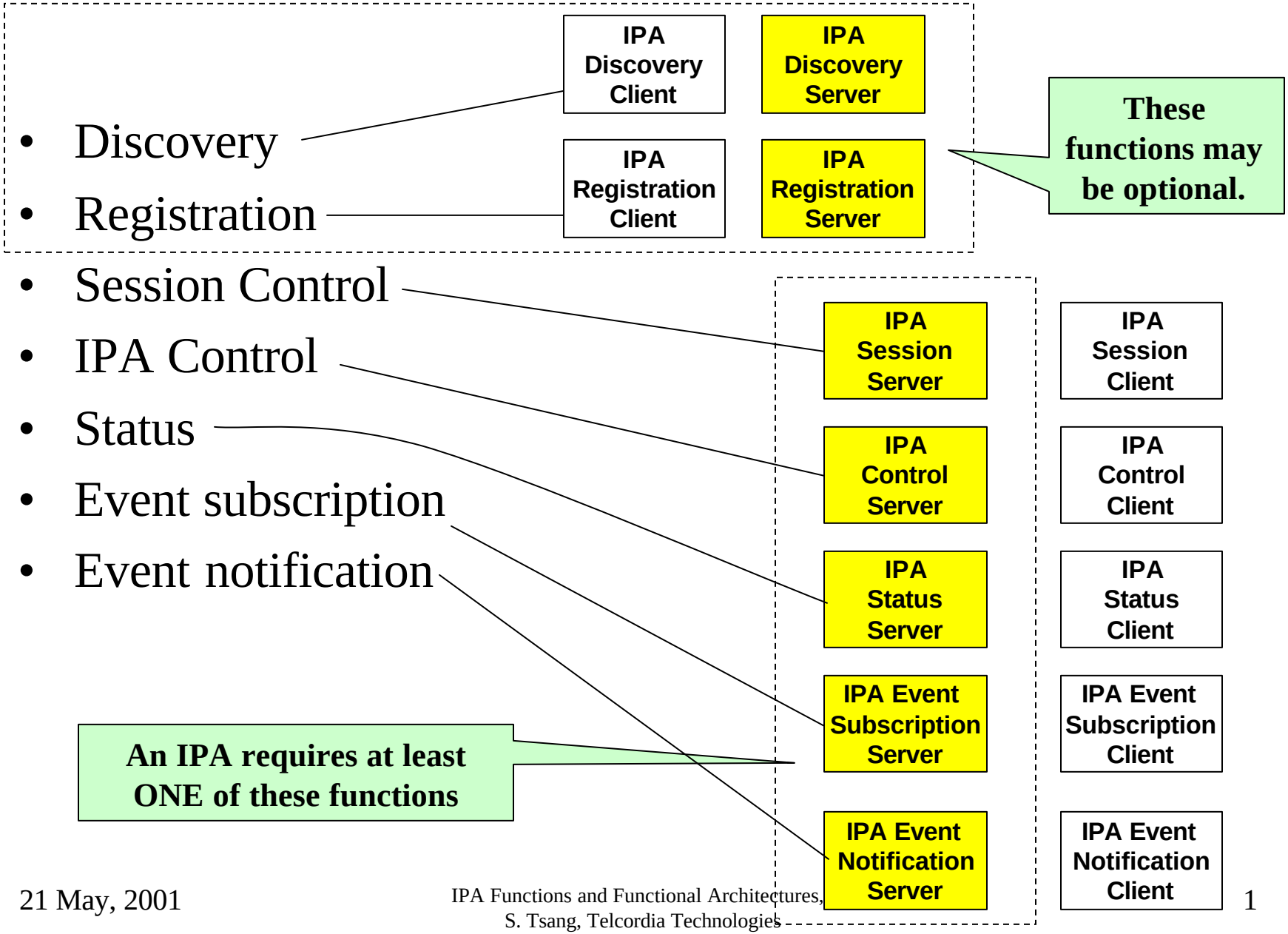
# IPA Networked Functions

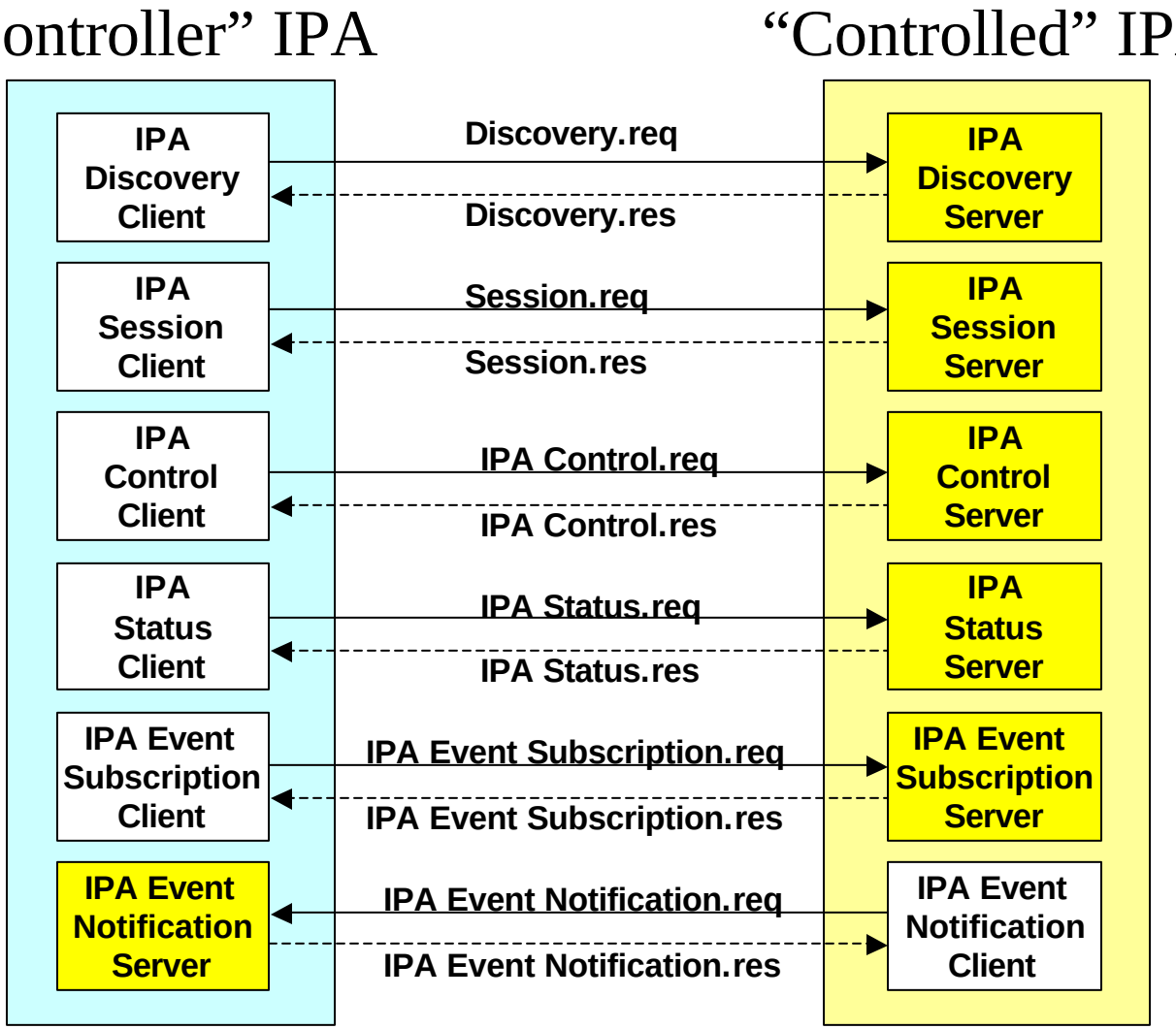
- Discovery
- Registration
- Session Control
- IPA Control
- Status
- Event subscription
- Event notification



