

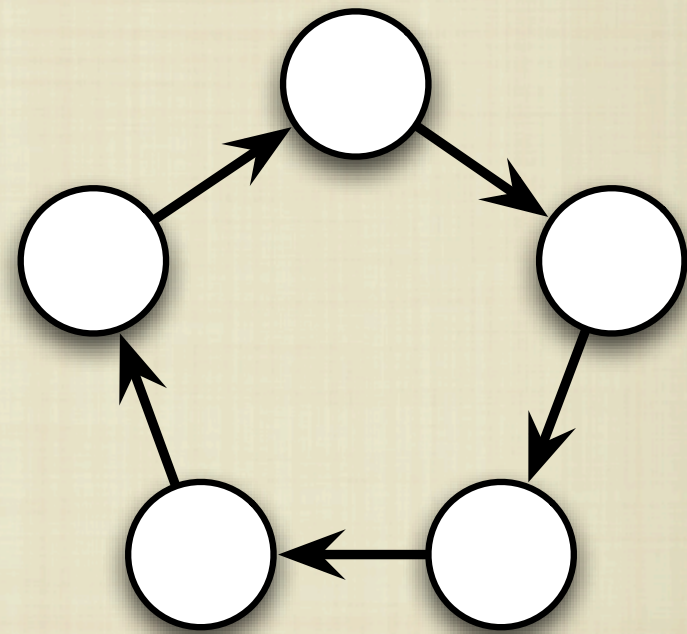
MORE ALLOY
EXAMPLES

CURT CLIFTON

ROSE-HULMAN INSTITUTE OF TECHNOLOGY

LEADER ELECTION IN RING

- **PROBLEM: CONCURRENT PROCESSES RUNNING SAME CODE MUST COLLABORATE TO IDENTIFY A “LEADER”**
- **SOLUTION:**
 - **ASSUME UNIQUE PIDS AND MAKE HIGHEST THE LEADER**
 - **PASS TOKENS CONTAINING PIDS (START WITH OWN)**
 - **RECEIVE TOKEN:**
 - **< OWN PID?, DISCARD**
 - **> OWN PID?, PASS ALONG**
 - **= OWN PID?, DECLARE SELF ELECTED**



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NO QUIZ TODAY



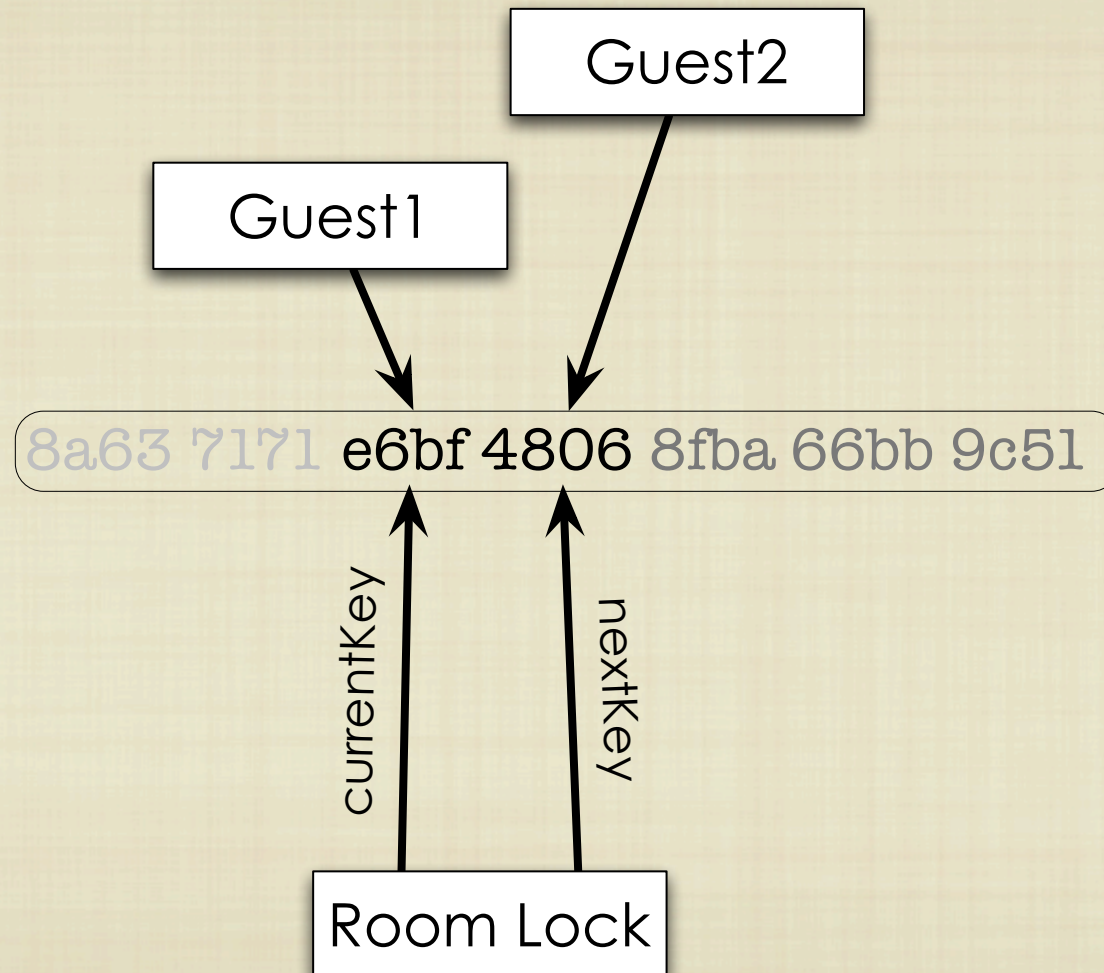
PHOTO BY ARIEL.CHICO - [HTTP://FLIC.KR/P/7G80NN](http://flic.kr/p/7G80NN)

