OSID

by xtralis

Open-area Smoke Imaging Detection



Large, open spaces – airports, train stations, stadiums and shopping malls – pose unique challenges to reliable fire detection due to their environmental nature and limitation.

Limitations of Traditional Smoke Detection

- Susceptible to nuisance alarms
  - Dust and dirt
  - Birds and insects
  - Foreign objects
  - Fog and steam
  - Reflections
- High installation and maintenance costs
  - Difficult to align
  - Susceptible to building movement
- Affected by ambient lighting
- Inconsistent response to various smoke types

Open-area Smoke Detection Reinvented

Open-area Smoke Imaging Detection (OSID) by Xtralis is a new technology designed specifically for these environments, enabling early detection and response to save lives and prevent service disruptions.

OSID uses a sophisticated algorithm to map and compare the strength of infrared (IR) and ultraviolet (UV) light signals from detectors configured in the space.

OSID also reduces the costs of installation and maintenance as the Emitter batteries have more than a five-year life.

Superior Features Offered by OSID

- ***Maximum detection range up to 150 meters (492 ft), outperforming traditional beams by up to 50% in length***
- ***Status LEDs for fire, trouble and power***
- ***Easy alignment with large adjustment and 3D viewing angles***
- ***Simple DIP switch configuration***
- ***Dual-wavelength, LED-based smoke detection***
- ***Limited maintenance requirements***
- ***Conventional alarm interface for straightforward fire system integration***
- ***Configurable alarm thresholds***
- ***Both wired and battery-powered Emitters available***

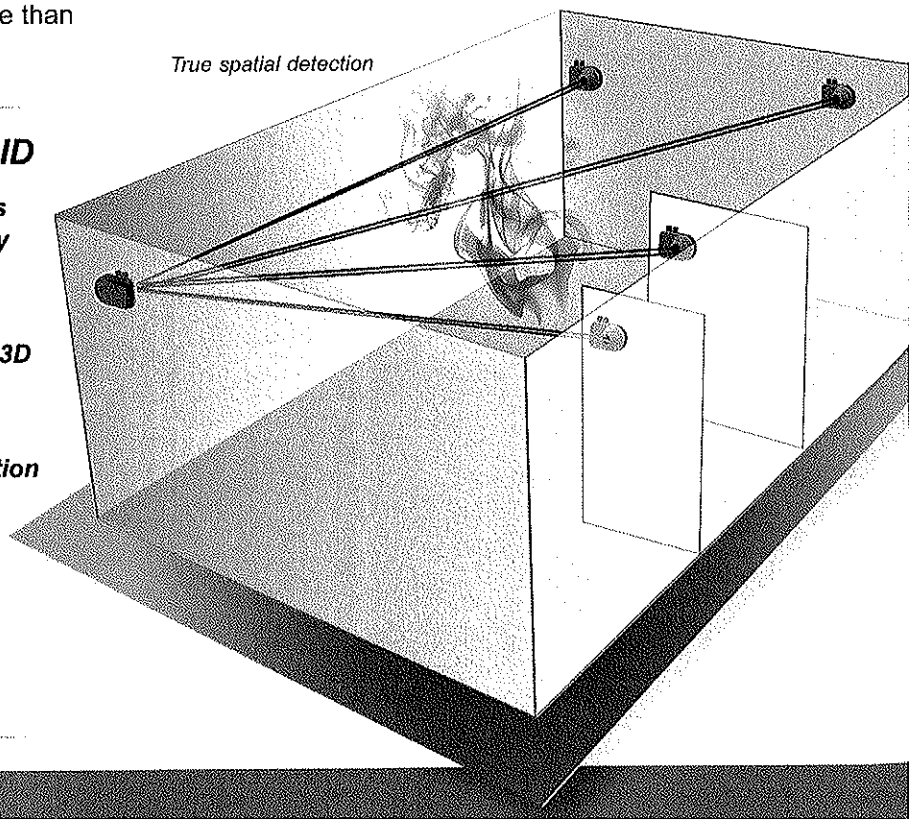
OSID Configurations

OSID systems may be configured to protect a range of spaces, regardless of shape. The protection zone or "fire web" is determined by the placement of OSID detectors.

Imagers		Emitters	
Field of View		Maximum Detection Range	
Horizontal	Vertical	Standard Power	High Power
7°	4°	150 m (492 ft)	-
38°	19°	60 m (197 ft)	120 m (394 ft)
80°	48°	34 m (112 ft)	68 m (223 ft)

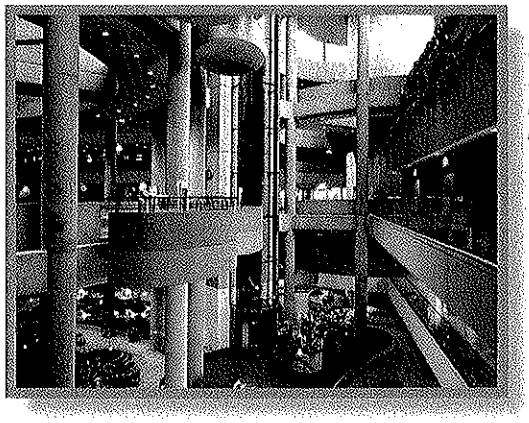
Benefits of OSID

- ***Simple installation and commissioning - up to 70% time saving compared to traditional beams***
- ***Low maintenance, saving both time and expense***
- ***High tolerance to vibrations, building movement and high airflow***
- ***Dramatically reduces false alarms by almost 100%***
- ***High resistance to smoke and other intruding objects such as dust, fogging, steam, reflections, sunlight, birds, insects and forklifts***
- ***Requires only 20 cm (8 in) free space***
- ***3-D coverage***