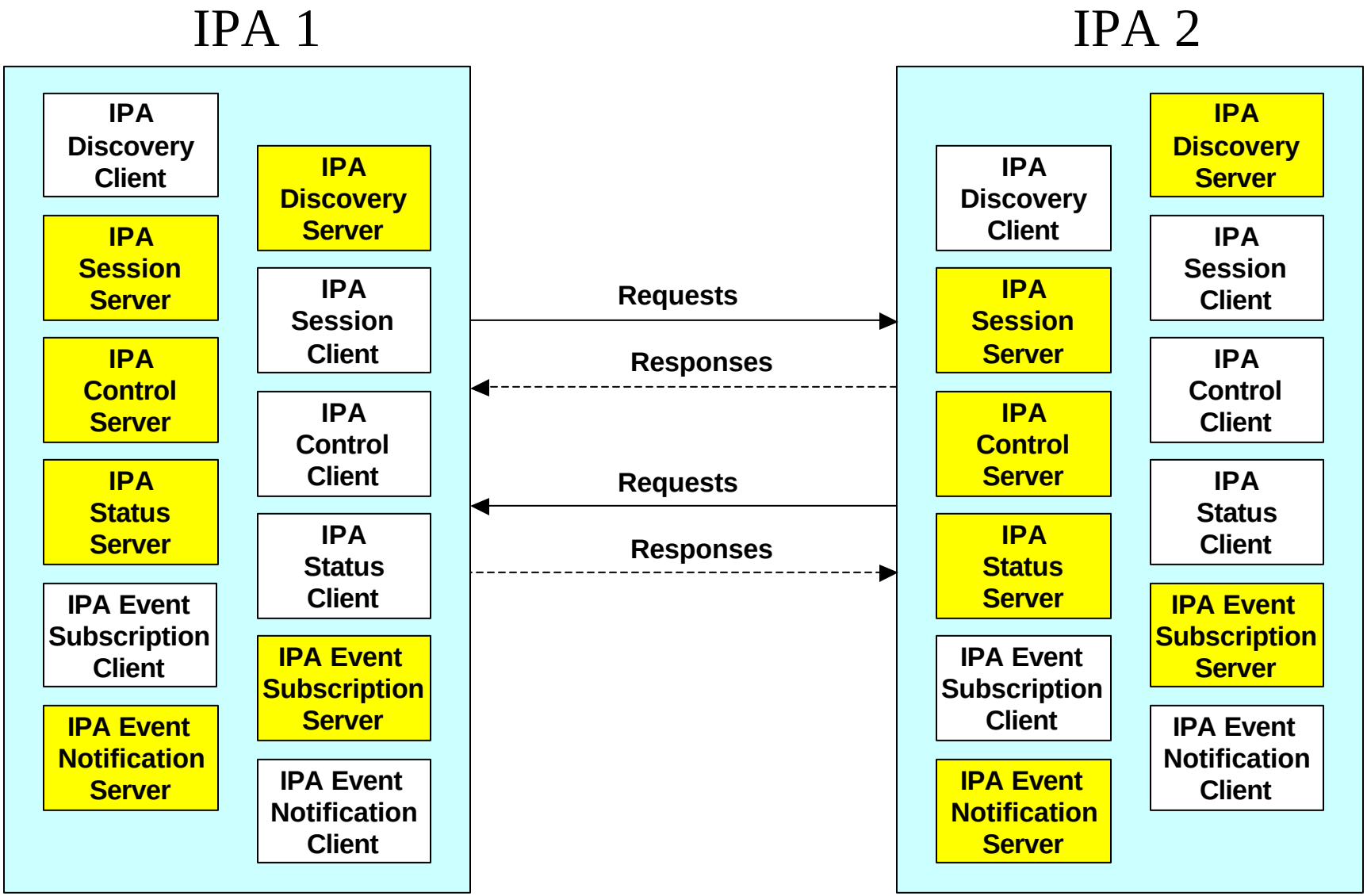
# IPA Networked Function Description

- **Discovery**
  - Client: Sends discovery requests (e.g. requests for specific IPAs, services).
  - Server: Receives and processes discovery requests. If the receiving IPA matches the requested attributes, the IPA's Discovery Server responds to the discovery request.
- **Registration**
  - Client: Sends registration information about the IPA (e.g. address, name, services supported)
  - Server: Receives and processes registration information. This information may then be stored (e.g. in an IPA registration information database).
- **IPA Control**
  - Client: Used to control IPA actuators. The IPA Control Client sends control messages.
  - Server: Receives and processes IPA control messages. The IPA control server returns a positive response if the control message is received and understood, otherwise, an error response is returned.
- **Status**
  - Client: Used to query the status of an IPA sensor.
  - Server: Receives and processes Status requests. Responds with IPA sensor status information.
- **Event Subscription**
  - Client: Used to request notification of specific events from another IPA.
  - Server: Receives and processes event subscription events. When the event subscription is received and 'understood', the event subscription server returns a response to the client, else an error response is returned.
- **Event Notification**
  - Client: Used to send notification of specific events to another IPA.
  - Server: Receives and processes event notification messages. If an event notification is successfully received, it returns a positive response to the client, otherwise an error response is returned.
- **Session Control**
  - Client: Used to initiate a session.
  - Server: Receives and processes session initiation requests.

