



# High-speed mobile Surveillance in outdoor WiFi Mesh network transmission system planning description

--Applied to the important places (places of demonstration) / abnormal sexual activity area / temporary event/emergency & disaster situation ... And so on

Set up WiFi Internet signal coverage and Wireless Mesh network surveillance transmission system

**\*\*\*\* Application in important places (places of demonstration) \*\*\*\***

## 1. WiFi wireless Hi-mobile surveillance planning area map (used in important places (places of demonstration))





## 2. Outdoor Wireless WiFi Mesh network backhaul planning (applies to important places (places of demonstration))



### Outdoor Wireless WiFi Mesh network backhaul planning design

1. Design 2 Mesh Gateway systems to implement double gateway redundancy outlet features, Mesh Gateway need use wired network to string together as forming loop network structure.
2. Design 4 Mesh AP backhaul to achieve full range Mesh wireless Hi- mobile signal coverage, support total bandwidth over up to 400Mbps.
3. Subject to Hi- mobile car antenna gain and antenna height value is limited, transmission distance is only 350~500 meters, resulting in Mesh AP only 500 meters distance from each other.
4. Each Mesh AP's Ethernet network port are ready to be plugged into a temporary new add Control Center, of course through Mesh wireless station can link at any time to join, but need use same Mesh device and Mesh ID, Mesh Sub ID, Mesh Security encrypted passwords be filled... and so on. (Special Note: Wireless Mesh network systems are private networks, general WiFi wireless device could not scan radio signals or link device)



### 3. Outdoor Wireless WiFi Mesh network backhaul line redundancy and best path specification



#### Outdoor WiFi wireless Mesh network backhaul redundant system with best path design descriptions

1. Mesh Network networks systems, can see one node or more other nodes' wireless signals at same time, which can mutually / auto link together in a Mesh network system by multiple nodes. (Node: in a Mesh network, each device is equivalent to a node in the Network node system.)
2. In Mesh Network systems, each node will be based on the multiple nodes transport conditions, such as the Cost of value (score), through Cost scores of judgments, and then decide which node to transmit (best paths). Transmission occurs when the best path routing node disruption or instability or deterioration of signal transmitted according to a new back-end node the Cost value (score), then perform a selection of the best route transfer and achieve the effect of bolt redundant.



