



ELECTRIC POWER, SUPER WI-FI, NOW ACCESSIBLE ANYWHERE

AUGUST 2020

PARK MONITORING, PUBLIC WI-FI, & CCTV SECURITY SYSTEM



PURPOSE

Need to monitoring mankind and parking a lot activities outside office building.

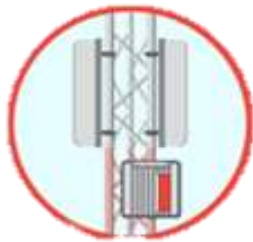
- Due to a lot of trees and gradient of mountain and curves, it is very difficult to monitoring them
- Want to set up public Wi-Fi along with CCTV for whole monitoring area
- Want to public Wi-Fi for Emergency communication from office and see the time frame video



OVERVIEW OF THE PILOT SYSTEM INSTALLATION

- Implement public Wi-Fi and CCTV for security monitoring using TV White Space solution by Adaptrum and Power Supplies solution, Mini-ERR System by Ferraris Power from the distribution panel of office building at Taejongdae Park.

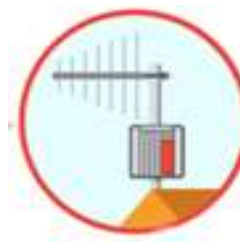
TV White Space
Base stations
(ACRS2-B1000) TX



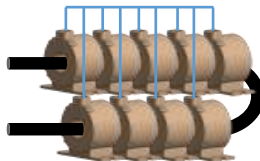
TV White Space
Signal range: upto 10km



TV White Space
Clients
(ACRS2.0) RX



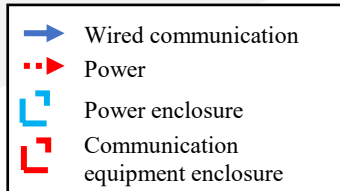
Magnetic harvested power source from distribution pannel of outside office building is used for TX module.



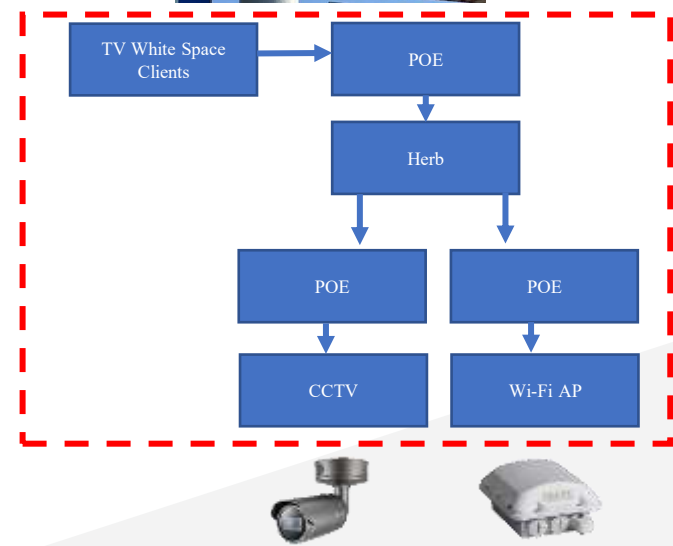
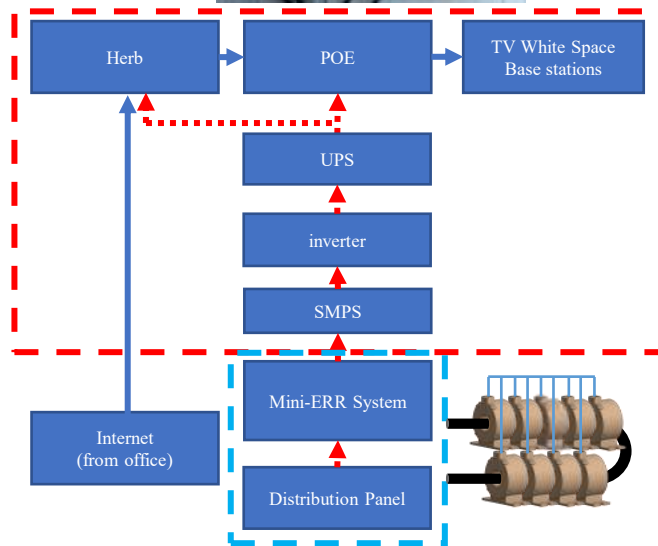
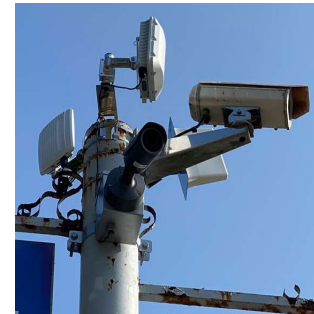
Street light power source (220Vac) is used for Power supply of RX modules

