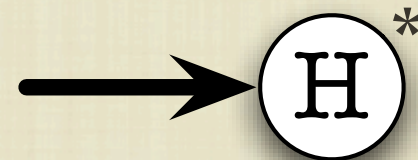


HISTORY LEVELS

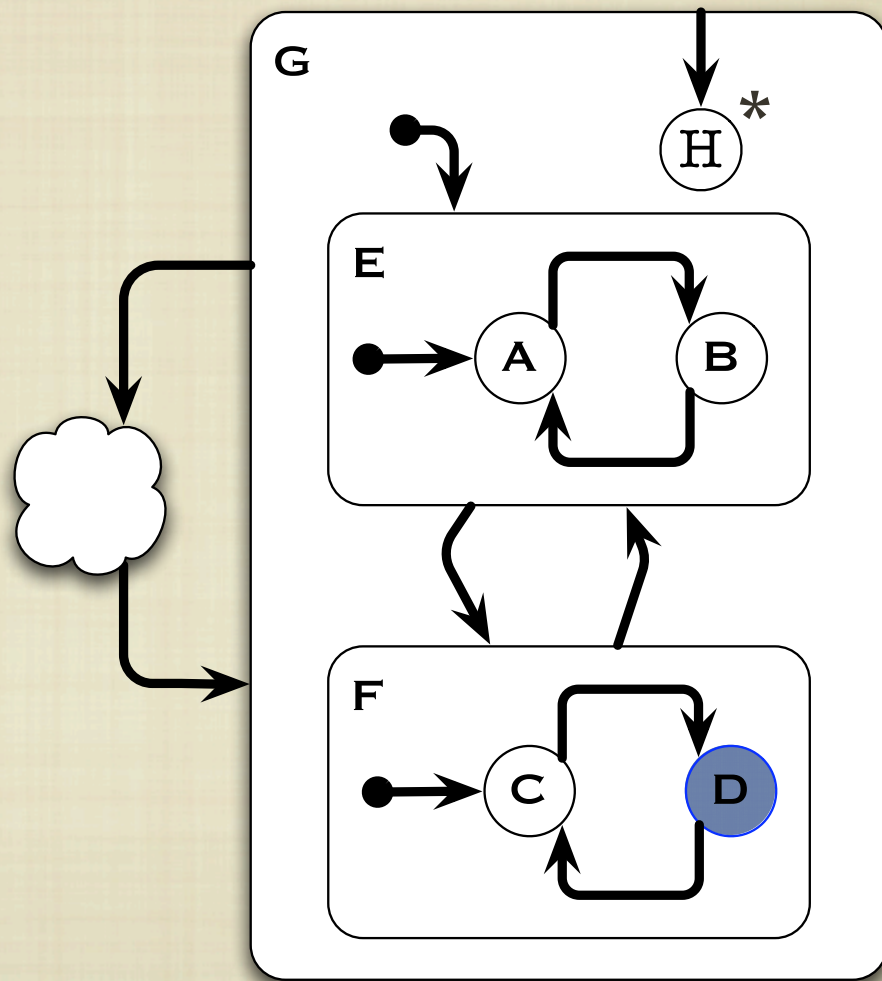