#### 4. Outdoor WiFi Wireless Mesh AP Hi-mobile network signal coverage

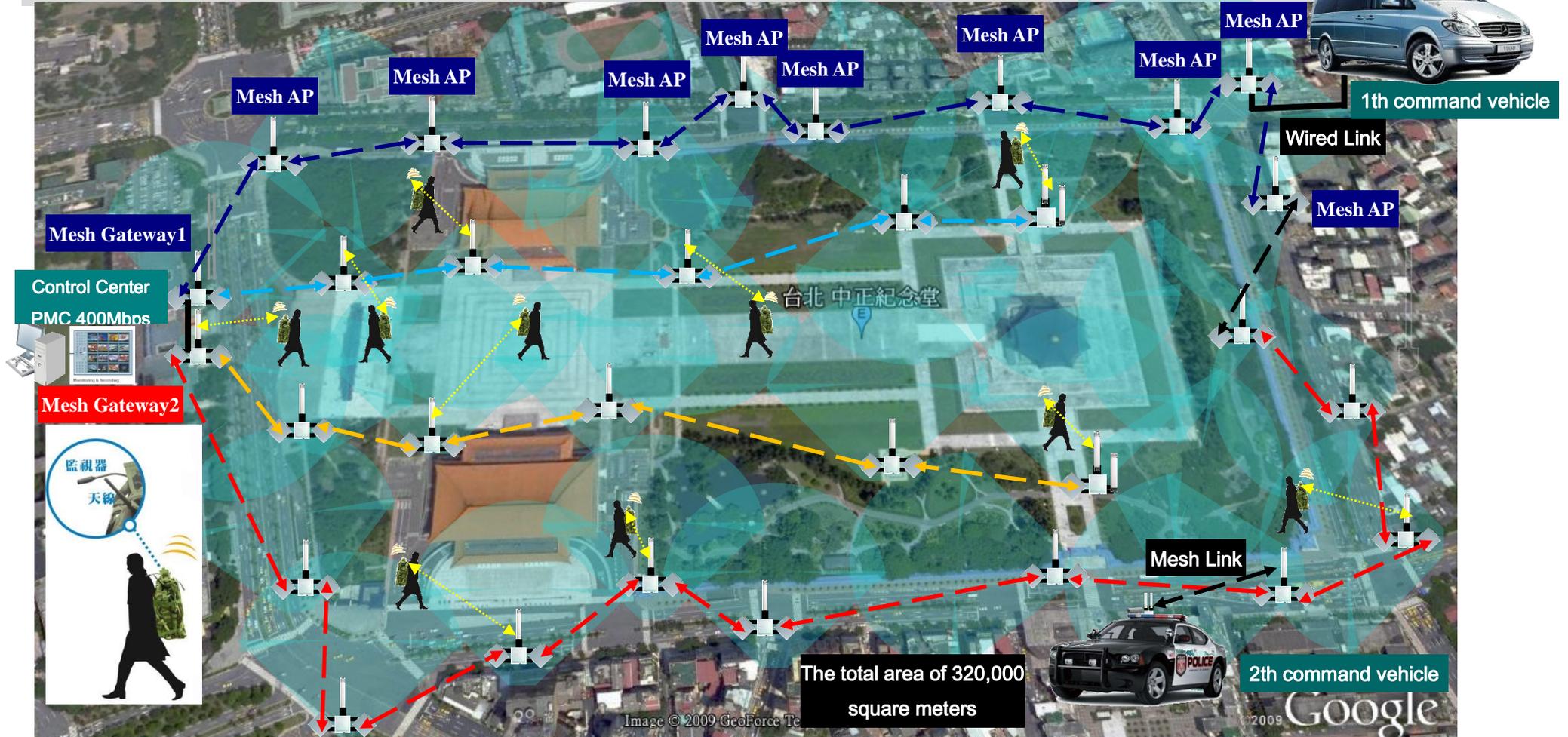


#### Outdoor WiFi Mesh wireless signal coverage using Wi-Fi Mesh AP design description

1. WiFi MIMO Mesh AP wireless signal coverage can be divided into four schemas: 1. Single mode single directional single-frequency coverage 2. Single mode bi-directional single-frequency coverage 3. Dual mode bi-directional single-frequency coverage 4. Dual-mode dual-frequency coverage.
2. According to the case set up environment and transmission bandwidth requirements, recommended 1. Single mode single directional single-frequency coverage or 2. Single mode bi-directional single-frequency coverage is preferred
3. Mesh AP wireless signal coverage, only support Mesh Mobility Station can link transmitting, normal WiFi clients (NB, Smart Phones ... ) cannot be brought online. Need for other wireless interface settings for the general wireless AP operating mode, WiFi wireless signal coverage and can provide WiFi wireless devices online Internet access.



## 5. Outdoor WiFi Mesh wireless Hi- mobile networks for hidden backpack MSTA surveillance transmission and



### Outdoor WiFi Mesh hidden backpack MSTA wireless mobile surveillance system application description

1. The user can move through hidden MSTA wireless backpack, camouflage officer camera monitor screen through the mobile client devices to Wireless Mesh AP and finally sent to a central monitoring center or interim conductor or a temporary command post vehicle. (Mesh Mobility Station = MSTA = Mesh wireless mobile client)
2. Hidden MSTA limited wireless mobile backpack combination antenna gain and disguised personal point barrier, effective link distance is about 250 meters, actual bandwidth all around 60Mbps definition.
3. Except from the Central Monitoring Center, other temporary command post or interim conductor through a wired connection (need to know the IP and the action account password) or through wireless connection Mesh Network System (wireless device and know the same Mesh ID should be used and operating accounts and Sub ID and Mesh encryption password).



## 6. Outdoor WiFi Mesh hidden backpack MSTA + Vehicle MSTA wireless Hi-mobile surveillance system application



### Outdoor WiFi Mesh hidden backpack MSTA + Vehicle MSTA wireless Hi-mobile surveillance system application description

1. Police and security units can move through hidden MSTA wireless backpack, camouflage officer camera through the mobile client devices to transmit images data to wireless Mesh AP; the same can also be through the military police, the State security vehicles, MSTA wireless device through the car, it will move along the process real time picture taken and sent to a central monitoring center or interim conductor or a temporary command post vehicle.
2. Because the mix of vehicle antenna gain greater theory Hi- mobile transmission distance can be up to 500~1000 meters, but due to the number of high-speed signal will be attenuated as it moves, and a tree overhead, or other factors such as vehicle barriers, effective link transmission distance is about 250~500 meters, the actual bandwidth is all about 60Mbps defines.  
 (Total aggregate bandwidth of approximately 120Mbps and camouflage)



