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FREEZING PREVENTION AND OPEN AREA CONTROL SYSTEMS

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OUTLINE

- BACKGROUND
- SYSTEM COMPONENTS
- FREEZING PREVENTION SYSTEM
- OPEN AREA CONTROL SYSTEM
- MONITORING AND REPORTING

BACKGROUND

- Requirement based Research and Development (R&D) Study
- Seeking proper solutions to the problems encountered during the operation of observing systems
- A good practice example of cooperation between public and private agencies
- Testing on operational systems
- Enhancing if the results are satisfied
- Open for further improvement based on the opeartional results and new requirements

SYSTEM COMPONENTS

System has two basic components:

- **Freezing prevention system:**
  - Installed on an AWS field with a main goal for ensuring the sustainibility of the measuremnest and improving data quality.
  - To target live control of precipitation status and to minimize the measurement problem due to freezing conditions.

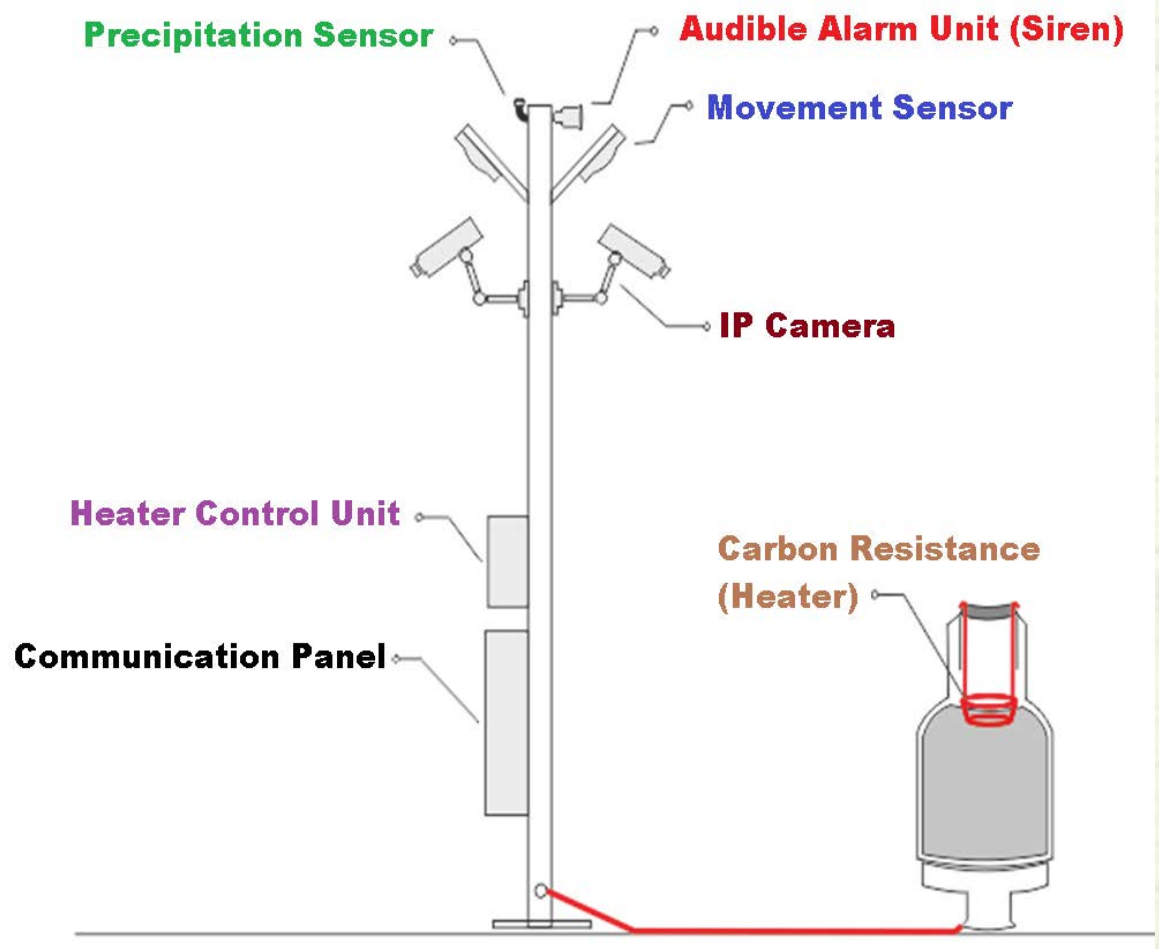
- **Open area control system:**
  - Increased security and to avoid vandalism.
  - Detection of unauthorized movements of people, suspension of unauthorized visitors from the field with an audible alarm.
  - Detection and reduction of malicious interventions with uploading photographs to a server taken after undesired movements.

SYSTEM COMPONENTS

Freezing Prevention Equipment that installed as standart on measurement devices can't work in stations without grid electricity due to voltage mismatch.

(Solar panels and batteries supplied with 12V Standart Systems supplied with 48V)

FREEZING PREVENTION SYSTEM



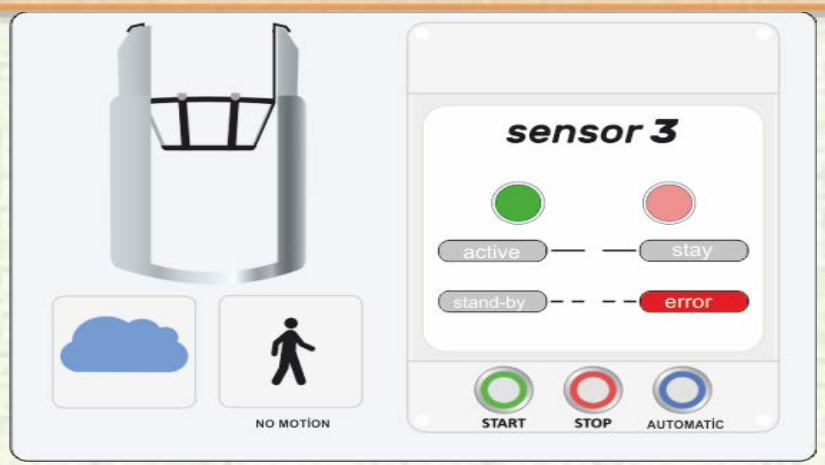
- Adjustable heating thresholds
- Activating before freezing
- Efficient use of energy for heating
- Best performance with less energy
- Sensing precipitation availability
- Avoiding snow or solid precipitation accumulation in the catch pit

Microchip controlled Frost Prevention System.

FREEZING PREVENTION SYSTEM

Demo Field, Pluviometer, Frost Prevention System Application and Control Device

OPEN AREA CONTROL SYSTEM

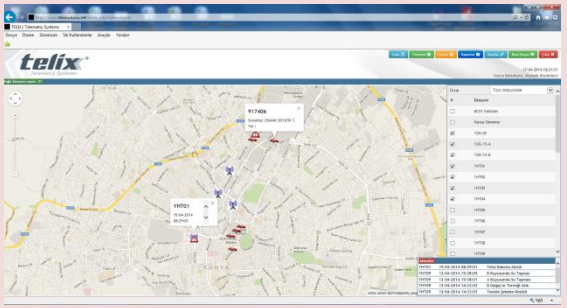


With cameras and motion sensors installed in station field, photographs of breach caused by human or animal movement are being uploaded to a server and audible alert is being created in the field.

SYSTEM MONITORING AND REPORTING

- Real time monitoring of the system
- Alerts and failure information via SMS and e-mail
- Integration to other application programmes via Web server output

- Detailed report dashboards
- Monitoring of all stations on the map



Thank You For Your Attention