HOTEL ROOM LOCKS

HOW HOTEL LOCKS WORK

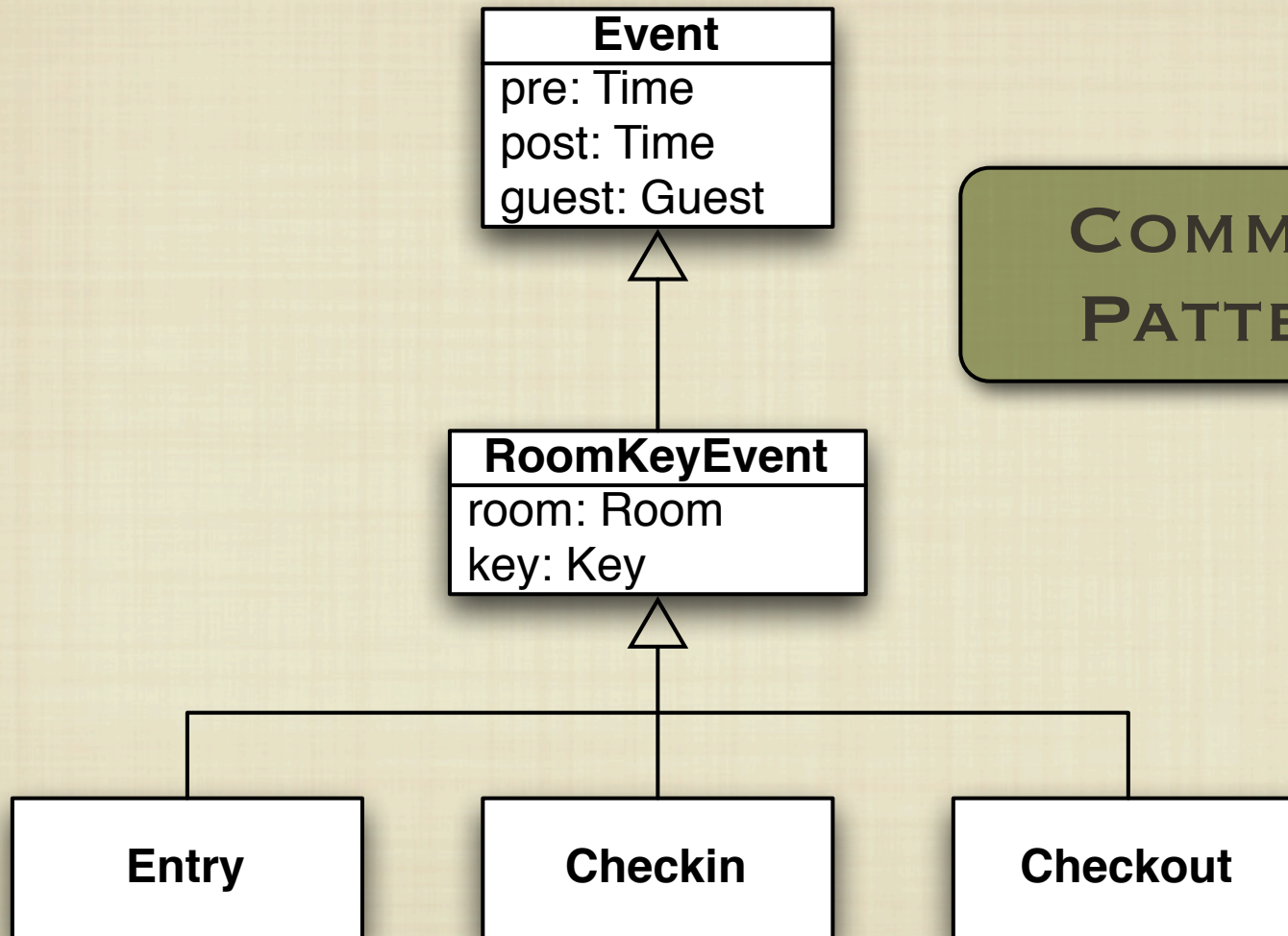
- EACH LOCK STORES A CURRENT KEY (CODE)
 - KEYS GENERATED PSEUDO-RANDOMLY, PREDICTABLY
 - LOCK CAN ALWAYS CALCULATE NEXT VALID KEY
- LOCK CAN BE OPENED WITH CURRENT OR NEXT KEY
 - OPENING WITH NEXT KEY CAUSES LOCK TO ADVANCE
 - PRIOR GUESTS CARD NO LONGER WORKS!

HOW HOTEL LOCKS WORK



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MODELING EVENTS



**COMMAND
PATTERN!**