



UATL® PRIVATE RESEARCH
UNIVERSITY est.2005

Патент: GB2562215

**CALIBRATED NEUTRON FLUX
SCANNING TECHNOLOGY FOR
REAL-TIME RECOGNITION OF
THE COMPOSITION OF
SUBSTANCES AT THE
MOLECULAR LEVEL**



UATL® PRIVATE RESEARCH UNIVERSITY OFFERS LICENSES FOR DEVICE'S DEVELOPMENT AND CREATION BASED ON THE PRESENTED TECHNOLOGY

APPLICATION SPHERES OF THE DEVELOPED DEVICES



Air



Fuel



Liquid



Blood



Explosives



Detection of any living and dead organisms in real time
in any environment

TECHNOLOGY DESCRIPTION

THE TECHNOLOGY IS BASED ON TWO TECHNIQUES
PRESENTED BELOW

METHODOLOGY №1: NEUTRON DETECTOR

Application for example - Neutron Detector:
Integration into the spreader of container
cranes, scanning containers **in real time**.

Range of action:

The average mean free path of neutrons in air
is **more than 100 m**.

Purpose of application:

Detection of radioactive materials, such as
plutonium, **over long distances**.

Feature:

Building materials used in cranes are practically
transparent to neutrons.

METHODOLOGY №2: MOLECULAR GAS ANALYZER

Application for example - Blood Sugar
Sensor:

An accurate, **non-invasive method** for
controlling blood sugar in diabetes.

Analysis Duration:

On average, it takes **up to 30 seconds**.

Appointment:

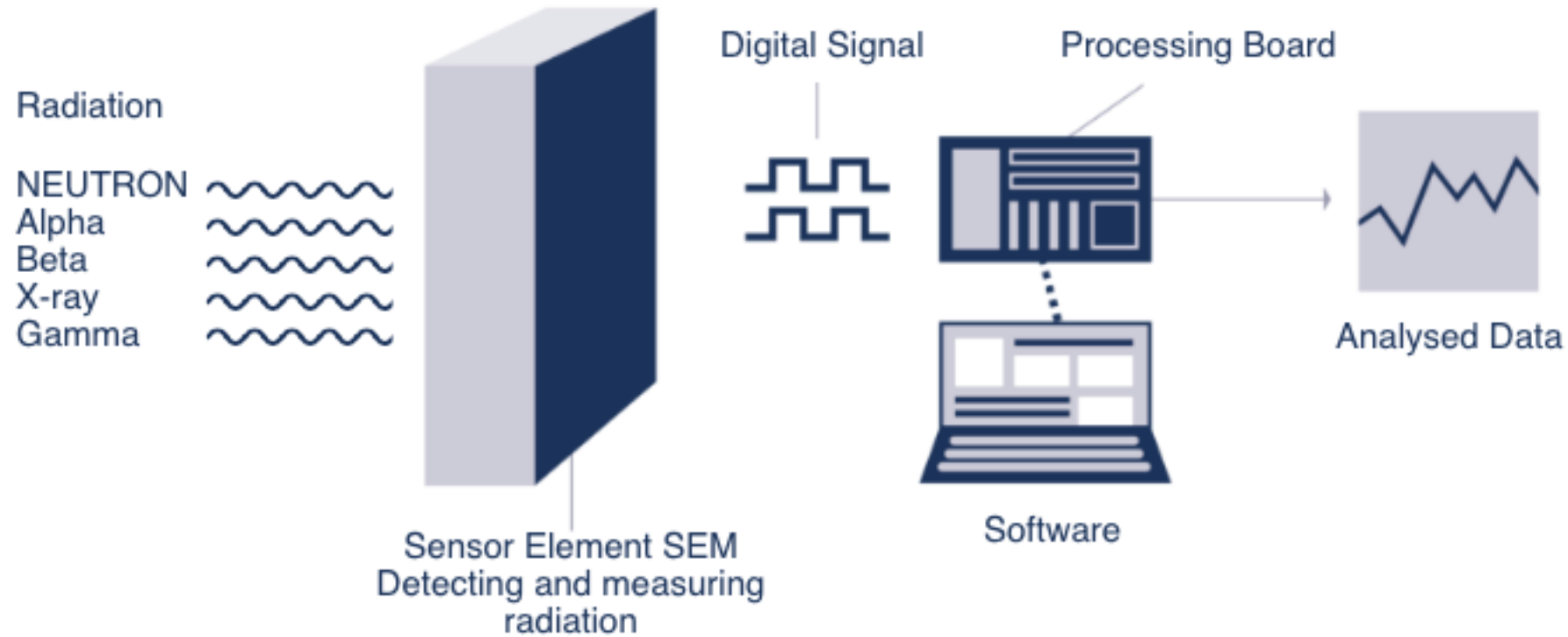
Fast and accurate data acquisition at the
molecular level.

