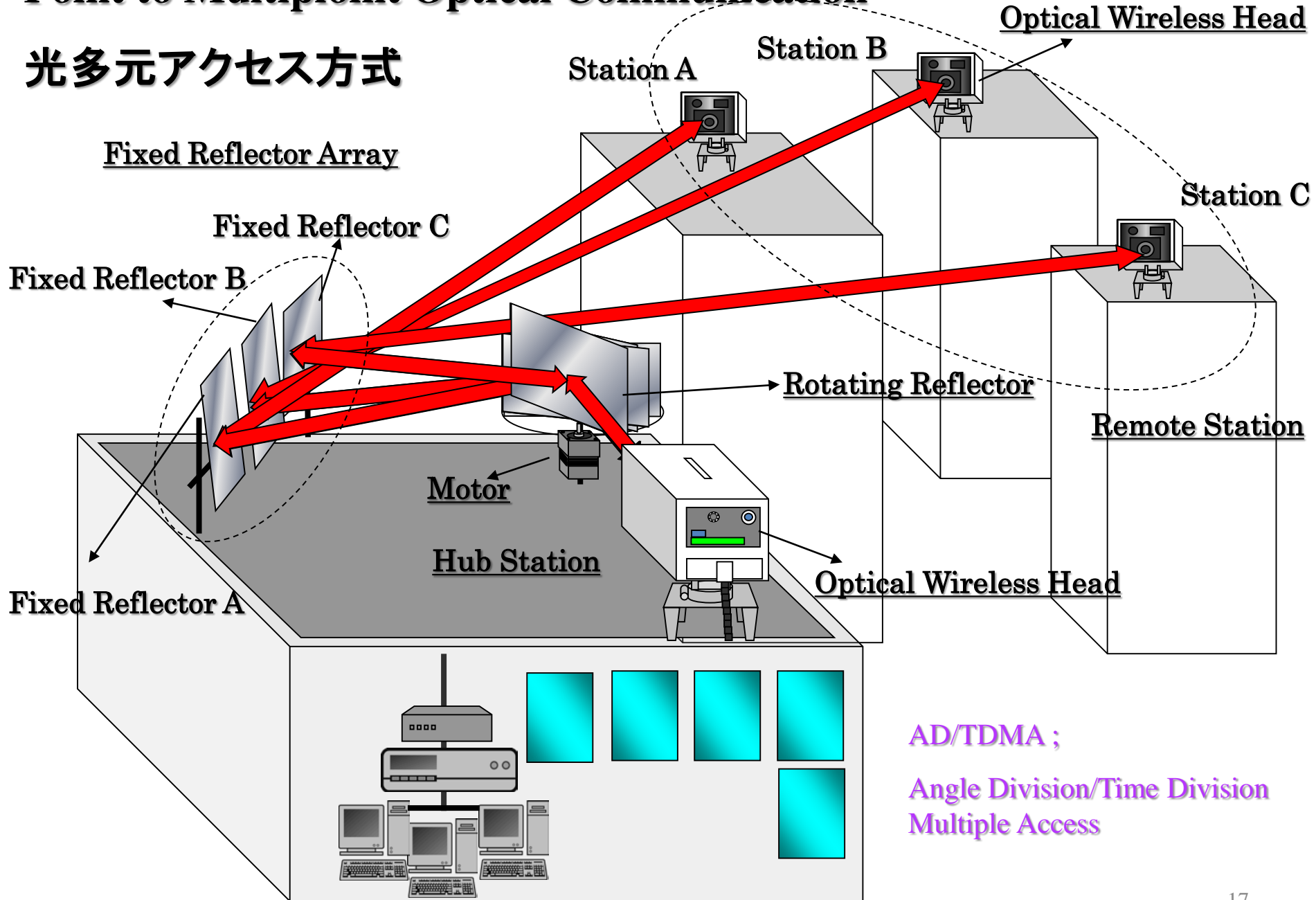


光無線通信

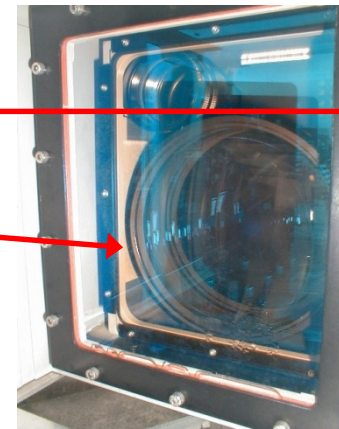
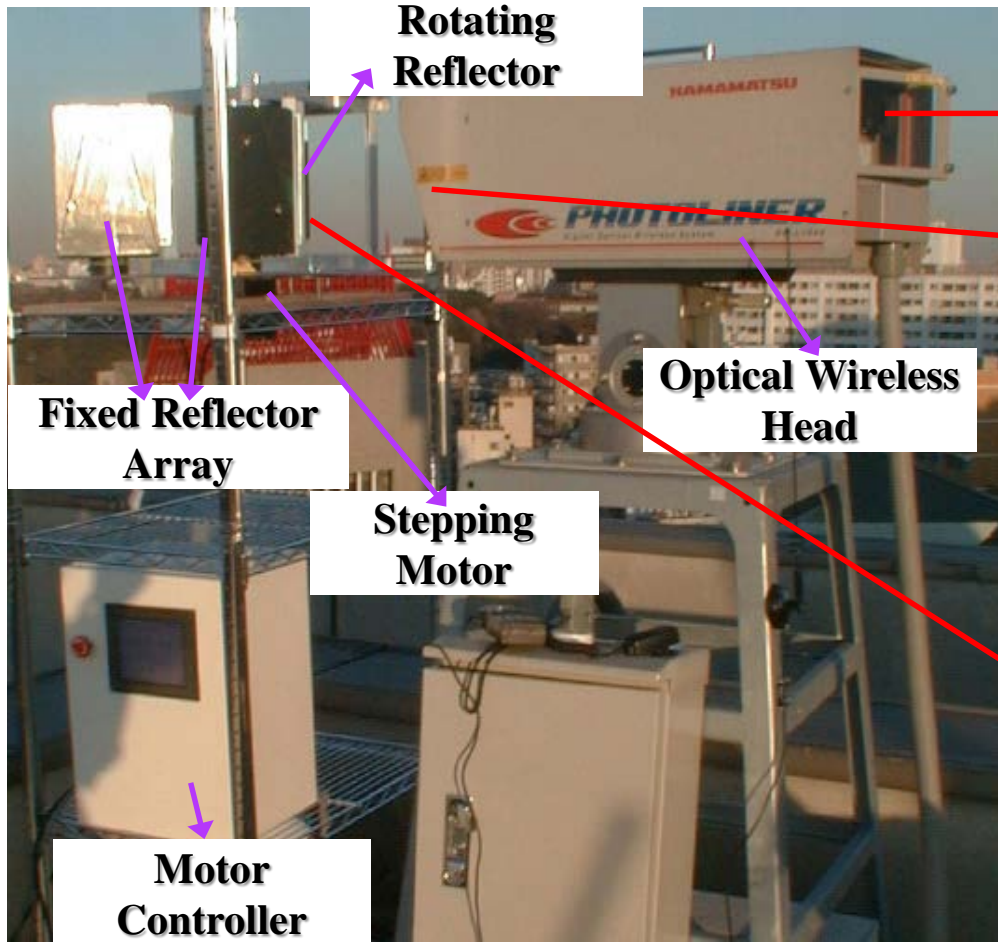
Optical Mobile Communication

# Point to Multipoint Optical Communication

## 光多元アクセス方式



# AD/TDMA experiment