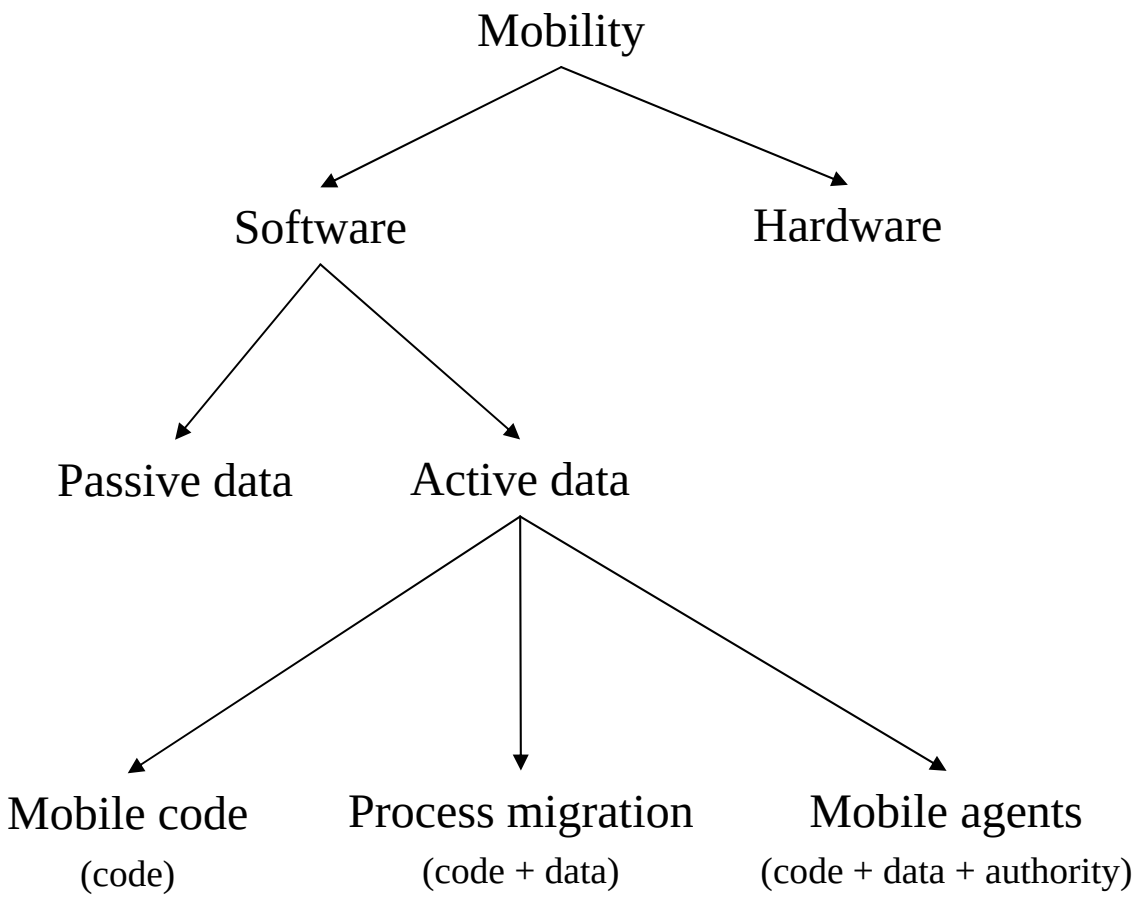