Feature:

For comparison, the classical approach to
the procedure takes from 30 to 120 minutes.

The only non-invasive technology.

HOW TECHNOLOGY WORKS



Sensor Element

SEM The proprietary sensor element (SEM) is the core the functionality of Sensed by Sensinite® technology. The element is made of special material which due the its properties can be used in challenging environments whilst still maintaining its performance. It is scalable from large to small and it is free of from form constraints.

TYPES AND CHARACTERISTICS

COMPACT SIZE

Second generation device: length - 15 cm, diameter - 4 cm



CHARACTERISTICS:

The power source is 1.5 volts.

Wi-fi module (power consumption like a standard module).

The memory module is the accumulation of information on specified parameters with the ability to remove data directly from the device.

Bluetooth module.

ADVANTAGES OF THE END USER:

1. No need for several types of detectors - one sensor platform for all types of radiation.
2. Resistant to shock and vibration.
3. The ability to scale the scan area by calibration, or by increasing the number of sensors.
4. Non-hygroscopic - does not change its properties and qualities when working in a humid environment.
5. There is no danger of electric shock.
6. Low power consumption.

SECURITY APPLICATION OF TECHNOLOGY

FOR STATE AND COMMERCIAL STRUCTURES

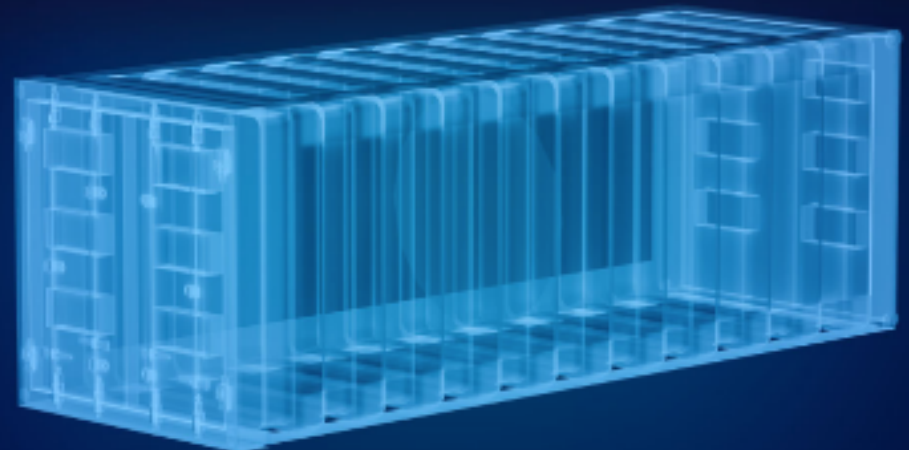
DRUGS DETECTION, PEOPLE ILLEGAL TRANSPORTATION, HAZARDOUS CHEMICAL, RADIATION AND EXPLOSIVES, INCLUDING IN THE FORM OF LIQUID, GUNPOWDER, HIGH-ENERGY LIQUIDS **THROUGH CONCRETE, METAL AND OTHER BARRIERS**

SCOPES OF APPLICATION:

1. Aviation.
2. Ground transportation.
3. Premises analysis.
4. Cargo transportation (small loads, containers).
5. Production (for example, chemical plants).

DEVICE TYPE:

1. Frame module for people.
2. Frame module for cars.
3. Plug-in module for containers.
4. . Portable device.
5. Module for ventilation and air conditioning, as well as water supply and sewage.