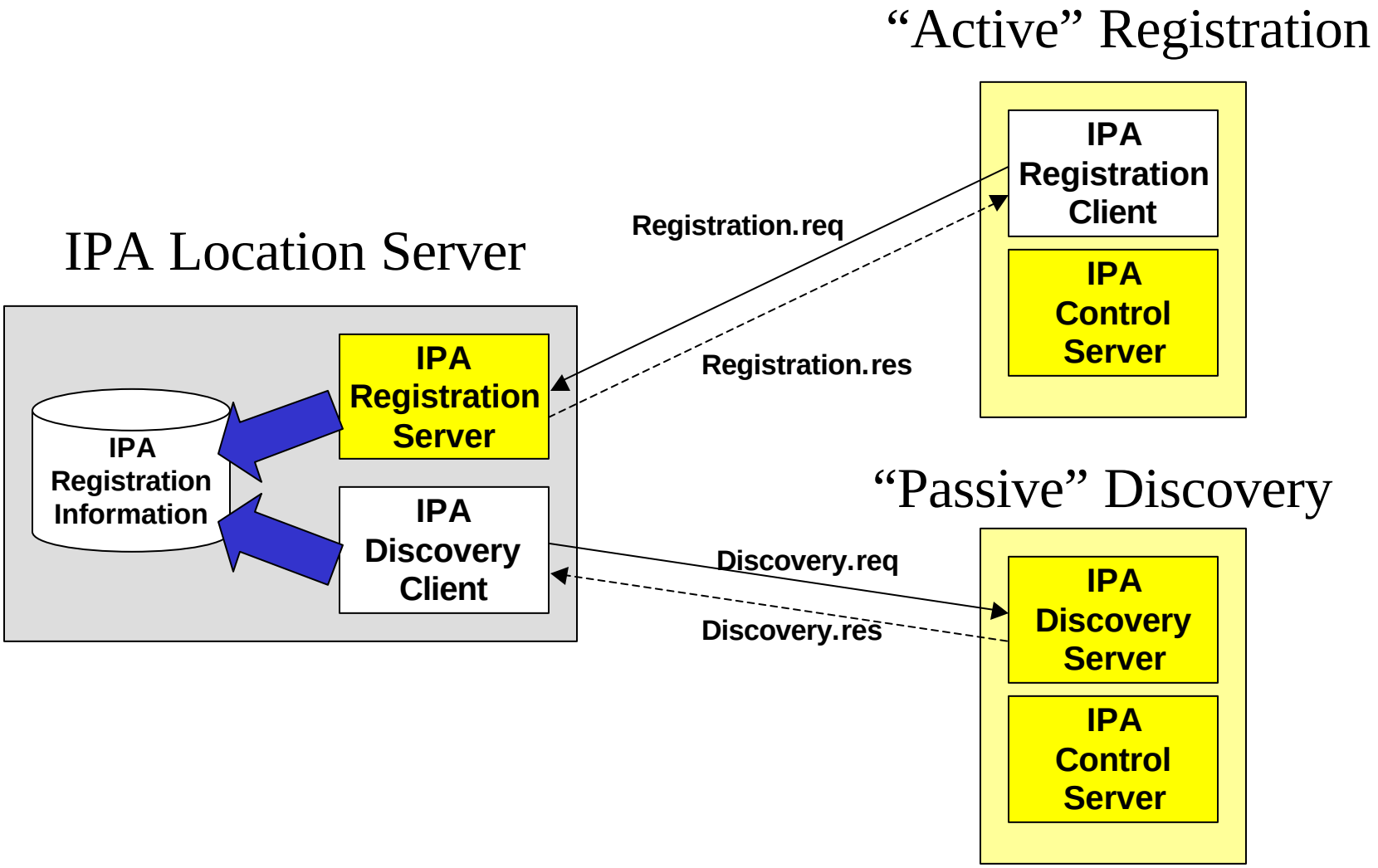
# Scenario 1 - IPA-IPA Master-Slave Control