Service using device:
Smartphone,
Laptop, and PC

OVERALL BLOCK DIAGRAM

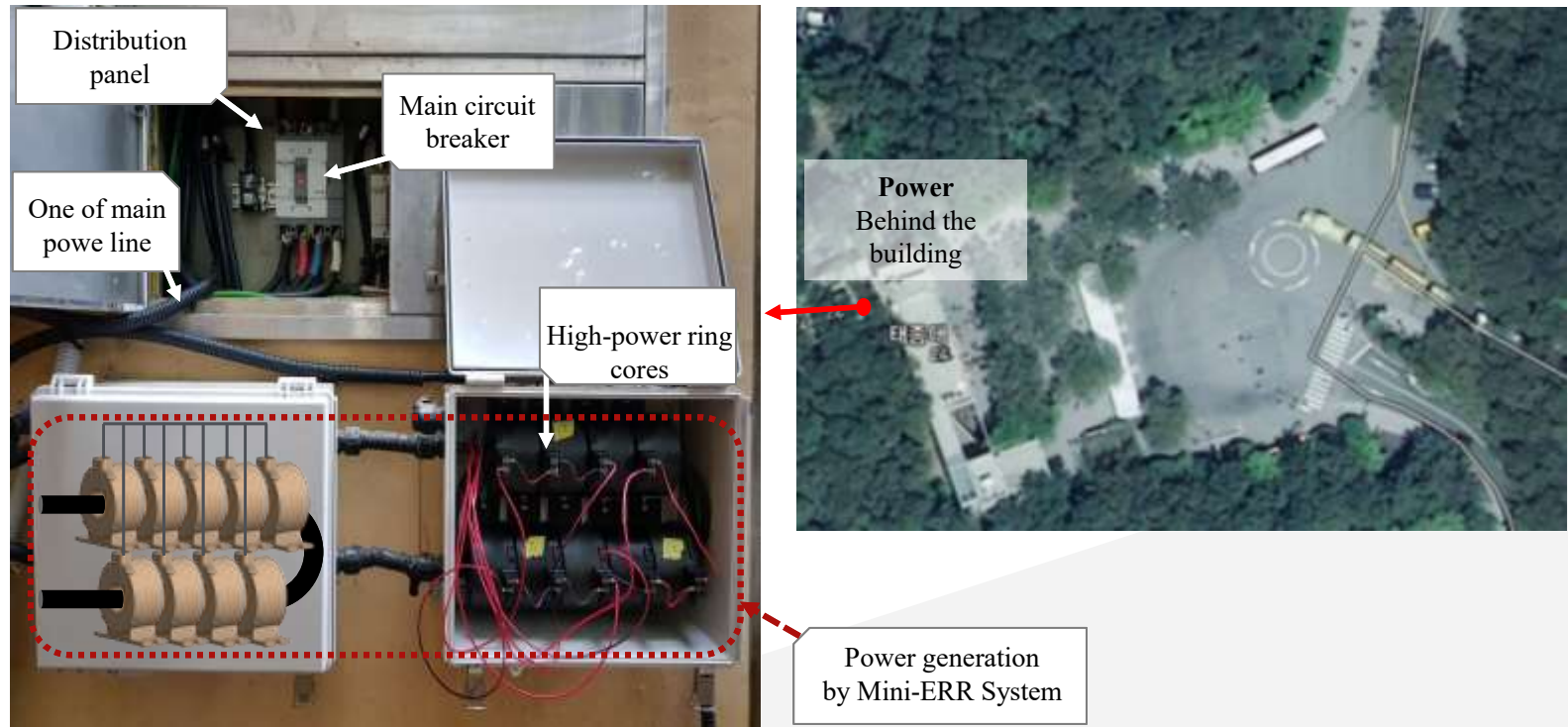


TV White Space signal



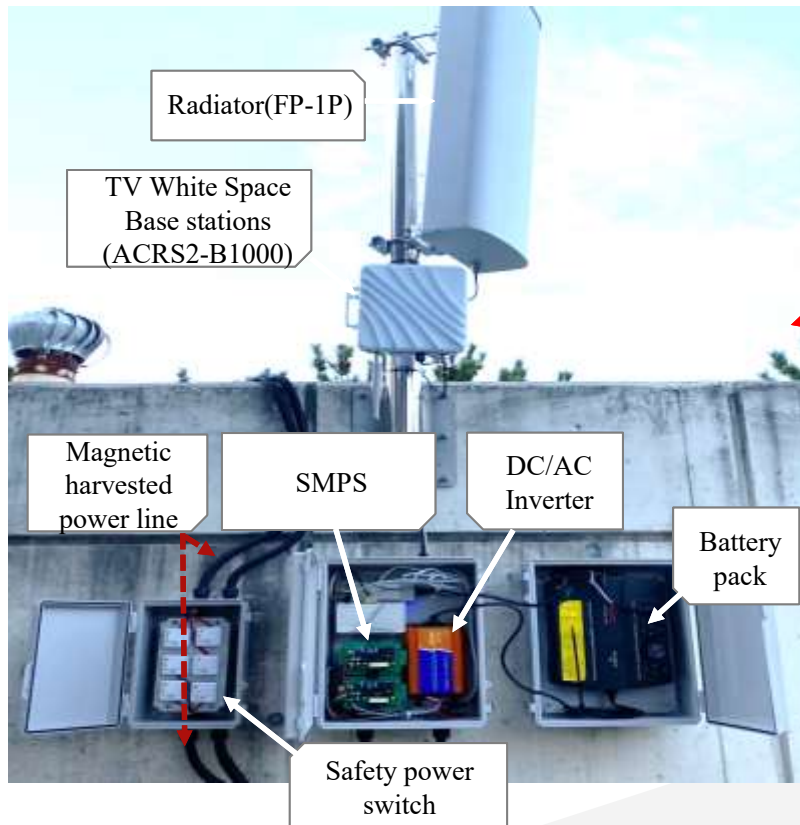
POWER GENERATION FOR TX MODULE

- Among the power line of main circuit breaker in the building distribution panel, one of the line where the current flows the most is used for magnetic harvesting. The Mini-ERR System is normally installed using contactless method on power line. The productivity efficiency of Mini-ERR System will increase in correlation to the higher line current.
- Mini-ERR system generates electric power from the magnetic harvesting modules on power line, and act as a power supplies to TX module. TX module has Ferraris SMPS and Inverter for the battery.



