

The smart way to secure borders and facilities

Intelligent Perimeter Intrusion Detection System



At a Glance

- Intelligent Perimeter Intrusion Detection System secures borders and facilities such as:
 - ◊ National borders
 - ◊ Airports
 - ◊ Military facilities
 - ◊ Seaports
 - ◊ Prisons/correctional facilities
 - ◊ Corporate campuses
 - ◊ Power plants/infrastructure
 - ◊ Data centers
 - ◊ Oil and gas facilities
 - ◊ Transportation infrastructure
- Optical fiber-sensing and machine learning based artificial intelligence provides covert, instant, and simultaneous classification and location of multiple physical intrusions such as:
 - ◊ Personnel (Crawling, walking, climbing, hammering, digging, tunneling, etc.)
 - ◊ Vehicles (Idling, driving, etc.)
 - ◊ Machines (Hammering, digging, tunneling, etc.)
 - ◊ Aircraft (Low-flying drones, etc.)
- Accurate, high probability of detection and low nuisance alarm rate over long distances in a wide-range of field conditions such as strong wind, heavy rain and snow, dense fog, lightning and explosive atmospheres, with seasonal invariance
- Immune to electromagnetic interference and no electrical power required in the field, delivers unmatched reliability, significant reduction of maintenance and security resources for low total cost of ownership

Overview

An ever-changing world increases the possibility of physical intrusions at borders and facilities. NEC's Intelligent Perimeter Intrusion Detection System secures borders and facilities by combining optical fiber sensing and machine learning based artificial intelligence. The system covertly, instantly, and simultaneously classifies and locates a wide-range of multiple physical intrusions with accuracy, high probability of detection and low nuisance alarm rate over long distances and a wide-range of field conditions, being invariant to seasons.

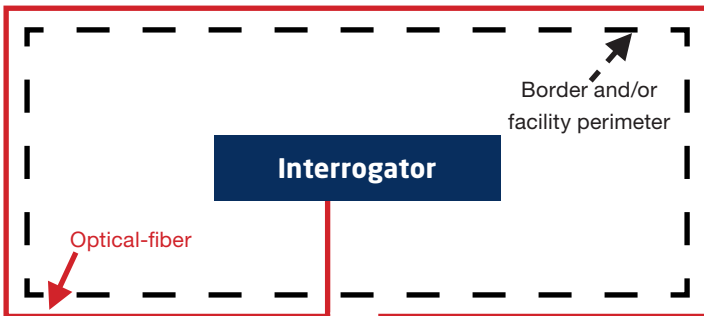
Solutions

NEC's Intelligent Perimeter Intrusion Detection System combines NEC's world-leading expertise in transoceanic optical fiber communication and machine learning based artificial intelligence. A centrally located "interrogator" sends and receives light into and from optical fibers that are covertly

buried and/or fence-mounted or wall-mounted along borders and facility perimeters. When physical intrusions create vibrations that reach the optical fibers, the interrogator discerns changes in the light. Then, machine learning based artificial intelligence instantly and simultaneously classifies and locates the multiple physical intrusions - with the best accuracy, highest probability of detection and lowest nuisance alarm rate over the longest distances and widest-range of field conditions, being invariant to seasons. In concert with innate immunity to electromagnetic interference and requiring no electrical power in the field, existing and/or previously non-securable borders and facilities can be secured with unmatched reliability, significant reduction of costly maintenance and security resources, and in turn, low total cost of ownership.

User-friendly and Customizable Software and Integration

In real-time, a user-friendly and customizable graphical user interface displays a border and/or facility perimeter map, denotes the location of detected physical intrusions, and provides actionable data (e.g. date, time, location, classification). This can be integrated to immediately trigger security resources in the field (e.g. personnel, cameras, drones) and/or be stored locally or remotely for future reference and data analytics. Additionally, for a single interrogator and, over the length of a single optical fiber, the software can be customized for multiple borders and facility perimeters that have a wide-range of field conditions.



Customer Care

NEC's U.S.-based NEC Customer Service Centers provides comprehensive 24/7 multi-tier customer support for problem tracking and resolution, as well as advanced remote diagnostics. Highly experienced engineers and developers provide technical support and troubleshooting services to ensure that our customers get the information and help they need without delay.

Customer Benefit

NEC's Intelligent Perimeter Intrusion Detection System provides the best accuracy, highest probability of detection and lowest nuisance alarm rate over the longest distances and widest-range of field conditions. Being invariant to seasons, in concert with innate immunity to electromagnetic interference, and requiring no electrical power in the field, existing and/or previously non-securable borders and perimeters can be secured with unmatched reliability, significant reduction of maintenance and security resources for a low total cost of ownership.



Superior Intrusion Detection System

For more than 30 years, NEC has been a pioneer and world-leader in transoceanic optical fiber communication and machine learning based artificial intelligence. Now, the mature, and world-class technologies are combined into a superior intrusion detection system that secures borders and facilities from physical threats, providing the best accuracy, highest probability of detection, lowest nuisance alarm rate, over the longest distances, and widest-range of field conditions. NEC globally provides "Solutions for Society" that promote the safety, security, efficiency, and equality of society. Under the company's corporate message of "Orchestrating a brighter world," NEC aims to help solve a wide range of challenging issues and to create new social value for the changing world of tomorrow.

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