## 7. Outdoor WiFi Mesh wireless Hi-mobile networks, usually functioning as a fixed point crossing application of wireless surveillance system



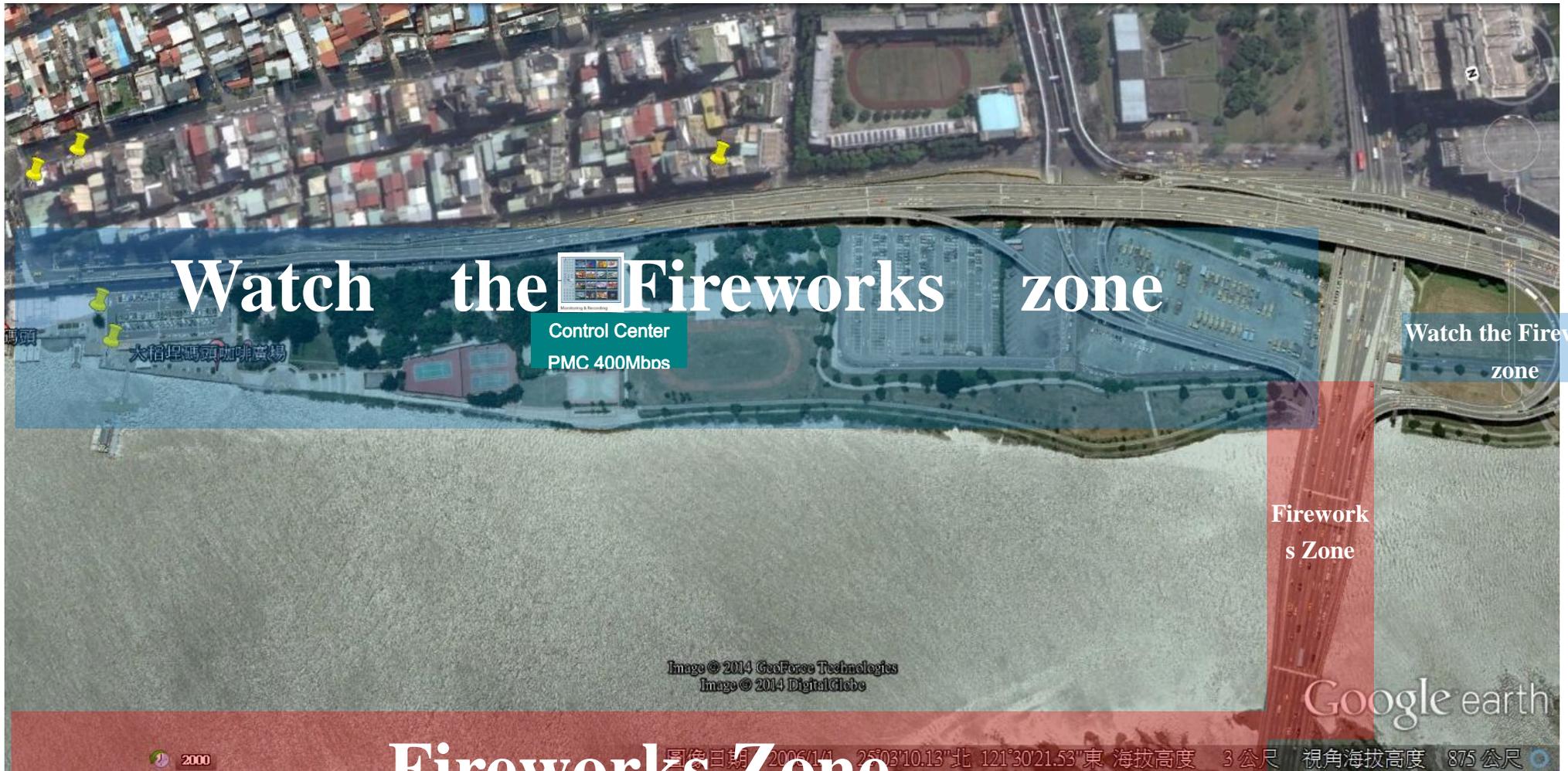
### Outdoor WiFi Mesh wireless surveillance system application description

1. Mesh Network for high-speed wireless transmission systems, in addition to providing high-speed transmission of special situations, but also can support to fixed point crossing wireless surveillance application.
2. If general fixed point crossing wireless surveillance has no occupied a lot bandwidth, when a temporary situation occurs, can still coexists with special cases using high-speed mobile monitoring transmission operations, comprehensive video monitoring and reinforcement reached the region.