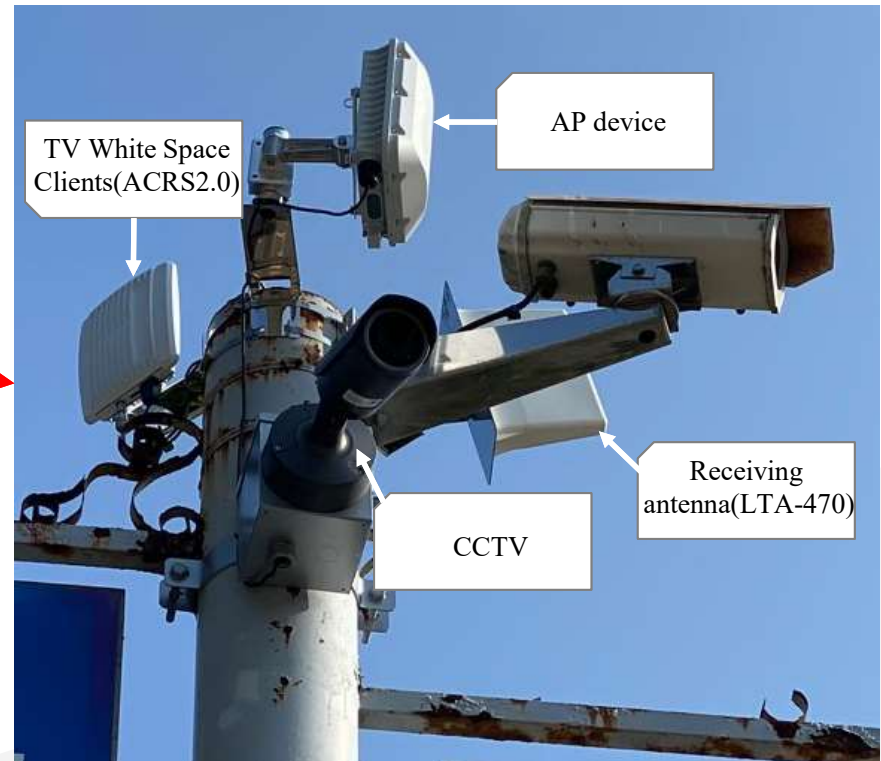
TX MODULE AND POWER SUPPLY ENCLOSURE

- Landline Internet and power supply to TV White Space Base Stations (TX) through POE equipment using the charged power (220V) from battery module.
- Transmit communication signal to TV White Space Clients (RX) through TV White Space Base stations (TX).



RX MODULE AND SERVICE SYSTEM

- The signal transmitted from the TV White Space Base stations(TX) is received by the TV White Space Clients(RX), and the Wi-Fi is used.
- CCTV and AP(Access point) device connection to the Wi-Fi received from the TV White Space Clients.



OPERATION



Monitoring CCTV images to laptop or mobile



Public Wi-Fi reception that can be used on mobile



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