

## Sub-stations: crucial hubs in the “power grid” system

### Utilities | use case

With over 55,000 utility sub-stations in the USA alone, all of which have vulnerabilities and often with insufficient physical protection, sub-stations are crucial hubs in the “power grid” system. The Wall Street Journal reports that coordinated attacks in each of the USA’s three separate electric systems could cause the entire power grid network to collapse.

#### ))) The requirement

- The need for prevention of broad outages in cities and countries.
- Protection against the potential of millions of dollars in damages from terrorist and other attacks on the grid.
- Energy distribution systems need to harden their perimeters against vandalism, theft and cyber-attacks.
- Repair and replacement of existing systems is costly and time consuming and therefore budgetary considerations are part of the equation.

#### ))) The challenge

Many sub-stations are unattended and rely on SCADA systems for remote supervision and control. A large percentage of sub-stations lack electronic security, leaving attacks and breaches unnoticed until after the damage is done.

Security camera footage is a source of information after the fact versus being used as a form of prevention.

Due to high incidence of false alarms in many legacy systems, alarms are often ignored.

#### ))) The CIAS solution

For the past 50 years, CIAS has been protecting the perimeters of utility sites around the world including many in the USA, having worked with the DOE.

The preferred choice in the CIAS suite of intrusion detection technologies is **microwave barriers and**

**short-range radar systems** that deploy fuzzy logic analysis that provides discrimination against unwanted alarms caused by non-human intrusions and environmental disturbances.

In the case of fences, **CIAS intrusion detection system** with the same fuzzy logic analysis alongside MEMS

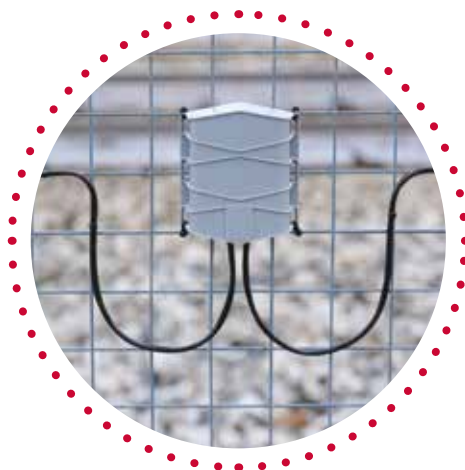
(Micro Electronic Mechanical System) can be applied to all fence types and rules out false intrusions.

All systems are IP and PoE ready to operate with leading third-party systems and platforms, with SDK available for integration to legacy systems on site already.



#### **MURENA Plus radar**

a pure microwave sensor able to set the area and the dimension of the target to detect



#### **SIOUX PRO2 MEMS**

fence-detection system is used for any fence, usually the first external protection layer of a sensitive facility



#### **MICRO-RAY linear mW barrier**

when the area to protect is very narrow, like a corridor, and very sensitive to weather conditions



#### **ERMO 482X3 PRO mW barrier**

is the perfect intrusion system to protect high-risk sites thanks to a near-to-zero false alarm rate

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