**\*\*\*\* Abnormal activity areas / Temporary event to set up wireless internet coverage and wireless surveillance transmissions\*\*\*\***

Abnormal activity areas / Temporary event to set up Hi-mobile Wireless Surveillance System





# Abnormal activity areas / Temporary event to set up Backhaul of Wireless Surveillance System



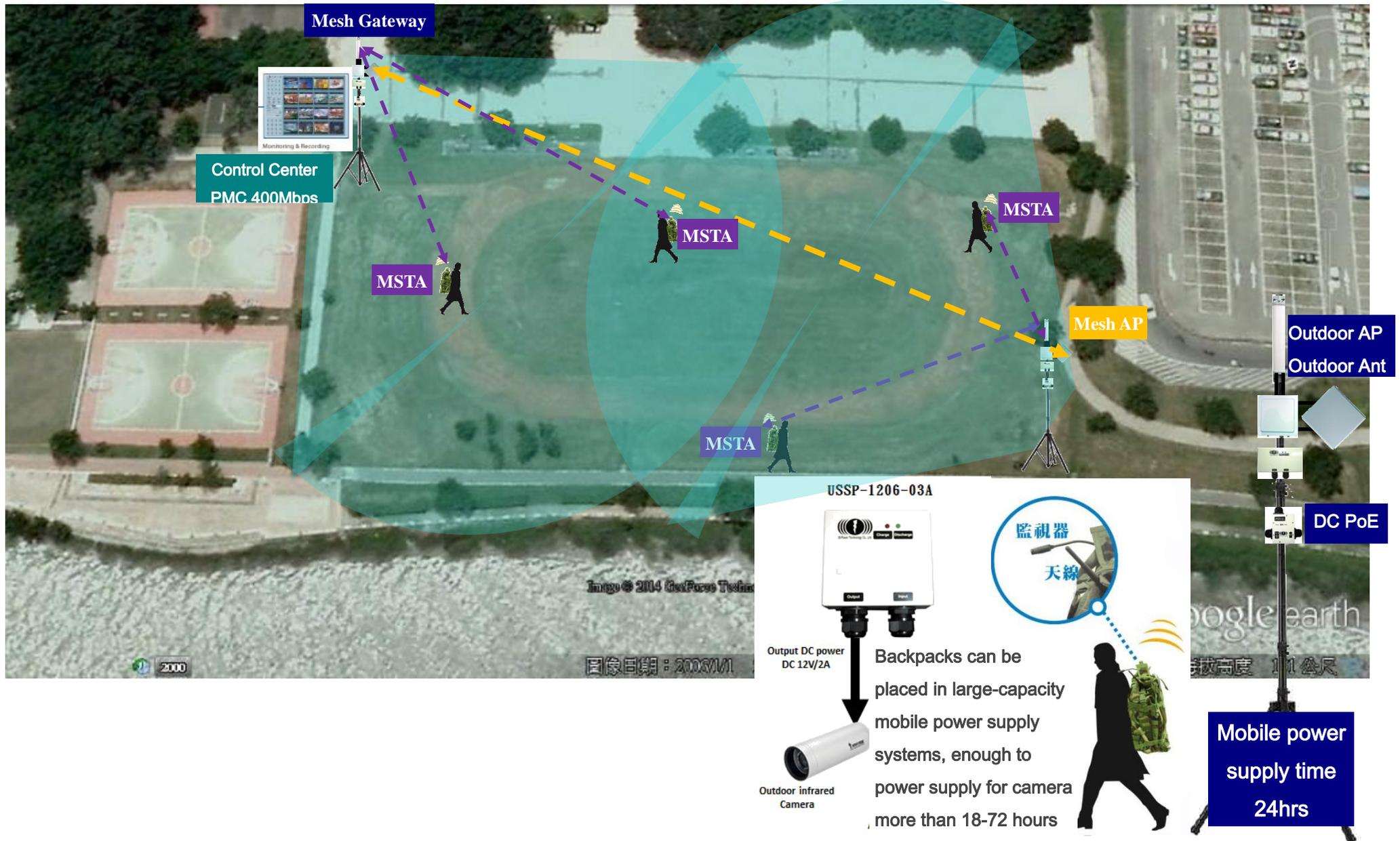


