D3S NET

Safeguarding cities and
critical infrastructure from the
threat of nuclear attack
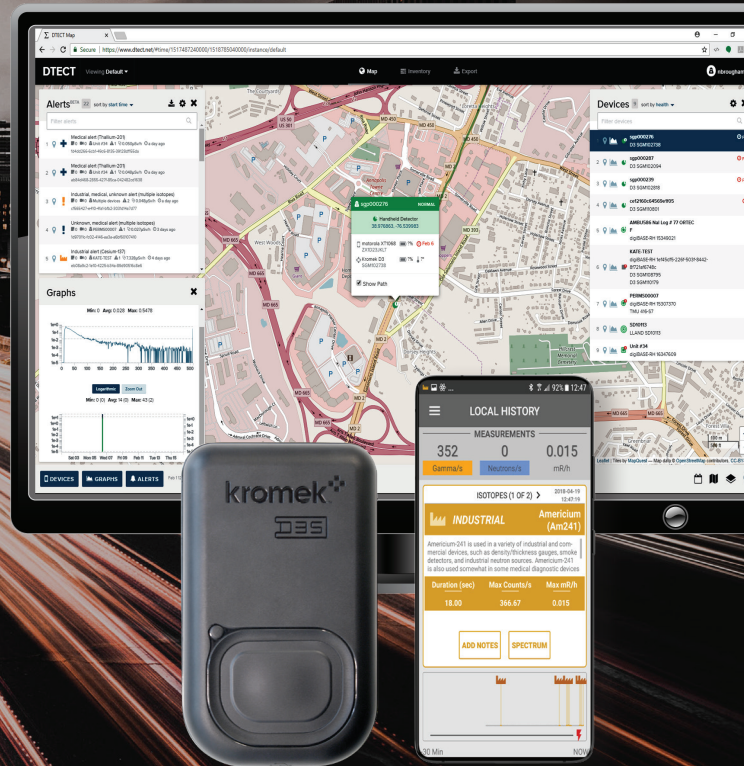
Picture: Clement M

www.kromek.com

D3S NET

Kromek's highly sensitive, belt-wearable D3S connected to the SIGMA network for full situational awareness

Connect thousands of D3S detectors to be viewed at a central hub anywhere in the world, with alerts and information sent instantly and automatically

The Next Generation Radioisotope Identification Device (RIID)