PRIVATE SECURITY APPLICATION

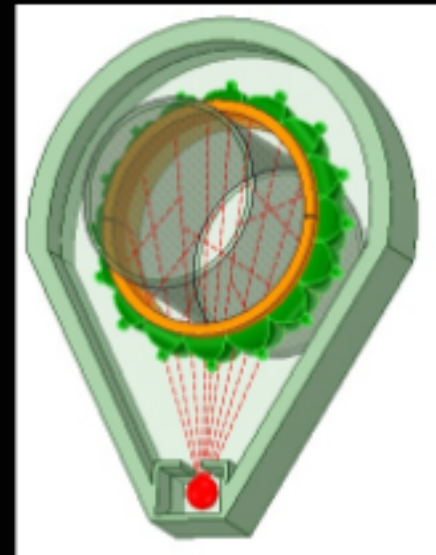
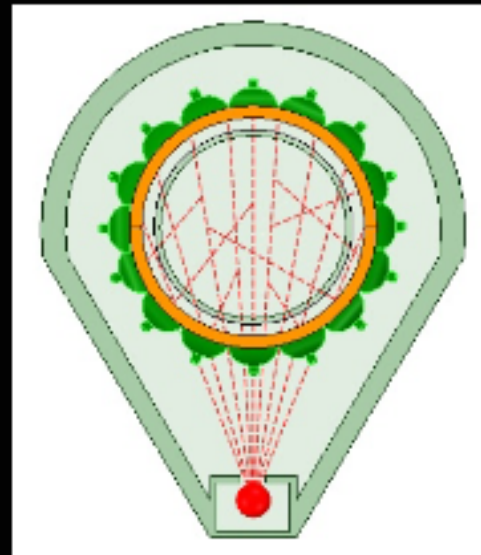
DETECTION AT A DISTANCE OF RADIATION, EXPLOSIVES, FLAMMABLE LIQUIDS, GASES HAZARDOUS TO HUMAN LIFE AND HEALTH

OBJECTS OF ANALYSIS:

1. Home / workplace.
2. Vehicle.
3. Water and liquids.
4. Goods and cargo.
5. People (covert intentional or unintentional carrying of hazardous substances or liquids).

EXAMPLE:

sensor mounted on a water pipe



FREIGHT CONTAINERS MODULE

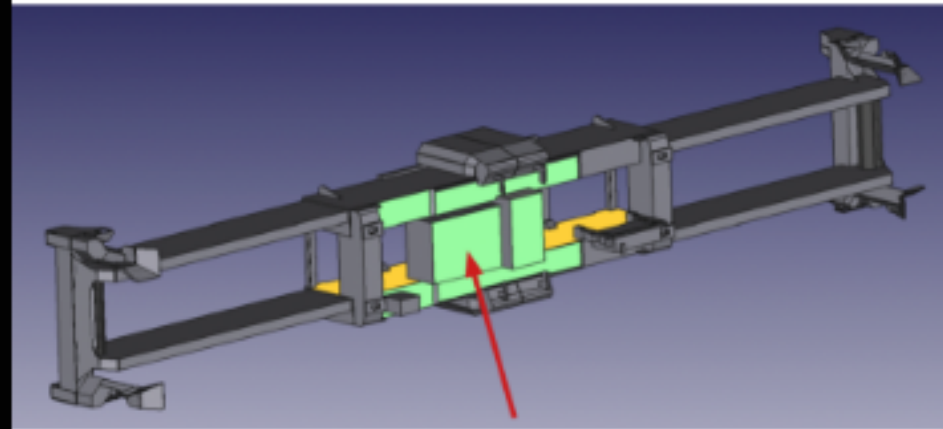
5-6% OF CONTAINERS CLASSIFIED AS "HIGH THREAT" ARE SCANNED USING CONVENTIONAL NON-INTRUSIVE SCANNERS (GAMMA OR X-RAY)

REAL TIME DETECTION:

1. Smuggling: drugs, illegal migrants, explosives, chemical weapons.
2. Radioactive materials.

ADVANTAGES:

1. **Simple integration** of container cargo scanners into existing port and border terminal operating systems.
2. **A modularity** in which freight container scanners can be easily added to general scanning schemes.
3. **Reducing the cost of the scanner by 30%** compared with existing technologies.



FEATURES FREIGHT CONTAINERS MODULE

THE TECHNOLOGY IS COMPLETELY SAFE FOR HUMANS

HIGH DETECTION SPEED

If the detection speed is too slow, this leads to delays in the supply chain, especially true in major ports and at customs borders.

HIGH CAPACITY

The capacity of the proposed module is 3 times faster compared to currently used conventional systems.

ACCURACY AND VISIBILITY

The three-dimensional image obtained by the scanning system allows inspectors to easily interpret and identify critical areas.

70% LESS FALSE ALARMS COMPARED TO CURRENT SYSTEMS

It does not work on such consumer goods as ceramic tiles, cat litter, porcelain toilets, bananas, etc., unlike the traditionally used x-ray system.