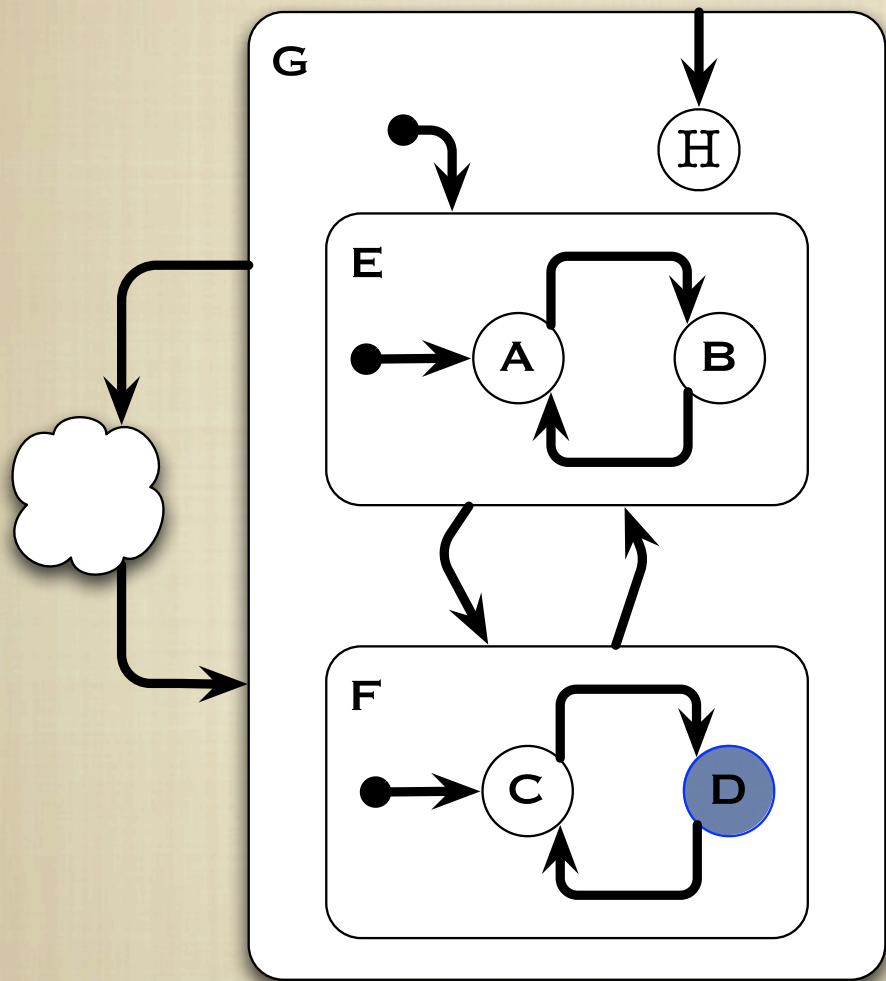
- PLAIN HISTORY SYMBOL
JUST APPLIES TO CURRENT
LEVEL