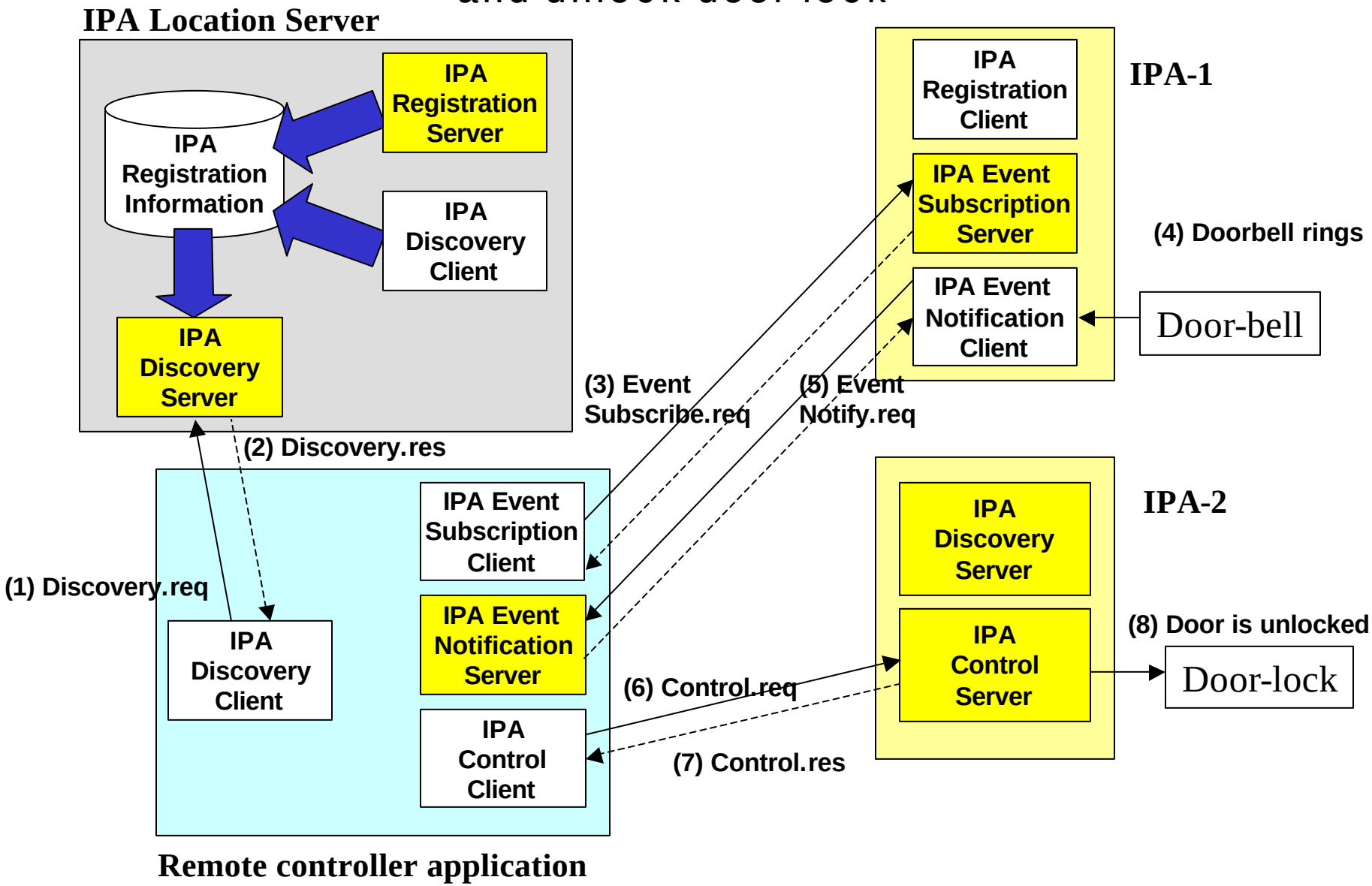
# Scenario 2 –IPA-IPA Peer-to-Peer Control



# Scenario 3 – IPA Location-Server Options



# Scenario 4 – Remote Control of IPAs – wait for door-bell ring, and unlock door-lock



# Scenario 4 – Remote Control of IPAs – wait for door-bell ring, and unlock door-lock

1. The **Remote controller application** "asks" the Location Server for the addresses of the Door-Bell (IPA-1) and Door-Lock (IPA-2) devices.
2. The **Location Server** responds. Note: This may require two requests/responses from the remote controller application, not one as shown.
3. The **Remote controller application** requests notification of a door-bell event. A response is returned by the Door-Bell (IPA-1) to indicate the request has been received (*not shown*).
4. The door bell is pressed.
5. As requested, the **Door-Bell device** (IPA-1) sends an event notification back to the Remote controller. The remote controller responds to indicate that it has received the event notification (*not shown*).
6. The **Remote Controller** sends an "unlock" request to the Door-lock (IPA-2).
7. A response is returned by the **Door-lock** (IPA-2) to indicate the request has been received and understood.
8. The door is unlocked.