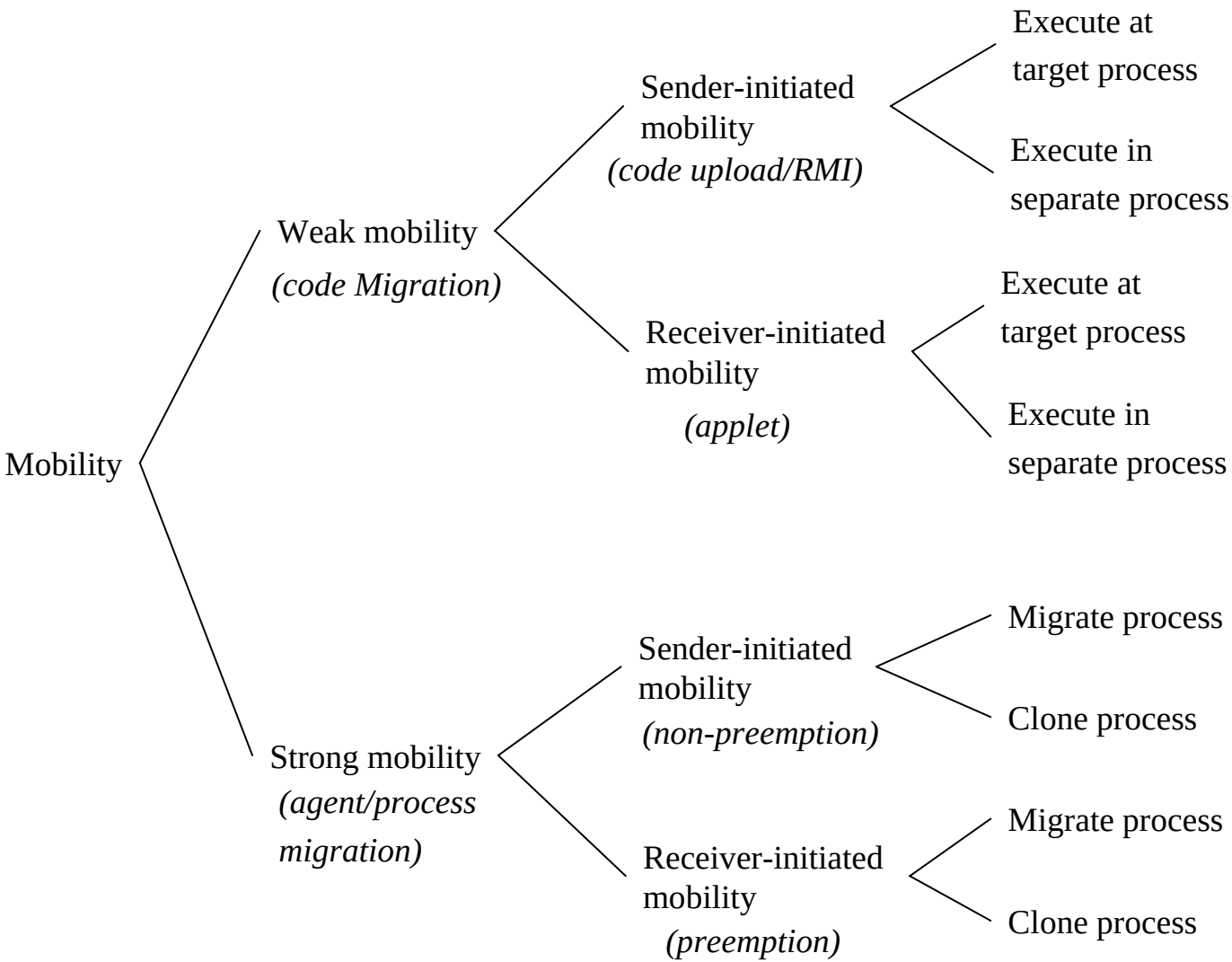
Taxonomy of Mobility