# Abnormal activity areas / Temporary event to set up Wireless Surf Internet Signal Coverage





# Abnormal activity areas / Temporary event to set up WiFi Mesh Hi-mobile Surveillance System

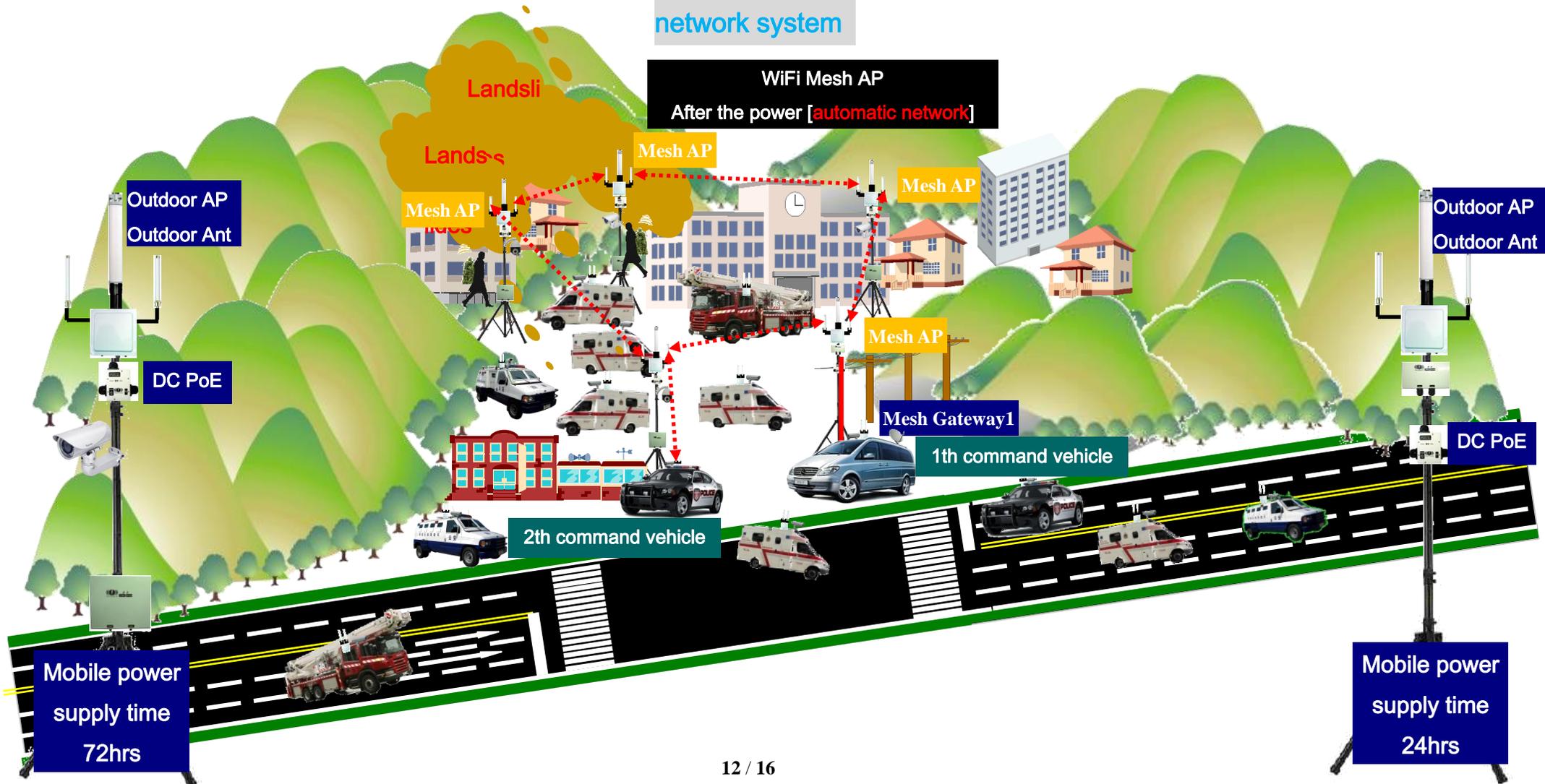




**\*\*\*\* Applied to emergency situations (fire, police) emergency/disaster relief to set up wireless Internet coverage and monitoring transmissions\*\*\*\***