True spatial detection

OSID by Xtralis — Ideal for these Applications and Industries



Shopping Malls
3-D arrangement may be configured to protect many large, open spaces



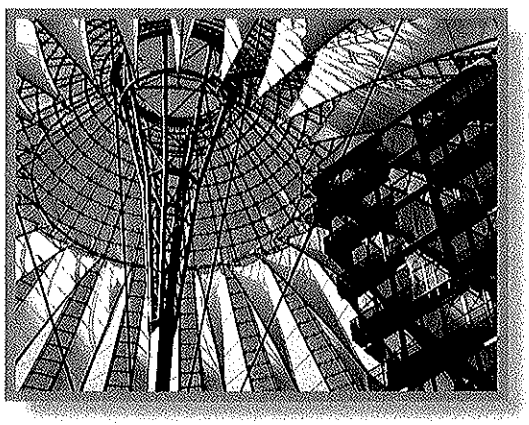
Long Corridors
Beam length up to 150 m (492 ft)



Train Stations
Non-intrusive detection in any ambient lighting



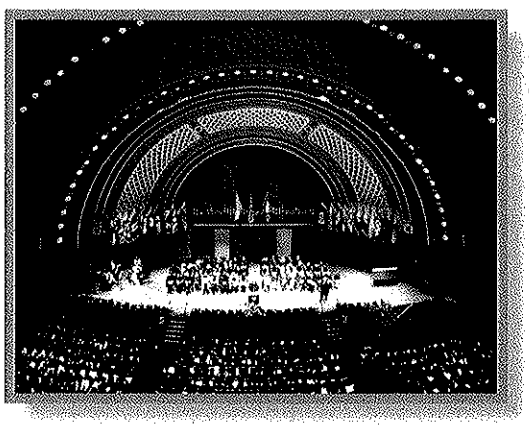
Heritage Buildings
Discreet and non-intrusive detection



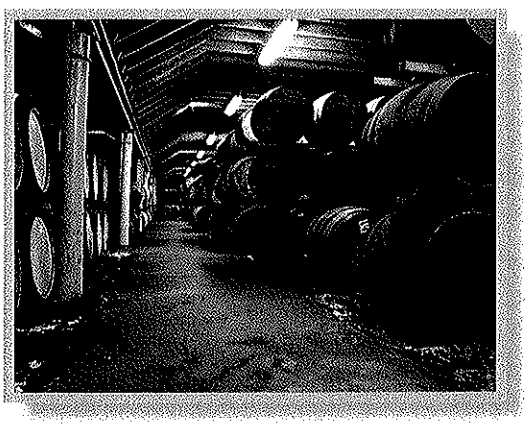
Suspended Ceilings
Discreet and flexible installation



Challenging Logistics
Simple maintenance with no disruption to operations



Concert Halls
Multi-layer detection



Dirty Environments
Discriminates against dust, dirt and other intruding objects to reliably detect smoke

- Hotel and office-tower atriums
- Shopping centers and mega retail stores
- Churches and cathedrals
- Airport terminals and railway stations
- Exhibition and convention centers
- Indoor stadiums and arenas
- Industrial and manufacturing facilities

Where Flexible Detection Coverage is Needed

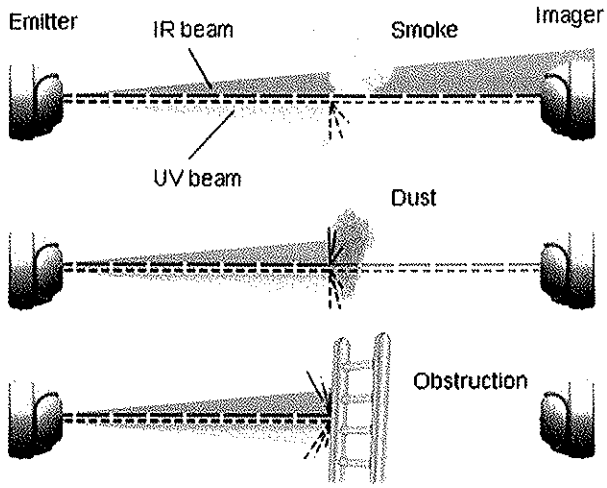
OSID can support up to 7 Emitters with a single Imager making it easy to deploy in unusually shaped areas. Emitters can be placed at different heights to overcome stratification and provide earlier detection. This Multi-Emitter 3D approach also provides a 50% better detection coverage because beams converging to one point are more closely spaced in the area.

Unique Detection Technology

OSID by Xtralis innovatively combines two technologies to reliably detect smoke in large, open spaces.

Dual-wavelength Particle Detection

By using two wavelengths of light to detect particles, the system is able to distinguish between particle sizes. The shorter UV wavelength interacts strongly with both small and large particles, while the longer IR wavelength is affected only by larger particles. Dual-wavelength path loss measurements therefore enable the detector to provide repeatable absolute smoke obscuration values, while rejecting the presence of dust particles or solid intruding objects.



Optical Imaging with CMOS Imager Arrays

An optical imaging array in the OSID detector provides a wider viewing angle to locate and capture images. Consequently, the system is easier to install and align and can compensate for drift caused by natural shifts in building structures.

Optical filtering, high-speed image acquisition, and intelligent software algorithms also enable the OSID detector to process images and provide new levels of stability and sensitivity while providing greater immunity to high-level lighting variability.

About Xtralis

Xtralis is the leading global provider of powerful solutions for the early detection of fire, gas and security threats. Our technologies prevent disasters by giving users time to respond before life, critical infrastructure or business continuity is compromised. We protect high-value and irreplaceable assets belonging to the world's top governments and businesses. For more information about our life safety and security solutions, visit our web site at www.xtralis.com.

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