From: D.S. Milojicic et. al.

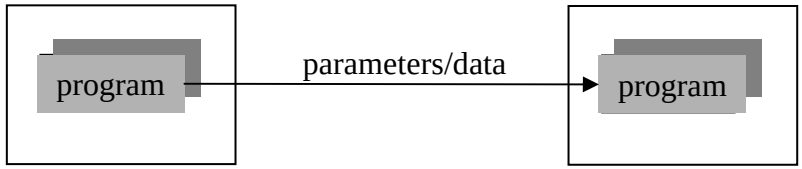
Taxonomy of Mobility



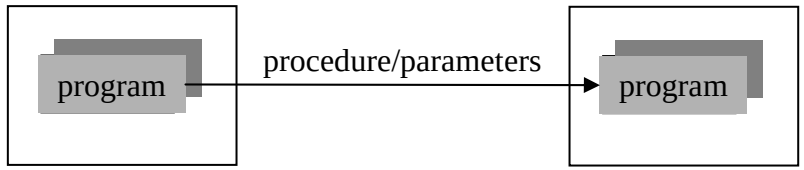
From: Tanenbabum and van Steen

Mobility and Remote Operations

- **Remote execution**



- **Remote evaluation**



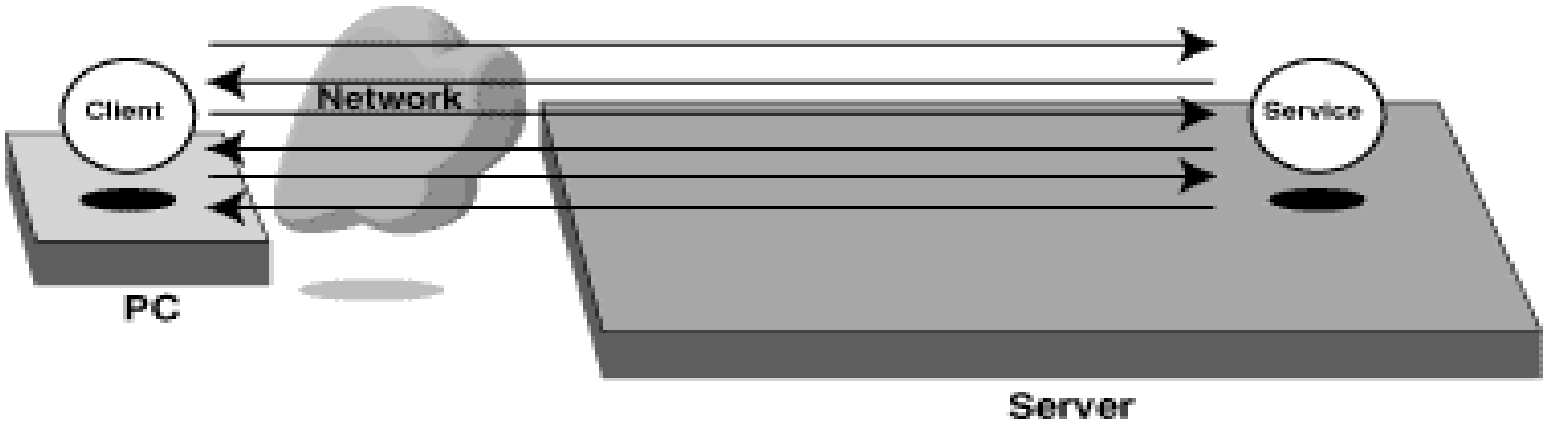
- **Process migration**

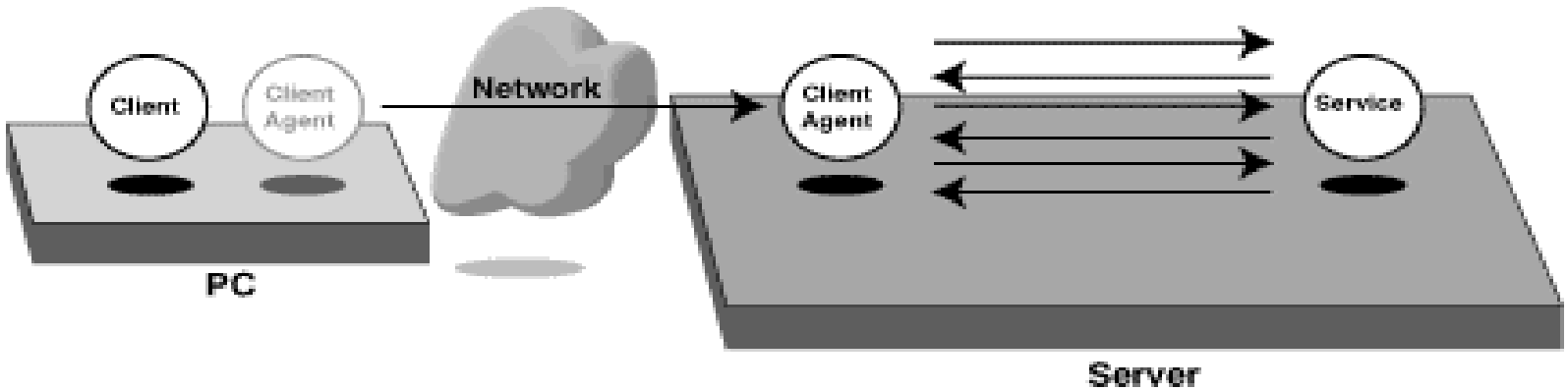
- **Mobile agents**

Characteristics of Mobile Agents

