

Expensive/Slow/Dangerous  
to test

## Real System

Real Time

### Charger

charging code  
doesn't know it is  
connected to real  
battery

Charger can  
apply constant  
current or terminal  
voltage

Charger reads  
current and  
terminal voltage

### Battery

hidden:  
state of charge  
open circuit voltage

Free/Fast/Trivial  
to test (once it is setup)

## Fake System

Programmable  
Time

### Charger

charging code  
doesn't know it is  
connected to simulated  
battery

Charger can  
apply constant  
current or terminal  
voltage

Charger reads  
current and  
terminal voltage

### Battery (simulator)

hidden:  
state of charge  
open circuit voltage