Disaster emergency relief to set up – disaster area 250,000 square meter (0.25 km<sup>2</sup>)

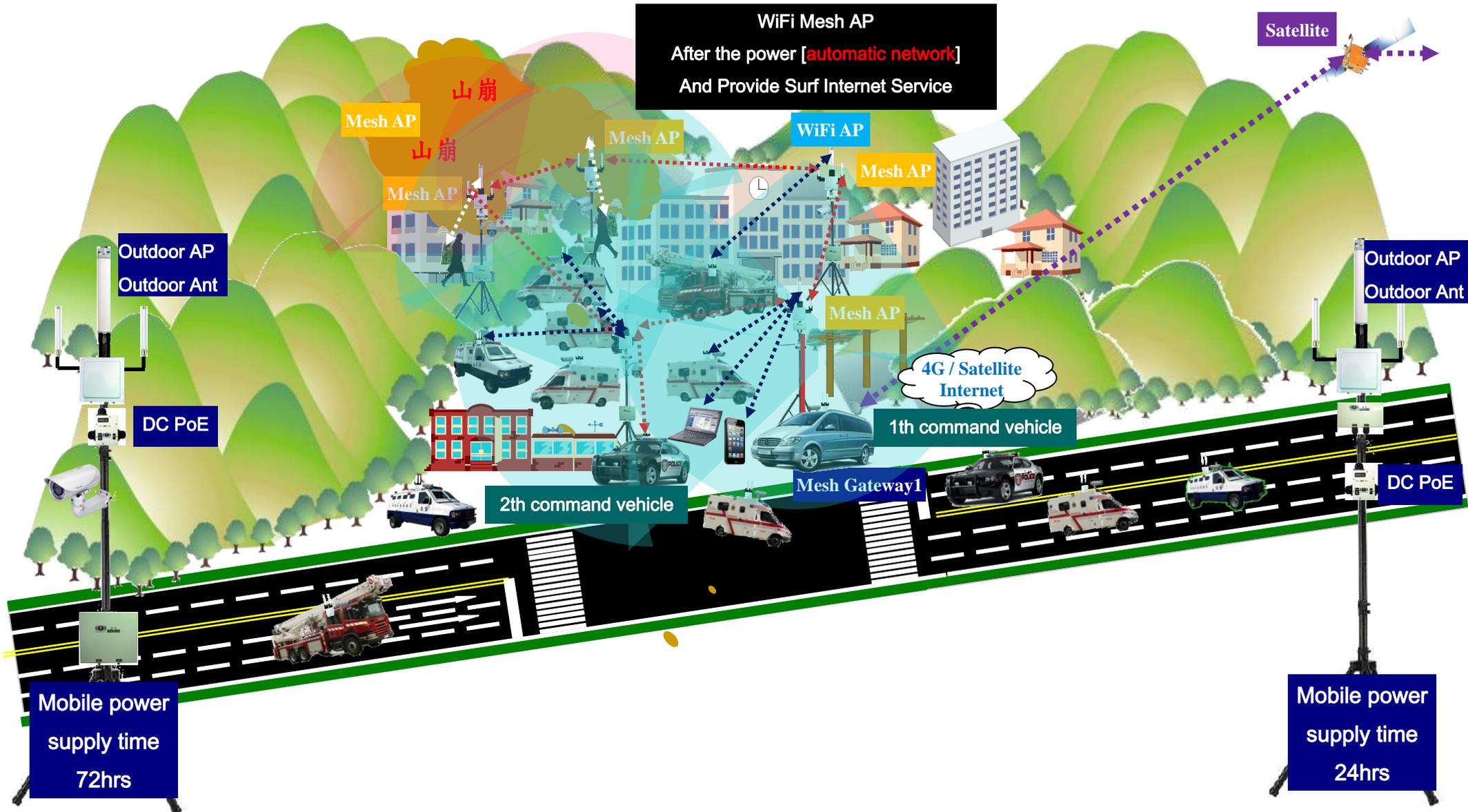
Through wireless devices in WiFi Mesh network function of automatic, within 30 minutes of rapid formation of an ad hoc network system