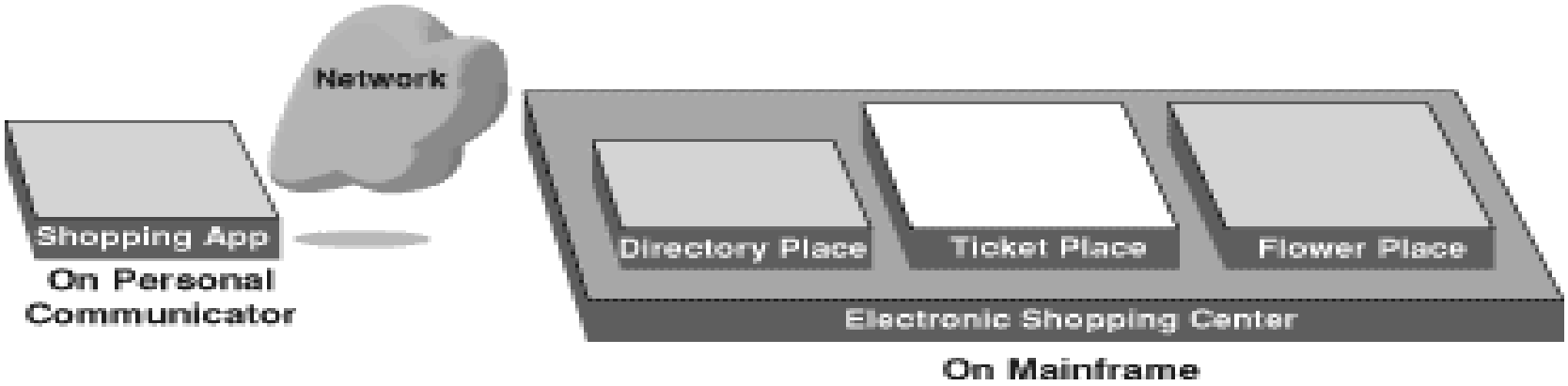
- **Encapsulated**: code, data, itinerary, activity, etc.
- **Autonomous**: decisions on what to do, where to go and when to go.
- **Asynchronous**: has its own thread of execution
- **Local interaction** : with other mobile agents or stationary objects locally.
- **Disconnected operation**: in the absence of a network connection
- **Parallel execution**: among agent dispatched to different sites

