## Outline for February 1, 2001

- 1. Greetings and felicitations!
  - a. Friday times good, also Tuesday 3-4:30. Please send me your preferences!
- 2. Clocks
  - b. Vector clocks and causal relation
  - c. ordering of messages so you receive them in the order sent
    - i. why
    - ii. for broadcast (ISIS): Birman-Schiper-Stephenson
    - iii. for point to point: Schiper-Eggli-Sandoz
- 3. Global state
  - a. Show problem of slicing state when something is in transit
  - b. Define local state;  $send(m_{ij}) \in LS_i$  iff time of  $send(m_{ij}) < current$  time of  $LS_i$ ; similar for receive
  - c. transit( $LS_i$ ,  $LS_j$ ); inconsistent( $LS_i$ ,  $LS_j$ ); consistent state is one with inconsistent set empty for all pairs  $LS_i$ ,  $LS_j$
  - d. Consistent global state: Chandry-Lamport
- 4. Termination detection
  - a. Haung