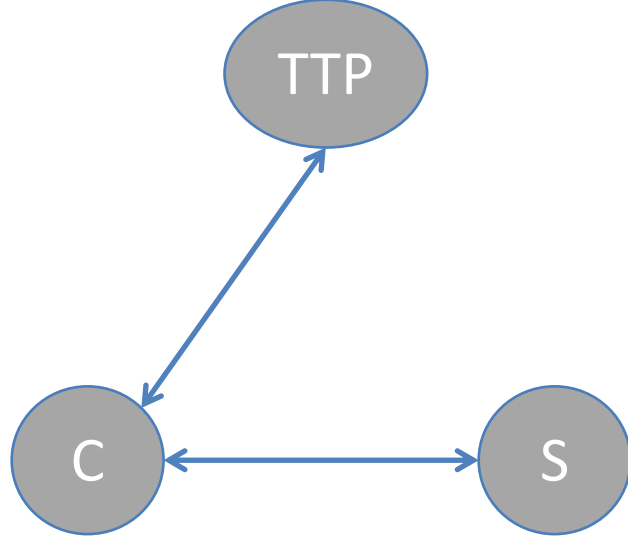


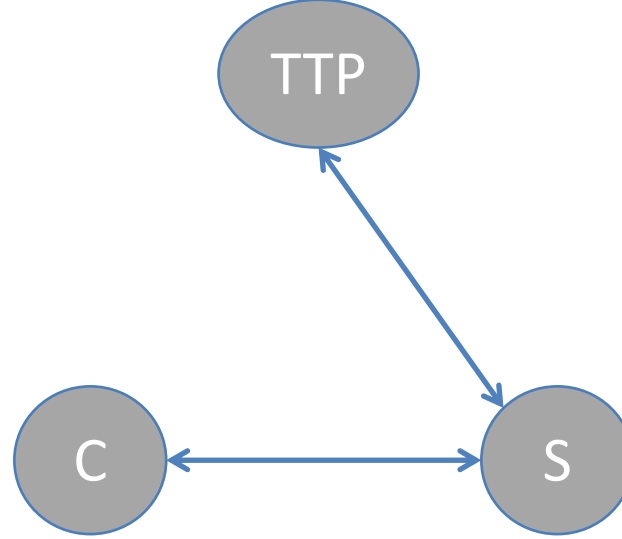
### Pattern 1: TTP-C-S



- Needham-Schroeder
- Kerberos
- Single-Sign-On

(a)

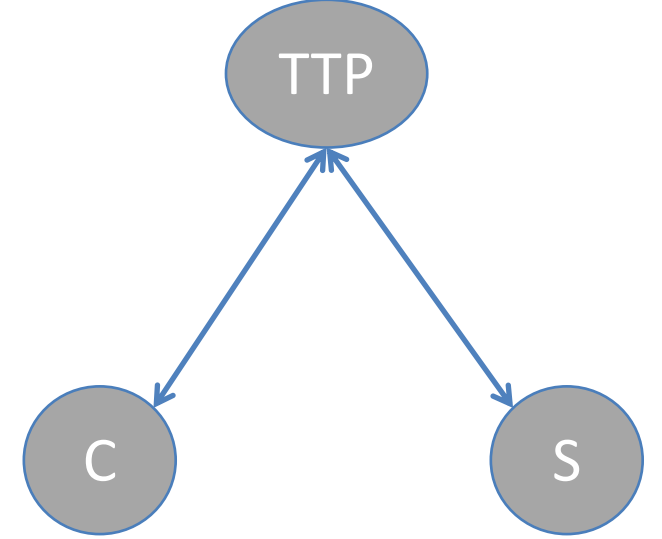
### Pattern 2: C-S-TTP



- Otway-Rees
- Extended Authentication Protocols (EAP)

(b)

### Pattern 3: C-TTP-S



- Wide-Mouthed Frog
- Bellare-Rogaway 1995

(c)