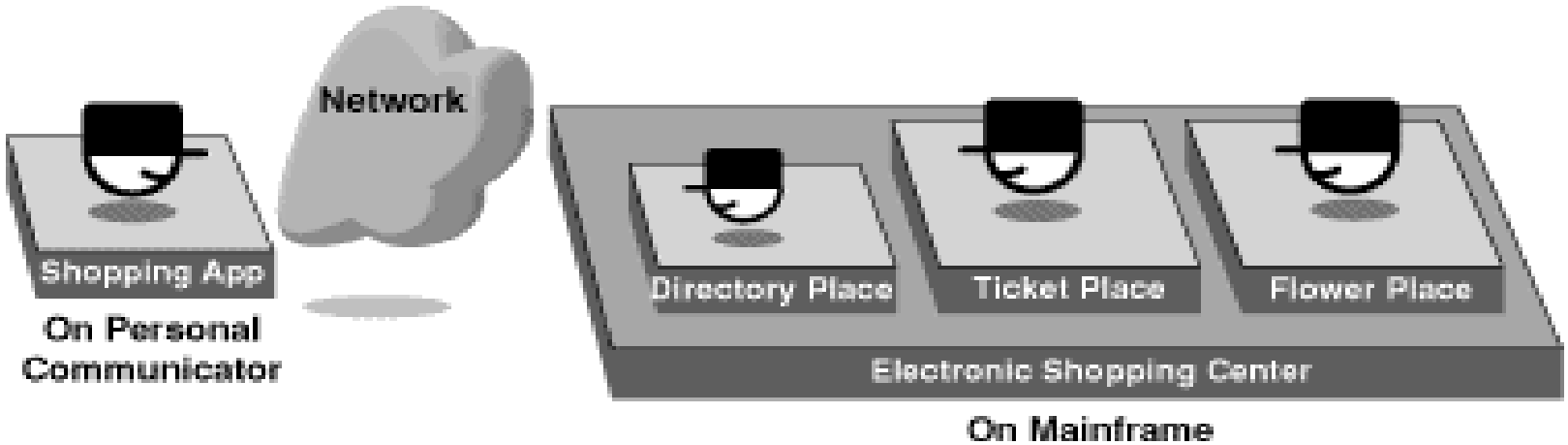
Mobile Agents



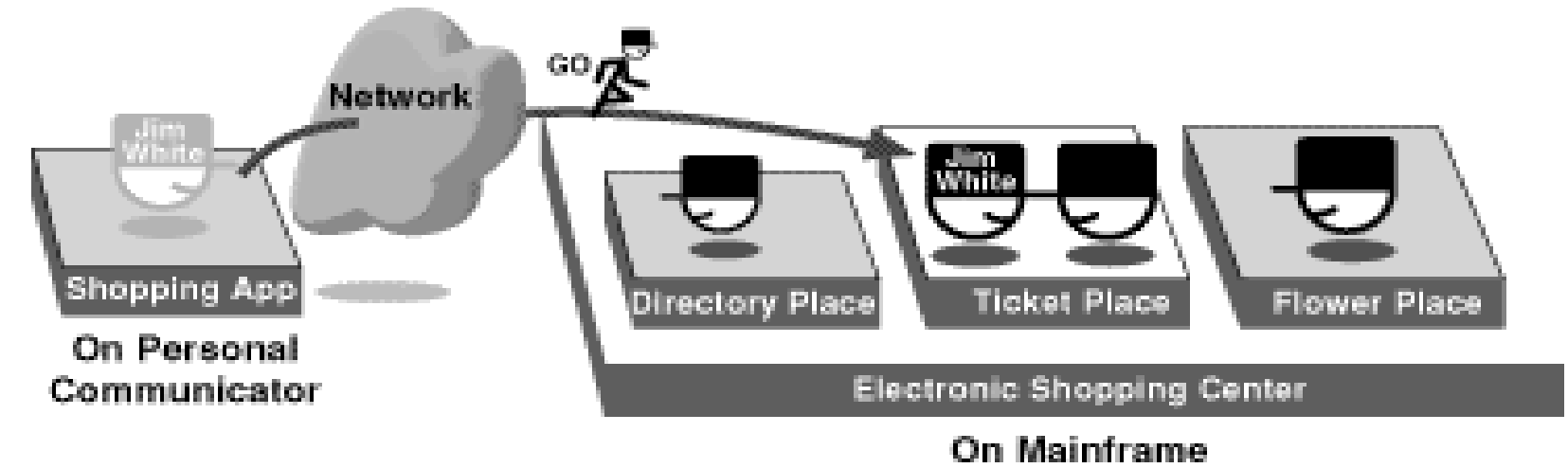


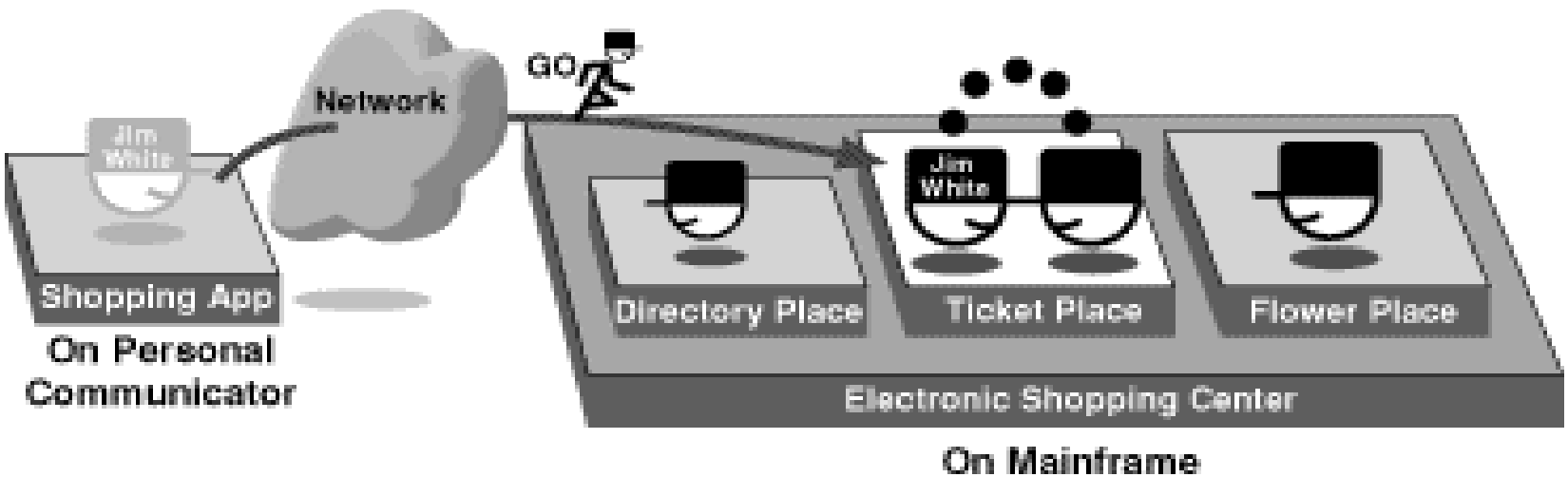
Places and Agents



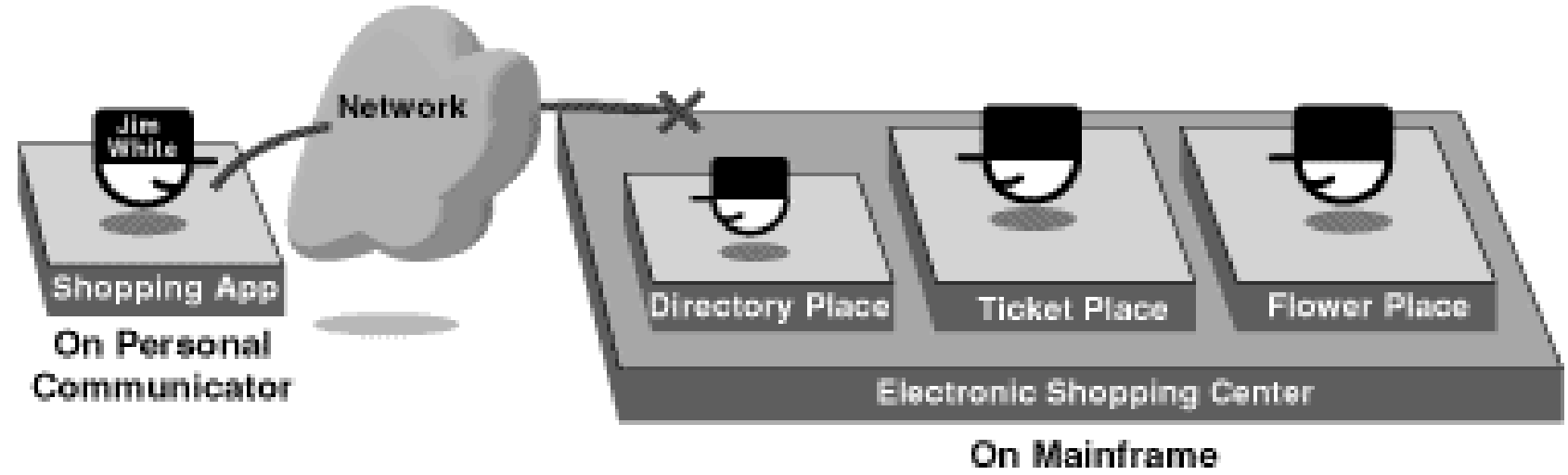


