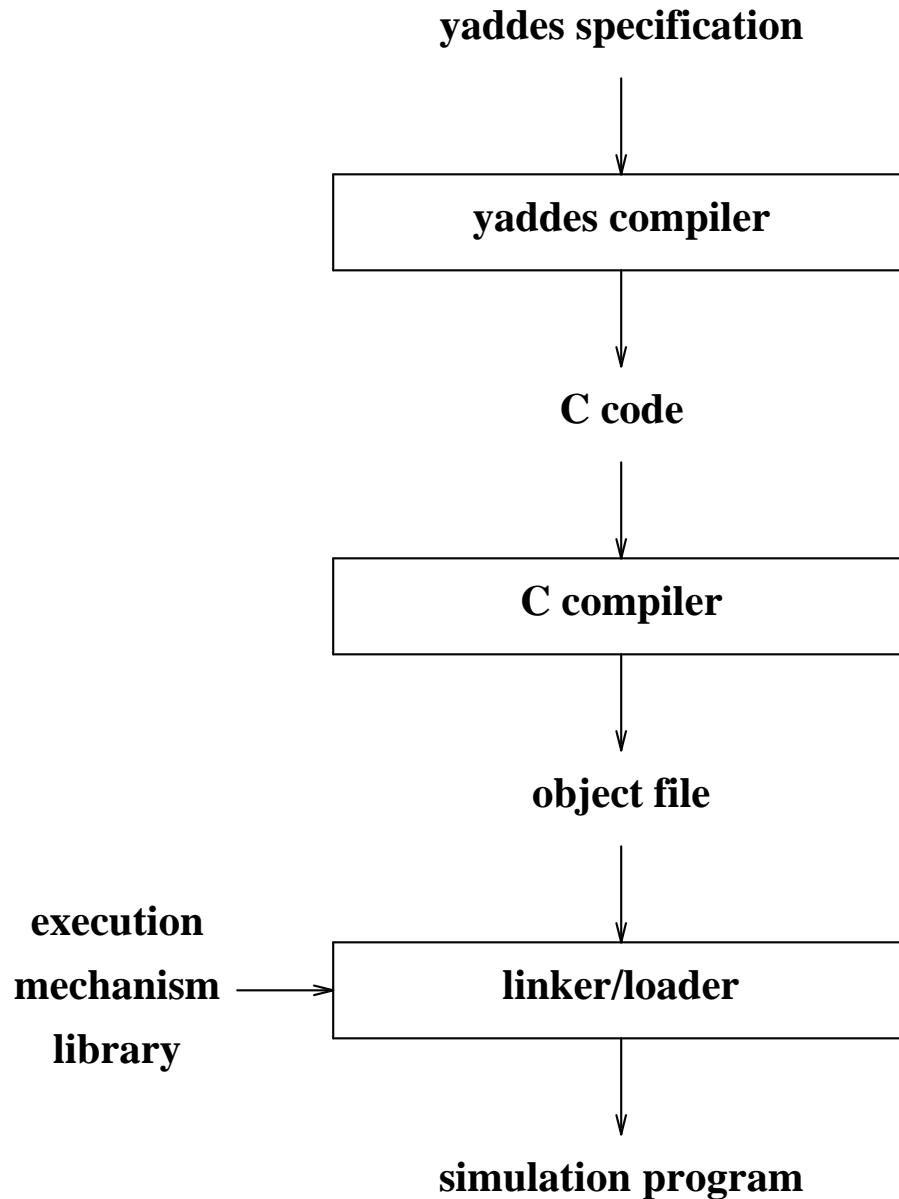


## **DEALING WITH THE FUNDAMENTAL DDES PROBLEM**

- **ULTRA-CONSERVATIVE APPROACH:**  
**distributed DES mechanism using multiple, synchronized event lists**
  
- **CONSERVATIVE APPROACH:**  
**Chandy-Misra distributed DES**  
**(without deadlock detection and recovery)**
  
- **OPTIMISTIC APPROACH:**  
**Virtual-time-based distributed DES**  
**(using the time warp mechanism)**

## THE YADDES LANGUAGE

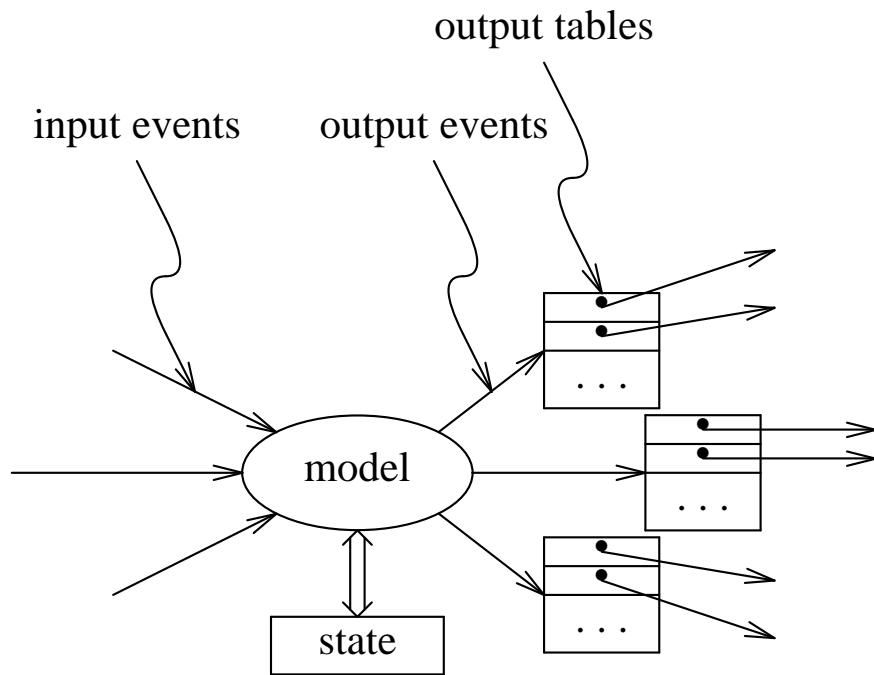
- **preprocessor for the C programming language**