- Discreet detector with mobile phone interface
- Convenient – always on, compact, lightweight, belt-wearable or in-pocket
- High performance – size of an PRD, sensitivity and performance of a conventional handheld RIID
- Actively search for and identify threats and send to SIGMA network
- Rapid, visible, audible and tactile alert/alarm
- Little to no user training required
- Deployed on staff carrying out their day to day duties
- DARPA tested and approved (DARPA-SIGMA Program)
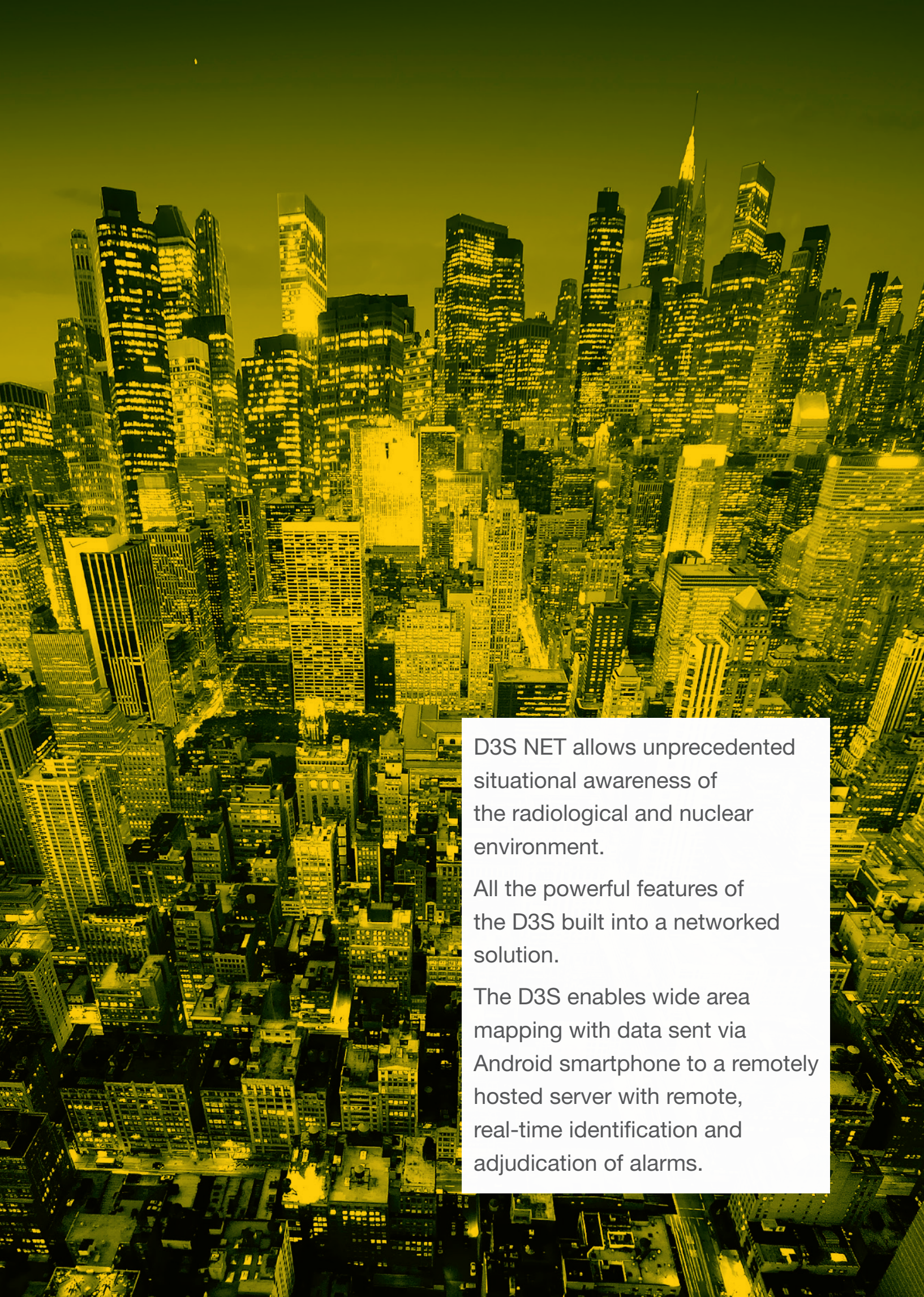
D3S NET allows unprecedented situational awareness of the radiological and nuclear environment.

All the powerful features of the D3S built into a networked solution.

The D3S enables wide area mapping with data sent via Android smartphone to a remotely hosted server with remote, real-time identification and adjudication of alarms.

SIGMA Platform Components

Cloud-based System

D3S NET consists of D3S detector, SIGMA LE Android app and SIGMA (cloud) Network.

The data collected is stored in the D3S NET cloud system, hosted by Amazon Web Services (AWS) and provides analysis and visualization for a large network of detectors.

Other detectors can be added and viewed on the SIGMA platform.

External System Integration

In-Vehicle Detection System

Highly configurable mobile solution for real time source ID.

An advanced mobile radiation detection and source identification system that can be easily configured for mobile and static applications.

The detector system consists of two NaI(Tl) scintillators and a 6LiF neutron detector combined with the PCS algorithm to maximise the detection and identification performance in complex urban environments.

Meets ANSI N42.43.