devices



# 空間的な光無線信号合成による場所限定通信

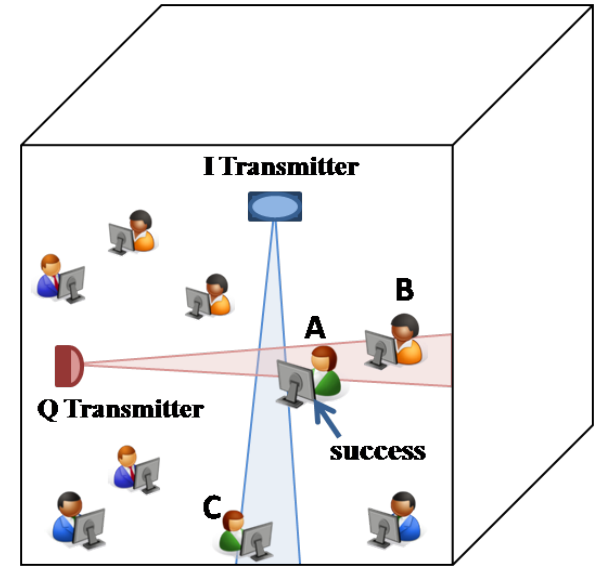
## Location Selective Optical Communication

### Objective

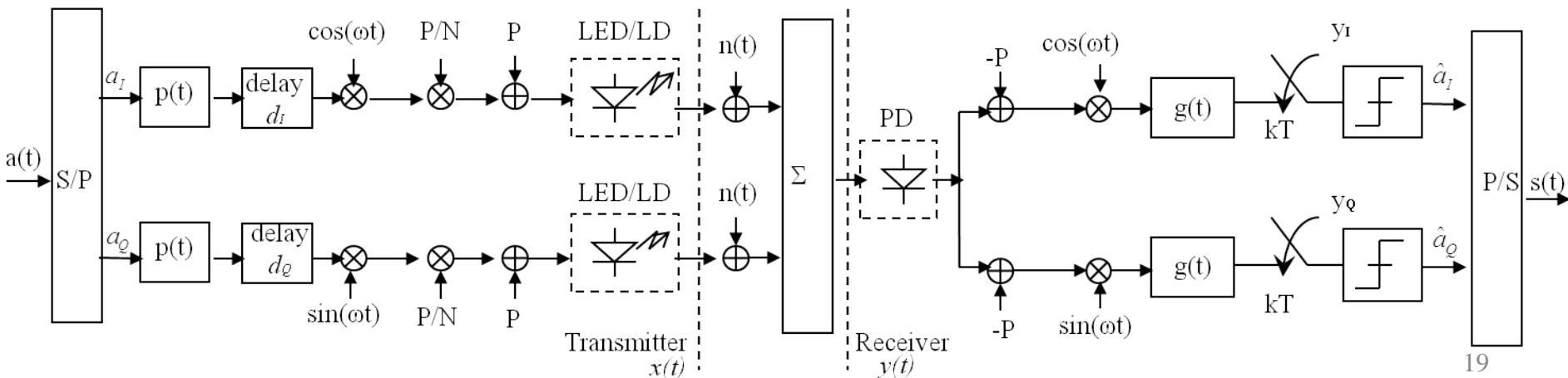
- Security Improvement
- Need both I and Q for demodulation