## YADDES IMPLEMENTATIONS

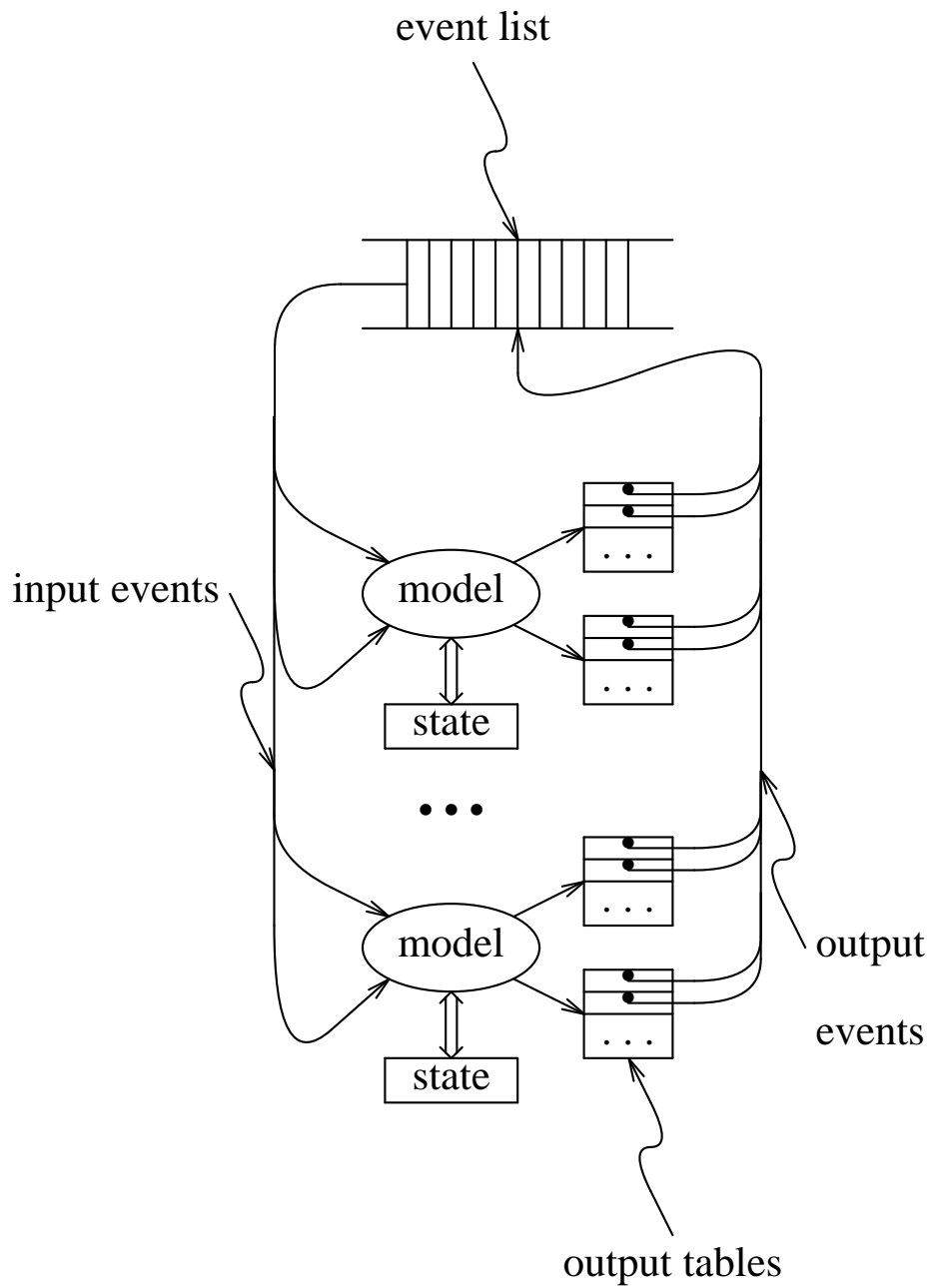
- **four execution mechanisms**
- **three implementations:**
  1. **PORTABLE**  
(uniprocessor version)  
  
**o/s:**
    - **BSD 4.3 Unix**
    - **Apollo DOMAIN/IX**
    - **MS-DOS**  
**processor:**
    - **$\mu$ VAX II**
    - **Apollo DN3010**
    - **IBM-PC compatible**
  2. **VAX-ONLY**  
(simulated multiprocessor version)
  3. **FULLY DISTRIBUTED**  
(network of Apollo DN3010 workstations)  
o/s: DOMAIN/IX with NCS and NIDL

# A YADDES LOGICAL PROCESS



## TRADITIONAL DES

- the event-list-driven execution mechanism



## THE CONSERVATIVE APPROACH

- Chandy-Misra distributed DES