# Disaster emergency relief to set up – disaster area 250,000 square meter (0.25 km<sup>2</sup>)

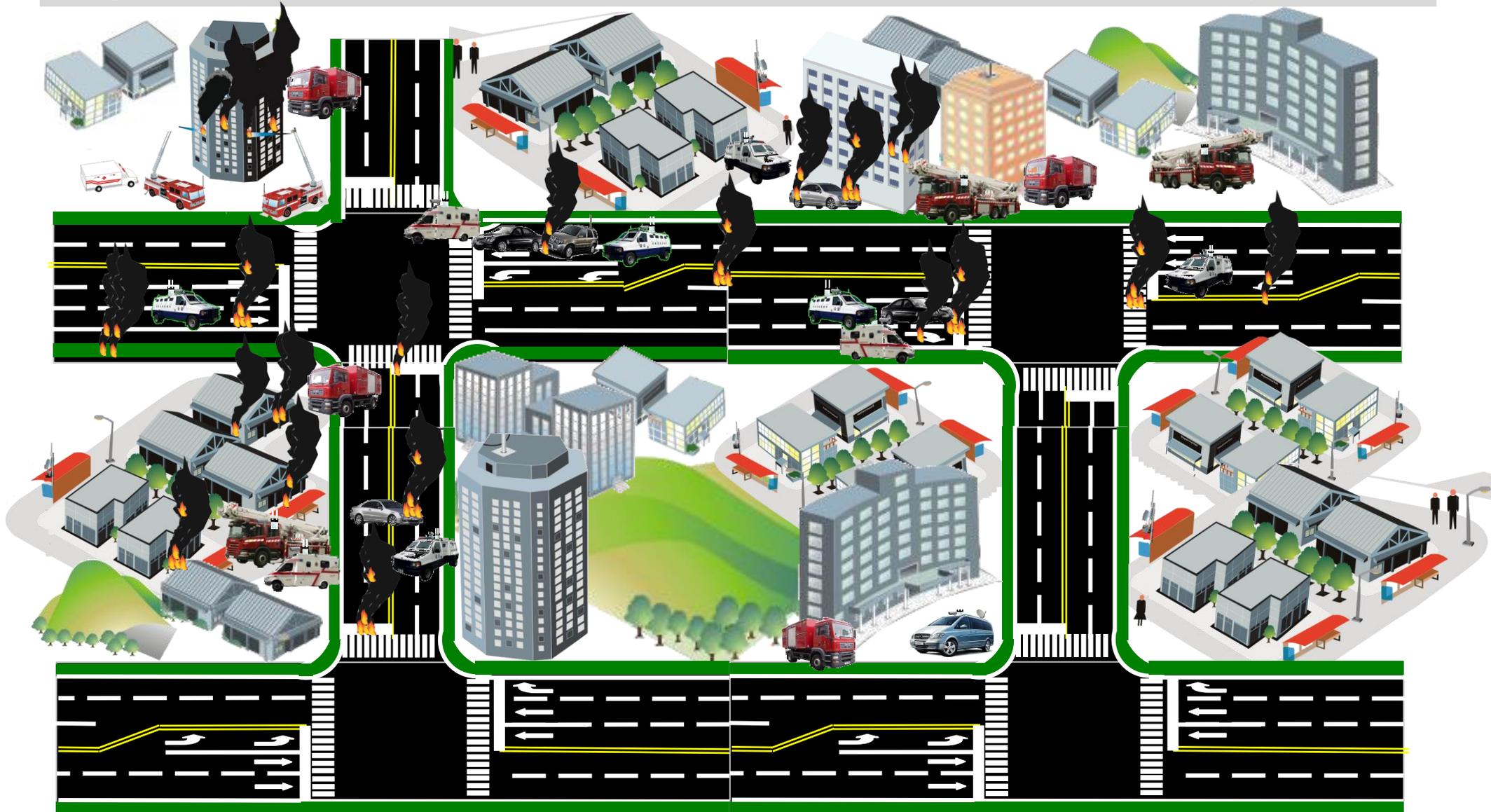
Through wireless devices in WiFi Mesh network function of automatic, rapid formation of Mesh network system in 30mins