### Application

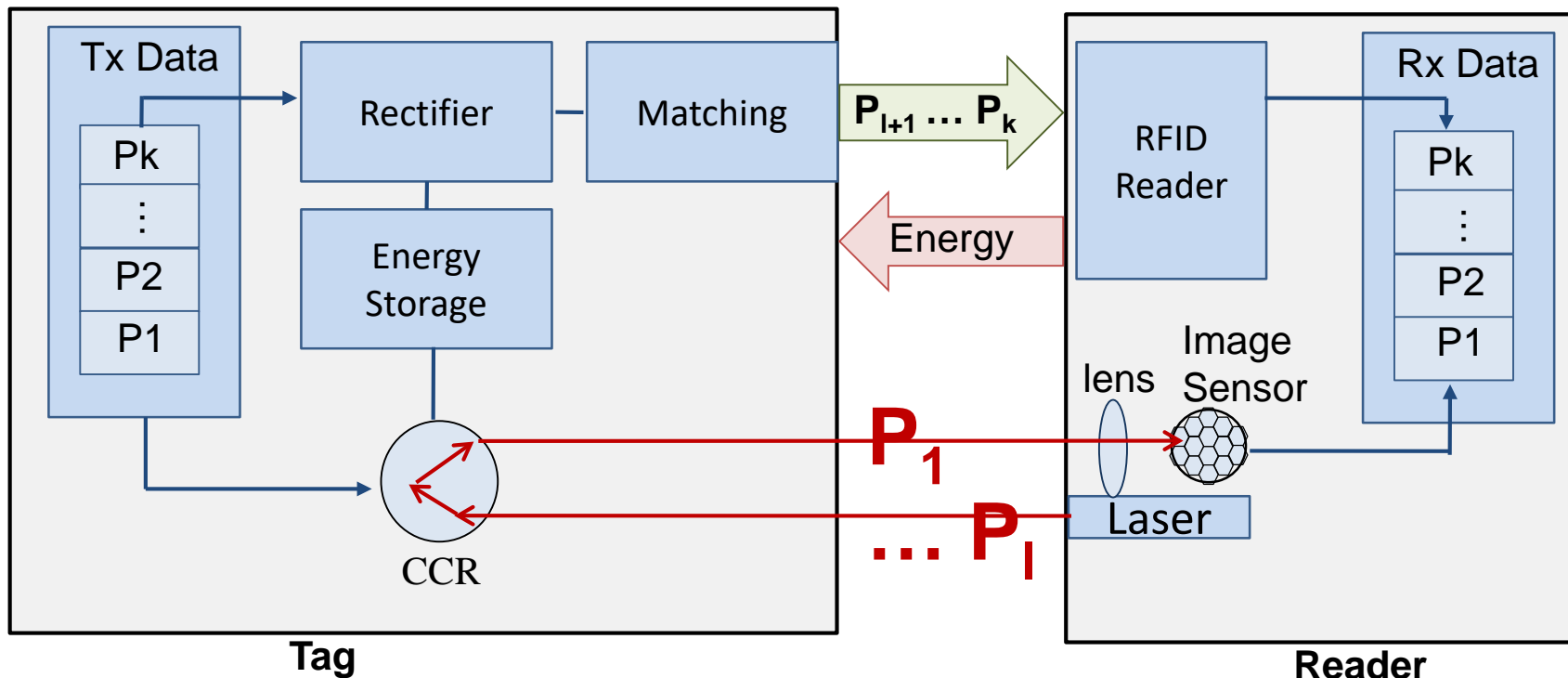
- Government sectors
- Very Important Persons (VIPs)



### Diagram



# 光RFIDタグ Optical TAG

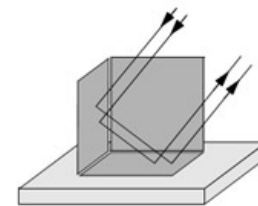


- Confidential Information is transmitted by OWC
- Employ energy harvesting during reader interrogation periods

## Application

- ▶ E-passport
- ▶ Identification Card, Driver License

### Corner Cube Retroreflector (CCR)



- ▶ Modulate the optical signal reflected from CCR
- ▶ Small size ( $\sim 200 \mu\text{m}$ )
- ▶ Low power consumption ( $\sim 19 \text{ pJ/bit}$ )