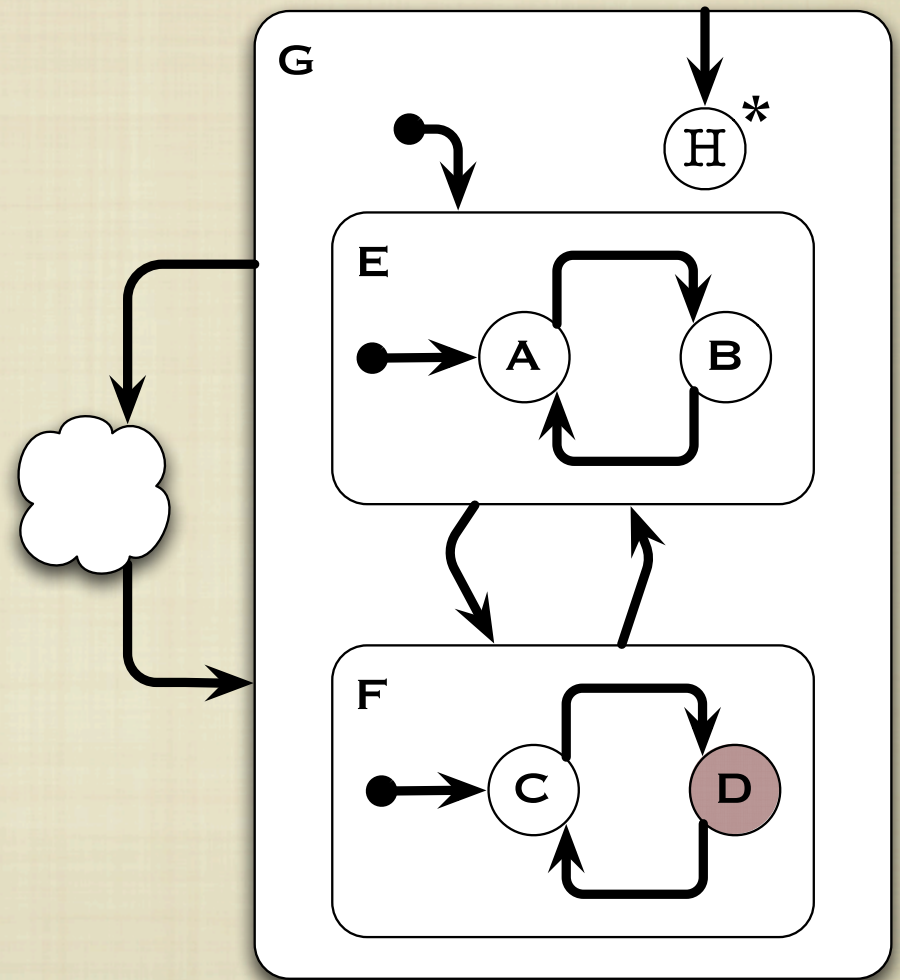
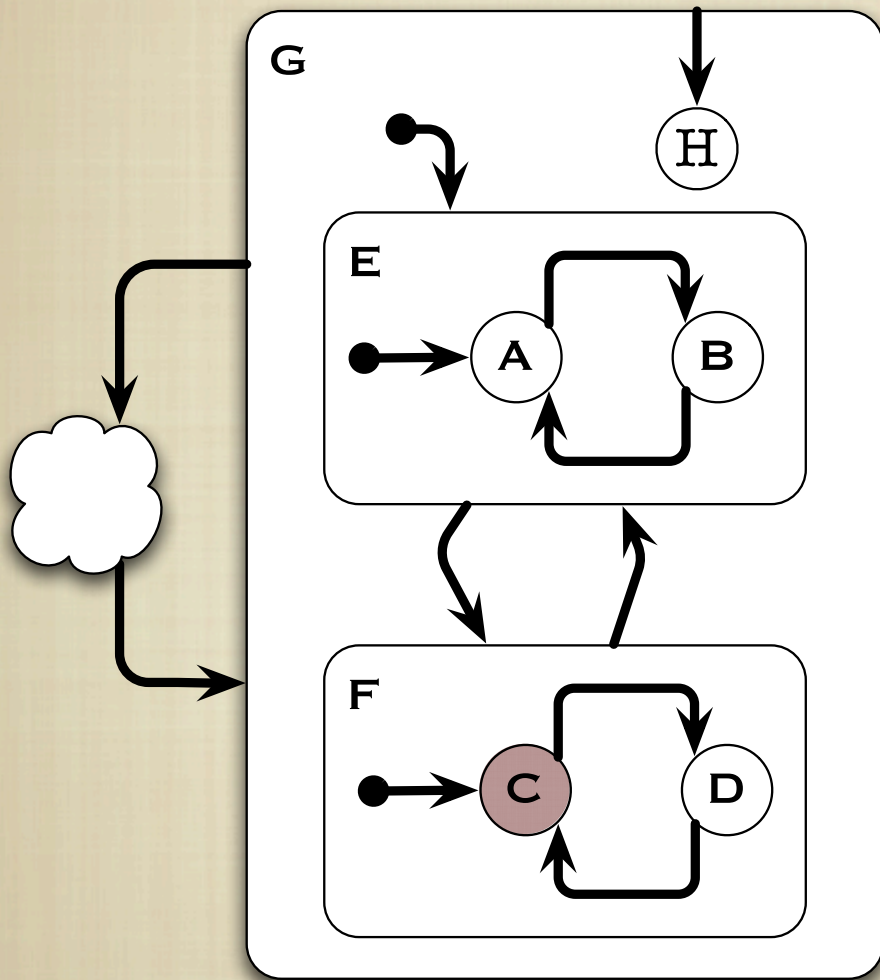
- ADD ASTERISK TO DENOTE
ALL SUBSTATES



