# Nominee: Active Roof by Dataracks

## Nomination title: Existing fire suppression with Aisle Containment is no longer a problem

### Active roof Introduction

The 'active roof' system was designed to aid the protection of equipment used within the Aisle Containment environment of Data or Telecommunications Centres. Activated by the Data Centre's existing fire alarm system or detection. The Active Roof automatically opens when triggered by a fire alarm event to allow fire suppression water mist or gases to penetrate the aisle. Panels that open can be activated by a number of sources but specifically can be operated by sensors designed for the early detection of smoke.

The canopy is activated by a signal from the fire alarm panel through interface units (local and remote) that control an electro magnet on the canopy frame. The local interface unit (LIFU) takes the input from the fire alarm panel as a controlling signal and feeds this signal out to remote interface units. The remote interface unit (RIFU) can control up to a maximum of four canopies. These units can be daisy chained to control an infinite number of opening panels.

The system accepts a variety of inputs ensuring that it is compatible with all alarm systems. It also provides a complete failsafe operation.

The interface unit also provides a visual and audible warning that the unit has been activated or faults detected. The RIFU and LIFU come with a test button, allowing operation to be tested without interfering with the main fire alarm panel.

### Features & Benefits

- Wired connection to all major alarm systems enabling instant automatic activation in the event of fire alarm going off
  Handles all fire suppression systems – allows gas or water suppressant to pass through (avoids need to modify fire suppressant systems)
- Quick fit modular design, fully integrated within the aisle roof
- Lightweight steel with opaque polycarbonate panel for light transmission
- Can be fitted to any width of aisle
- Can be retro fitted to any current contained aisles
- Includes audible roof open alarm for fault detection and warning
- Low maintenance
- Low power requirements
- CE certified
- Not thermally operated

## Why nominee should win

Dataracks' own field trials have shown that use of a full aisle containment significantly improves the effectiveness of containment, resulting in a lower energy requirement through more efficient air management.

Active roof is flexible, scalable and has supervisory monitoring and alarm functions. For those wishing to adopt aisle containment but have been concerned about maintaining fire suppression integrity there is now a solution to meet their needs without costs or risks of moving fire suppression into the aisle.

Dataracks have developed an aisle containment active roof solution that meets the requirements of the National Fire Protection Agency. Dataracks have taken the lead on the issues of aisle containment and fire suppression.

References:

1, BCS year book 2013: "Fire suppression with aisle containment" by Jeremy Hartley http://www.dataracks.co.uk/docs/files/BCS%20Article%20Dataracks.pdf

2, Dataracks White paper #11 http://www.dataracks.co.uk/docs/files/Fire%20Suppression%20with%20Aisle%20Containment%202013.pdf

3, http://www.dataracks.co.uk/datacentre_solutions/roof/

4, http://www.dataracks.co.uk/docs/files/active_roof.pdf

5, "Altering Fire Suppression Systems in Data Centre" by Gerry Rutherford MIET CDCDP in 2014