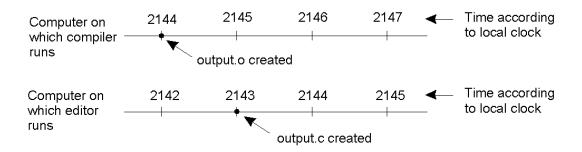
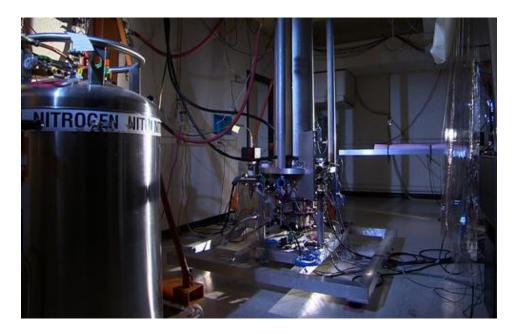
#### Time and Clocks



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### **Event Ordering in Make**

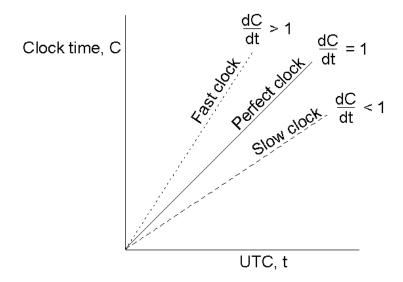




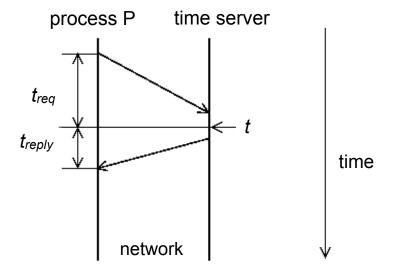
**Atomic Clock!** 

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# **Clock Synchronization**

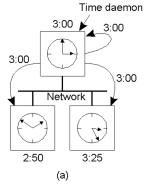


## Cristian's Algorithm

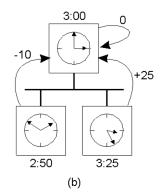


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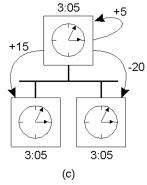
### **Berkeley Algorithm**



Leader sends time



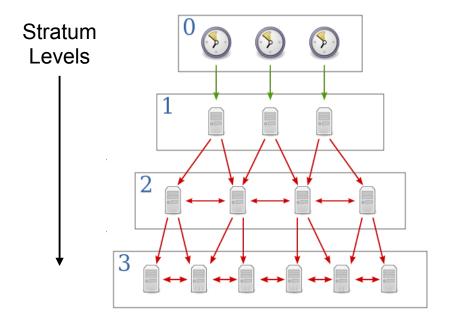
Followers send skews



Leader averages, sends offsets

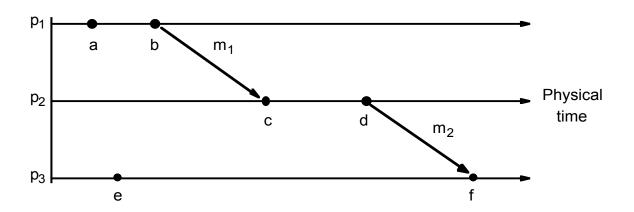
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### **Network Time Protocol (NTP)**

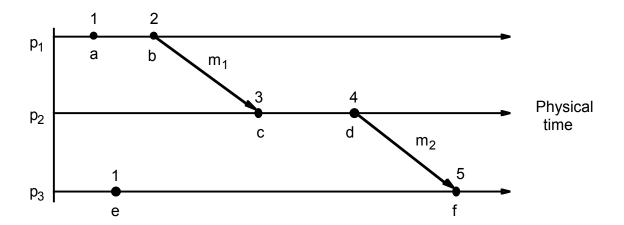


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### **Logical Clocks**



### **Lamport Clocks**



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### **Vector Clocks**