HISTORY LEVELS EXAMPLE

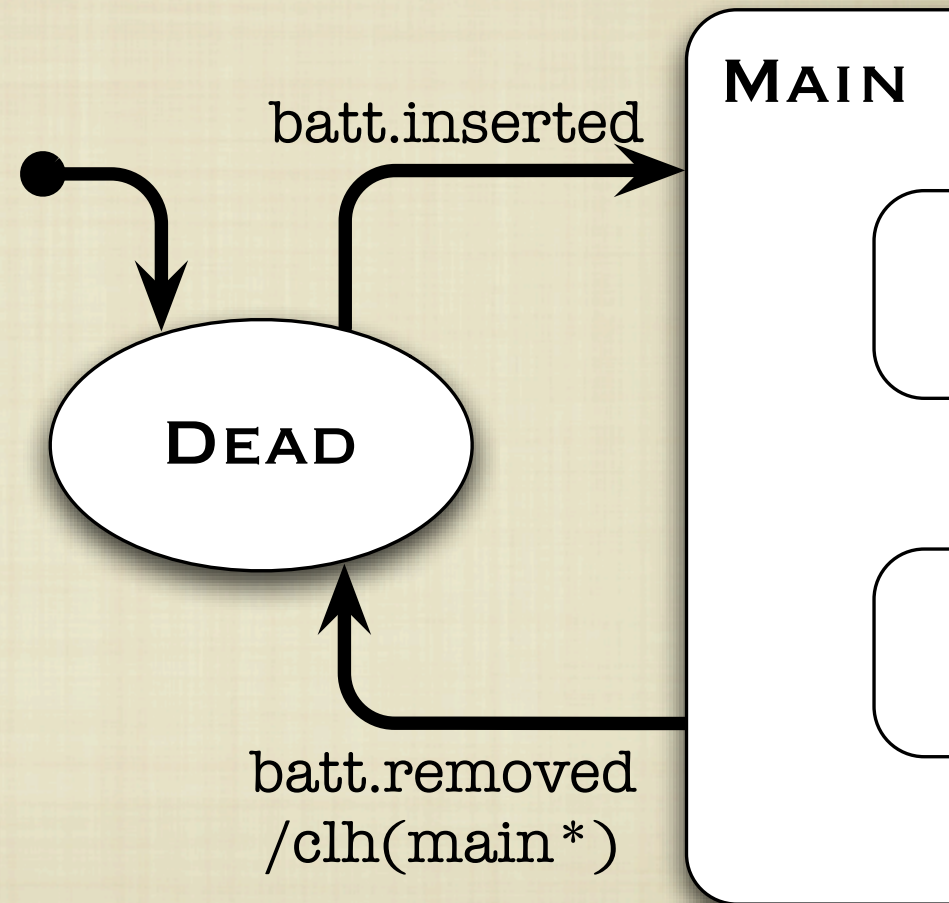


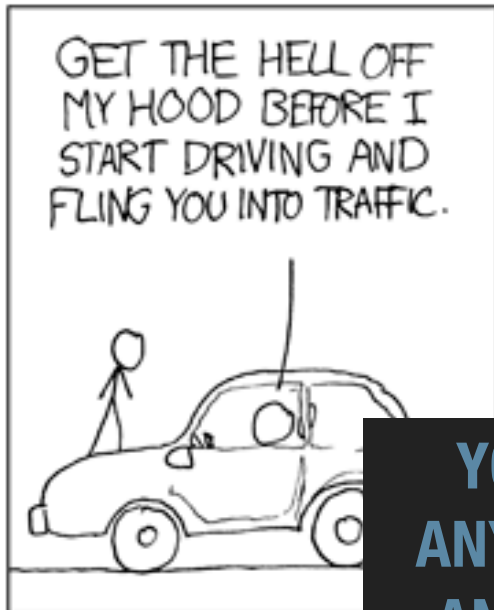
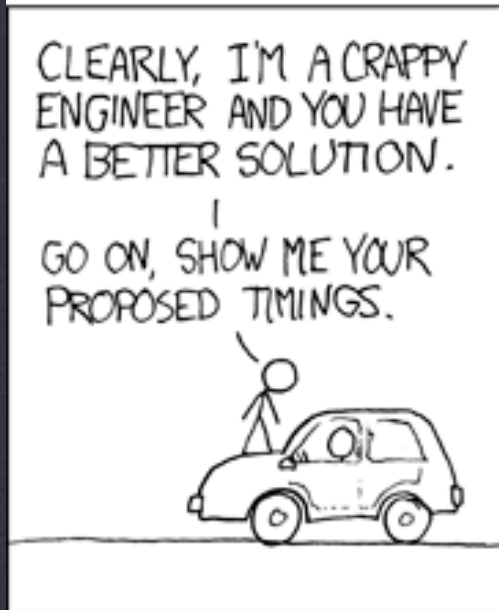
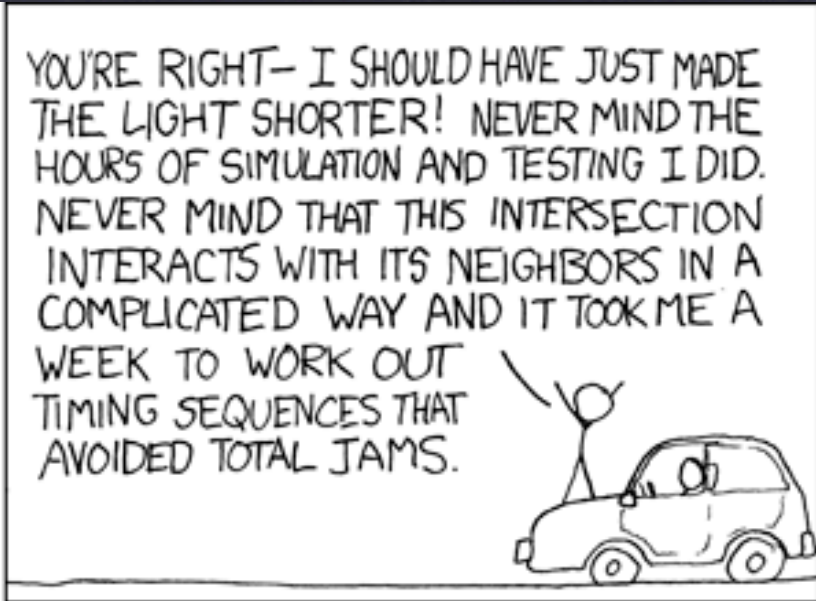
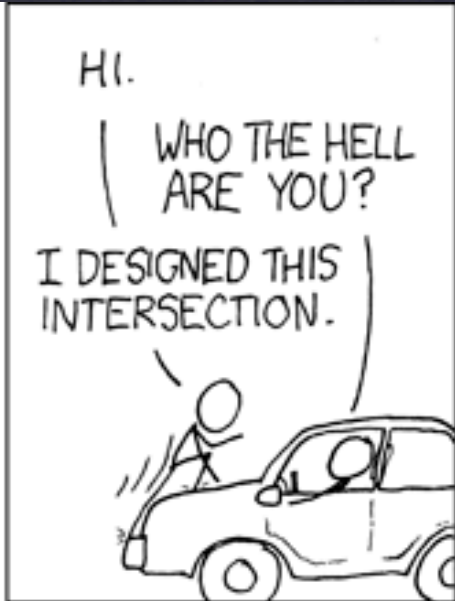
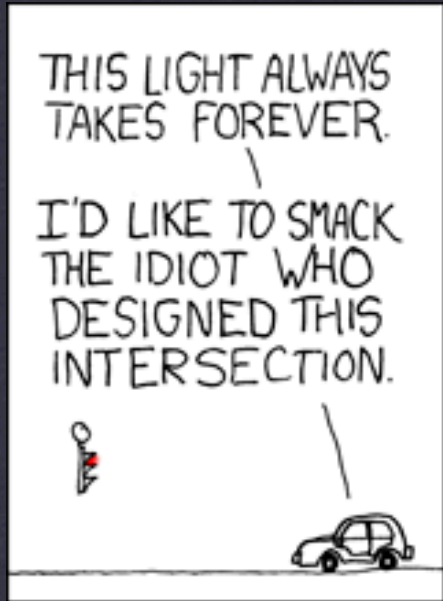
HISTORY LEVELS EXAMPLE



FORGETTING THE PAST

- SOMETIMES USEFUL TO CLEAR HISTORY
- SYNTAX:
clear-history(state) OR
clear-history(state*)
- ABBREVIATIONS:
clh(state) OR
clh(state*)





YOU CAN LOOK AT PRACTICALLY ANYTHING MANMADE AROUND YOU AND THINK 'SOME ENGINEER WAS FRUSTRATED WHILE DESIGNING THIS.' IT'S A LITTLE HUMAN CONNECTION.

CARTOON OF THE DAY

WORK ON QUIZ