SIGMA Network

Viewed on DTECT website

Identification
N42 Report
Web-based Situational Awareness & Analysis UI

Neutron detector

Discreet contextual cameras on each window enabling 360° view

Large volume gamma detector

D3S PRD and D3S ID

Handheld RIID

Convenience of a PRD, sensitivity of a RIID

The D3S is one of the fastest and most accurate isotope ID devices on the market. The ID App provides real-time alarm and adjudication in seconds easily detecting even very low levels of radiation rapidly.

The D3S shows dose when connected to the SIGMA LE app in addition to isotope ID.The D3S NET identification also far exceeds the ANSI standard N42.34 for RIIDs, identifying 22 extra isotopes, instantly.
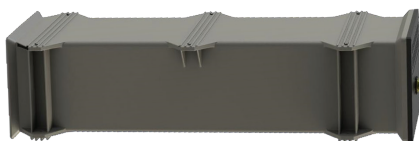
Static Nodes

Static D3S Nodes

The Static Node is an always-on fixed D3S sensor that constantly uploads data to the network. it is used to protect key areas.

Large Volume In-land Detector

Large Volume
In-land Detector

The large volume detector is a networked, modular, spectroscopic gamma detector capable of stand-alone operation in extreme environments or as a subcomponent of larger systems.

The PCS algorithm maximises the detection and identification performance in low SNR conditions.

* For ambient temperatures above 20°C

How do you create the ultimate field of detection?

Take anywhere from a handful to thousands of D3S NET devices and network them together.

The SIGMA Network, developed as a US DHS/DARPA program, is a comprehensive network providing:

- cost-effective, continuous radiation-monitoring
- networkable systems covering large cities or regions
- real-time mapping with increased sensitivity

It has been successfully deployed in cities and with security forces in varying operations: urban, tactical and event-based scenarios.

Picture: Michael Dicenza

Out-of-the-box Solution

Event Case

D3S nuclear event case is designed for rapid in-field deployment. Sending a team into the field creates the ultimate field of detection creating a wide area network can be controlled from anywhere.

The all-in-one ruggedized transport provides storage, wireless induction and USB charging stations and post-deployment secure and portable storage.

Contents include:
- 10 D3S detectors
- 10 Smartphones with local ID and network app
- 10 D3S pouches
- 2 stacks of 5 induction charging stations with 1 external power cable, enabling charging within case
- USB cables
- Manuals

Accessories

Charging stations

The charging stations can be taken out of the Event Case to form a stack, allowing easy storage and charging of both phone and D3S at the same time.

D3S can be charged by wireless inductive charging or via USB.

D3S induction charger

Phone USB charger
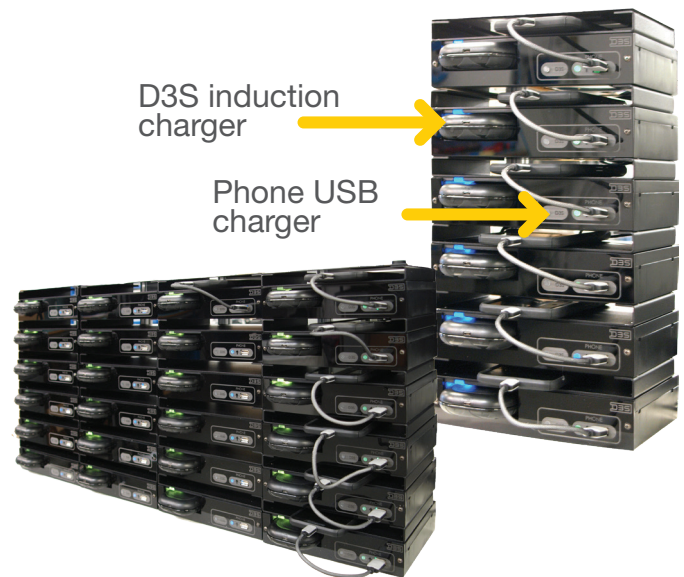
Belt-wearable pouch

A pouch can be supplied with every D3S to provide an easy and portable way of carrying the device and can be worn on a belt or a MOLLE vest.

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