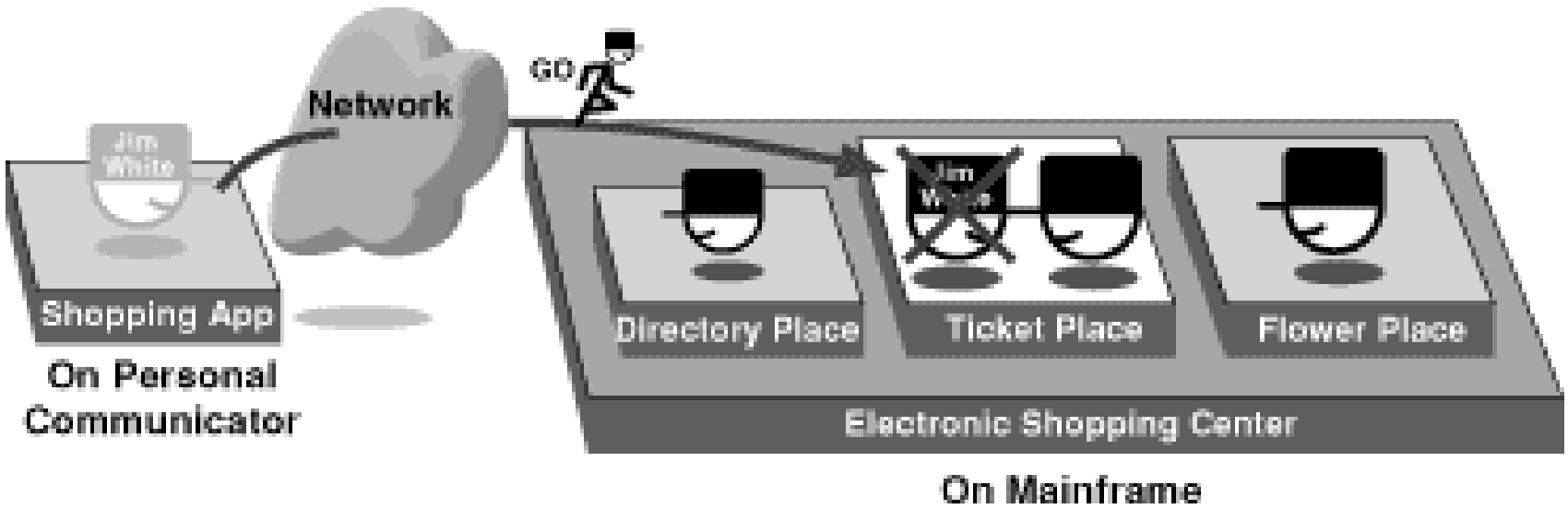
Travel and Meeting



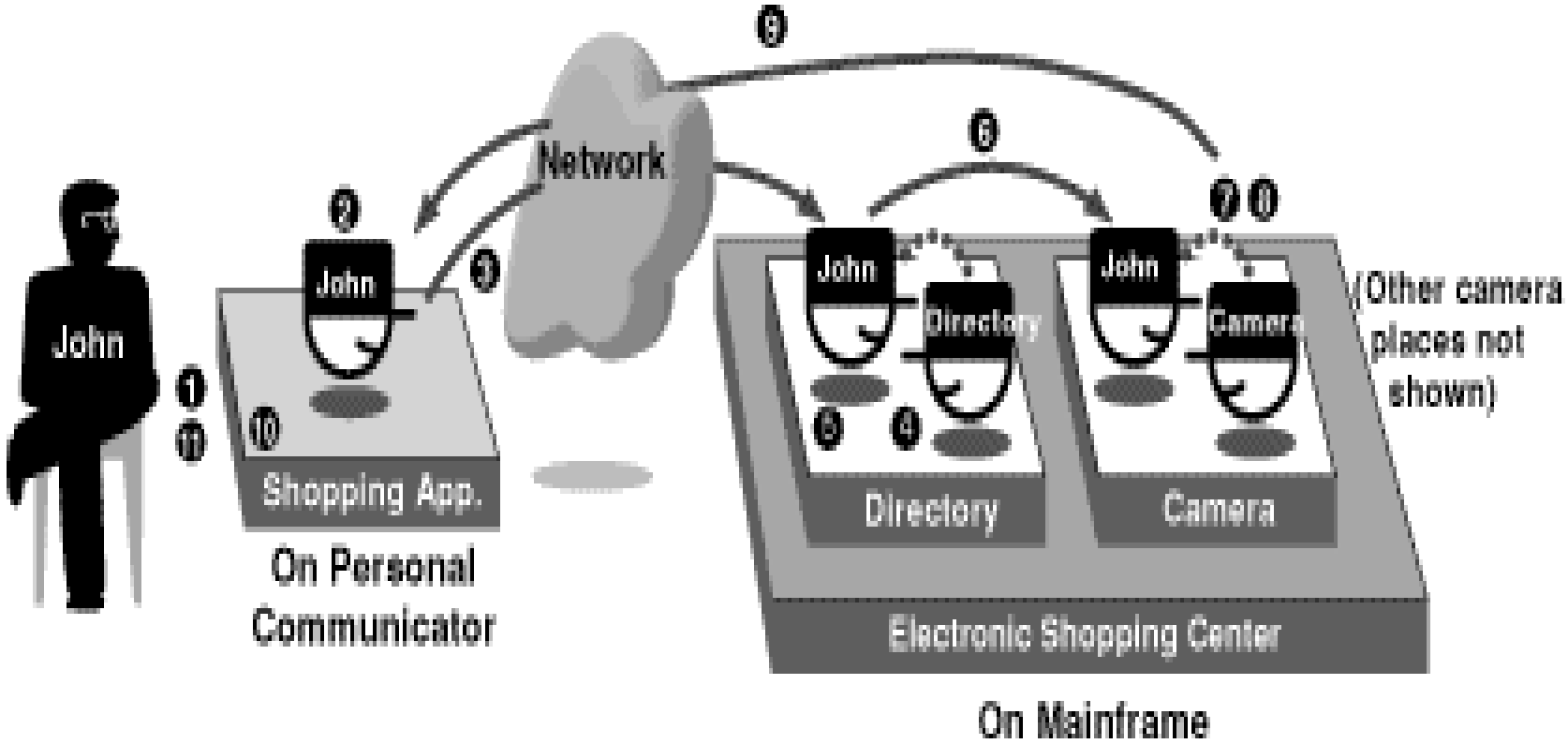


Authorization and Permission

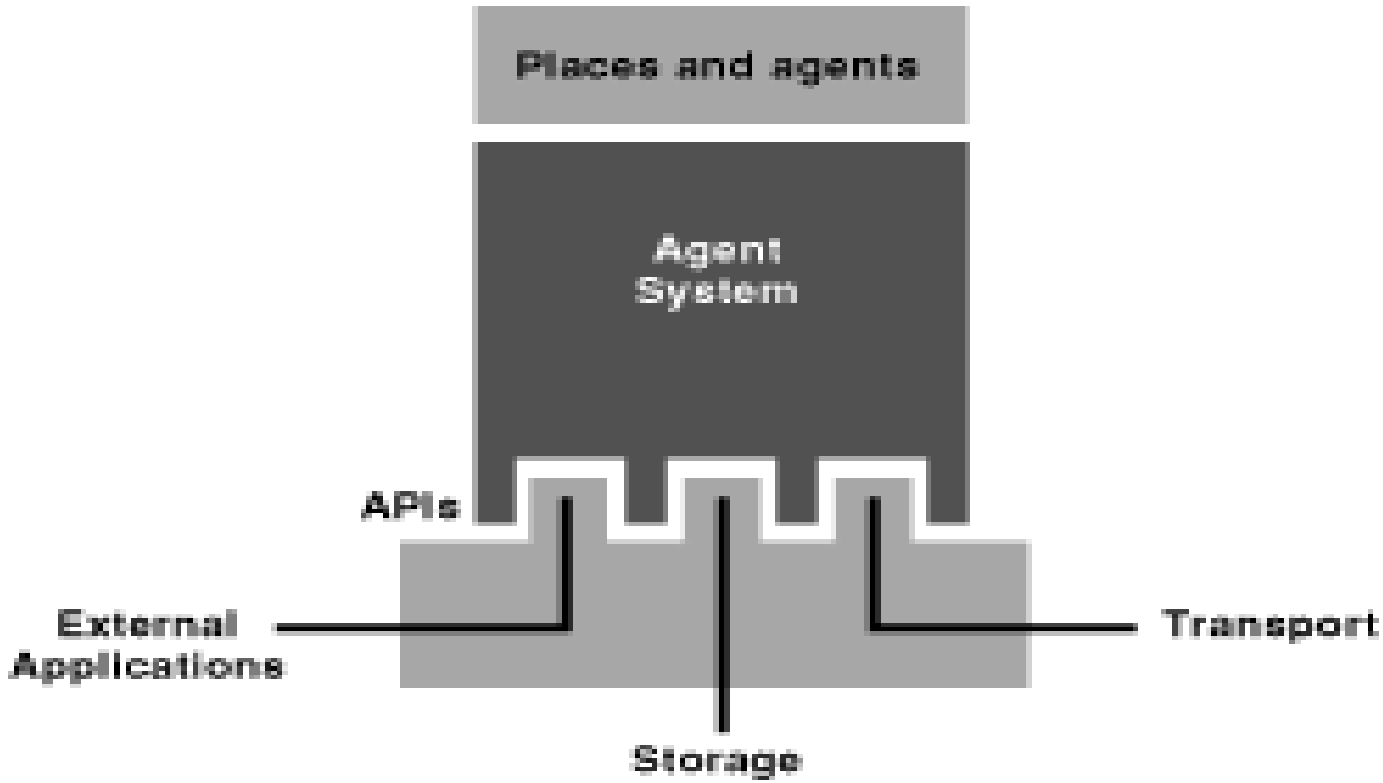




Example


Network
John
John
Shopping App.
On Personal Communicator
John
Directory
John
Camera
Directory
Camera
Electronic Shopping Center
On Mainframe
(Other camera places not shown)

Architecture



Lange's Seven Good Reasons for Using Mobile Agents

- reduce network load
- overcome network latency
- encapsulate protocols
- execute asynchronously and autonomously
- adapt dynamically
- naturally heterogeneous
- robust and fault-tolerant