

ECE 151
Assignment 1
Due Tuesday April 15

1. Assume that your operating system provides only primitives for transient asynchronous communication, including an asynchronous receive primitive. How would you use those primitives to implement transient synchronous communication?
2. Assume that your operating system provides only primitives for transient synchronous communication. How would you use those primitives to implement transient asynchronous communication?
3. Discuss what kinds of application are best served by transient synchronous communication and by transient asynchronous communication. Which would be more appropriate for a multiplayer interactive game?
4. Assume that your operating system provides only primitives for transient asynchronous communication. How would you implement persistent asynchronous communication, in which messages are not lost if a client, a server or a communication link fails and is repaired and restored to service?
5. What kinds of applications might need persistent asynchronous communication? Where might you need persistent asynchronous communication in a multiplayer interactive game?