FRAME MODULE FOR TRUCKS

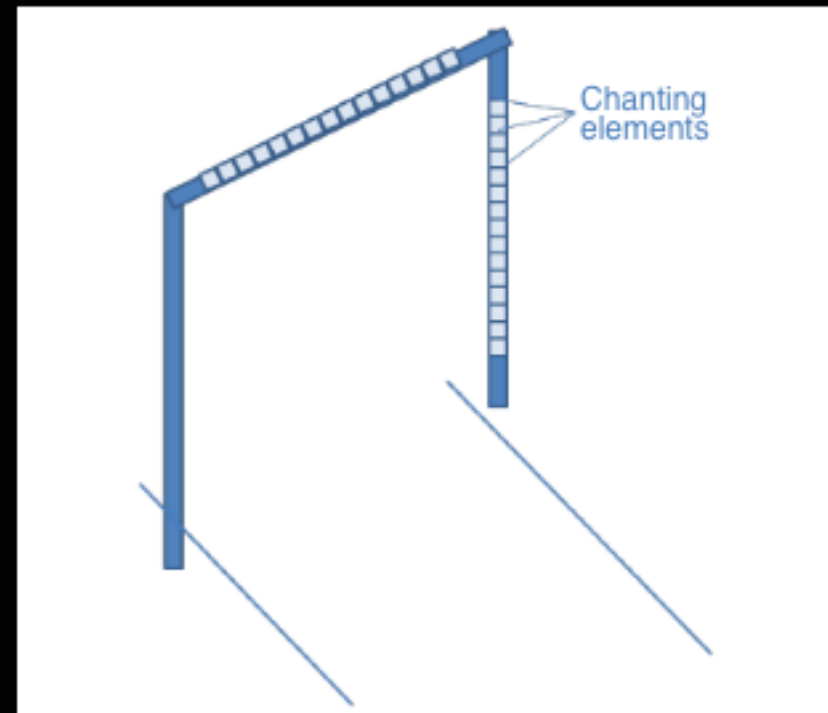
THE TRUCK CAN DRIVE THROUGH THE FRAME AT A SPEED OF 30-50 KM / H

REAL TIME DETECTION:

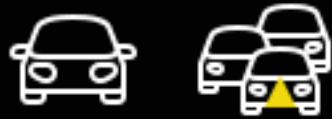
1. Smuggling: drugs, illegal migrants, explosives, chemical weapons.
2. Radioactive materials.

ADVANTAGES:

1. High speed detection.
2. High throughput.
3. Accuracy and visibility.



ADDITIONAL TECHNOLOGY OPTIONS



MODULE INSTALLATION IN ANY VEHICLES

1. Vehicle verification at a distance.
2. The ability to accurately detect the source, for example, in the parking lot, among other vehicles.



MONITORING DRONES WITH INTEGRATED MODULE

1. The ability to install a module with a memory device so that it is impossible to intercept device monitoring data.
2. For example, drones can monitor a given area / area, providing real-time data.



INSTALLATION OF THE MODULE IN ANY PIPES AND VENTILATION DUCTS, CARGO CHECK

1. The cargo may be any parcels, gifts, etc., which must be checked for general security purposes.
2. For example, installation on water pipes to track potential threats of infection or contamination.

TECHNOLOGY, AS A SOLUTION TO THE COUNTRY'S INTERNAL SECURITY ISSUES

1. **PROTECTING CITIZENS** FROM TERRORISM AND ORGANIZED CRIME.
2. **INFRASTRUCTURE PROTECTION AND UTILITIES** FROM DAMAGE, DESTRUCTION OR VIOLATION AS A RESULT OF DELIBERATE TERRORIST ACTS, CRIMINAL ACTIVITY AND MALICIOUS CONDUCT.
3. **BORDER PROTECTION:** DETECTION AND PREVENTION OF ILLEGAL MOVEMENT OF PEOPLE, DRUGS, WEAPONS, ILLEGAL SUBSTANCES, ETC. THIS INCLUDES ADDRESSING TRACEABILITY AND SECURITY OF SUPPLY CHAINS OF GOODS AND STANDARDIZATION OF LOGISTICS NETWORKS.

UATL® PRIVATE RESEARCH UNIVERSITY - PATENT AND TECHNOLOGY RIGHTS HOLDER

5 REGISTERED PATENTS
2 PATENTS PENDING
6 TECHNOLOGIES IN THE TEST PHASE

UATL® PRIVATE RESEARCH UNIVERSITY IS **FOUNDED**
IN 2005

Production of prototypes and sensors is carried out on the basis of Sensinite Oy.

Works, research and experiments in the field of accelerator physics of elementary particles.



Watch the video
About Sensinite



Sensinite official
website



UATL Corporation
official website



Mr. Teider's business
card