# Disaster emergency relief to set up – disaster area 12250,000 square meter (12.25 km<sup>2</sup>)

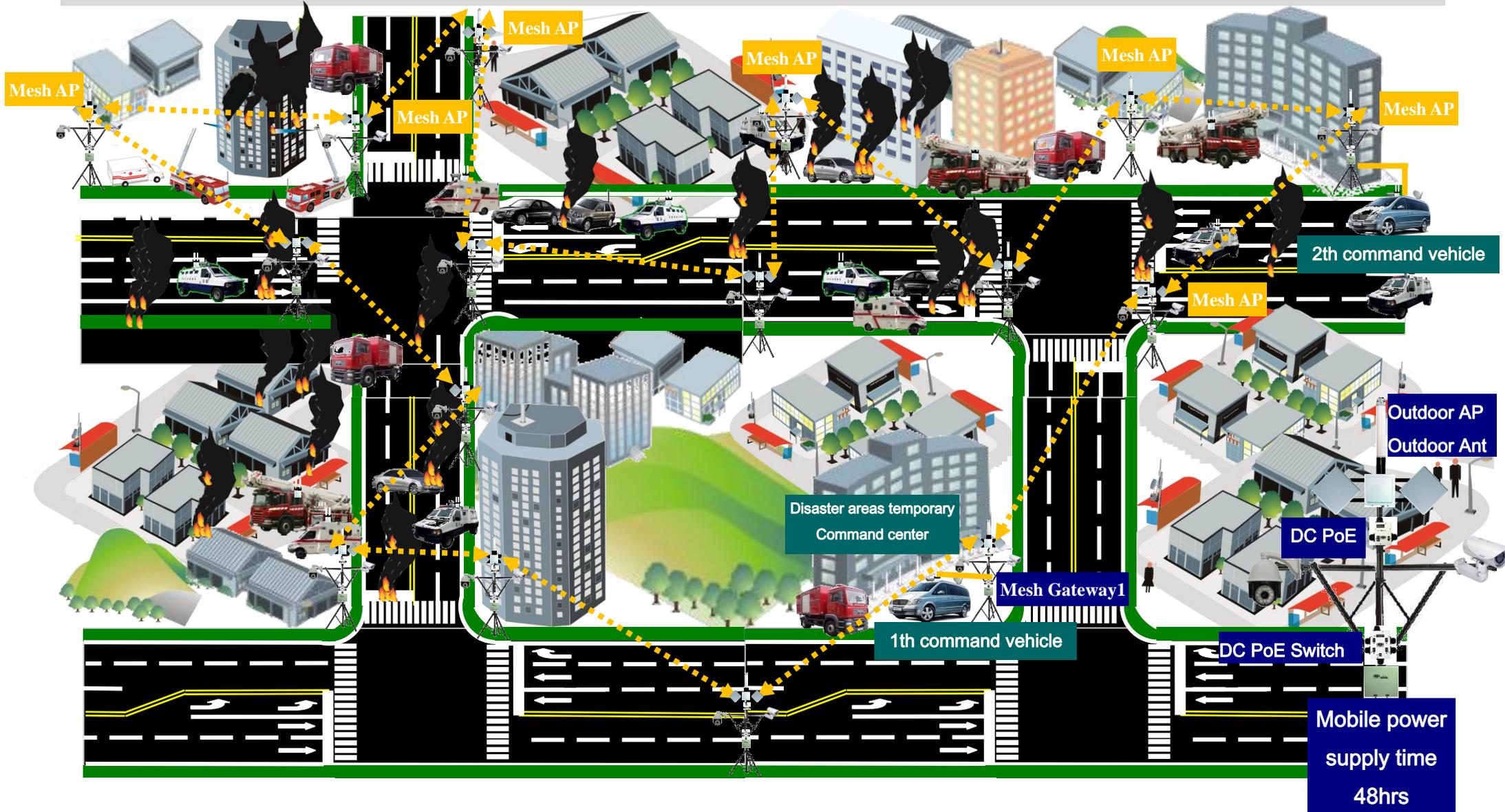
Through wireless devices in WiFi Mesh network function of automatic, rapid formation of Mesh network system in 60mins





# Disaster emergency relief to set up – disaster area 12250,000 square meter (12.25 km<sup>2</sup>)

Through wireless devices in WiFi Mesh network function of automatic, rapid formation of Mesh network system in 60mins





# Disaster emergency relief to set up – disaster area 12250,000 square meter (12.25 km<sup>2</sup>)

During reconstruction in the disaster area to provide 24-hour video surveillance and wireless signal coverage provided the disaster area Internet service

