Universal Detection Technology - RadSmart

GENERAL DESCRIPTION:

The aftermath of the Fukushima Daaichi disaster in Japan exposed two major flaws in the radiation detection technology industry:

1. The industry could not ramp up production fast enough to meet the demand for radiation detection systems from customers in Japan.

2. The systems were designed for use by first responders and nuclear industry professionals and not everyday users.

Universal Detection Technology, through a partnership with Honeywell International and Hamamatsu has set out to design a first of its kind smartphone compatible survey meter. The unique feature of this survey meter is that the device will measure elevated levels of gamma radiation and transmit that data to a Bluetooth-ready smartphone. The dedicated smartphone app in development by Universal Detection Technology will give the user the ability to use simple menu-driven features to test for radiation in food, surfaces or clothing and subsequently share the accumulated data with other users through mapping and social networking features.

User's will also have the option to share and store readings on a safe and secure cloud which they have access to at anyplace at any time. Additional features will allow the user to: visually analyze data, keep track of cumulative dose, set automatic alerts (email, SMS, and other) and export data in different formats with timestamps and geo-tags.

The device will be easy enough to use for the everyday user but also sophisticated enough for the first responder market.

TECHNICAL DESCRIPTION:

RadSmart is a portable battery-powered instrument which includes a Cs(I) Tl scintillation detector with photodiode for detection of gamma rays. It works in conjunction with a smartphone allowing the user to take advantage of the computing power of the phone to receive and analyze data related to radiation exposure.

CONTACT INFORMATION

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COST

- $1,200/system
- N/A/analysis

Tier Selection

Final tier assignment is based on overall product score.

Top Tier Second Tier Third Tier Fourth Tier Bottom Tier

RANKINGS

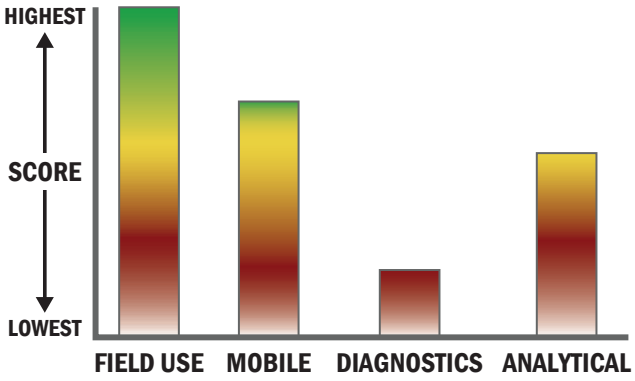
	Biological	Chemical	Radiological
FIELD USE System	N/A	N/A	Bottom Tier
MOBILE Laboratory	N/A	N/A	Bottom Tier
DIAGNOSTIC Laboratory	N/A	N/A	Bottom Tier
ANALYTICAL Laboratory	N/A	N/A	Bottom Tier

Survey Source

Vendor Supplied Information

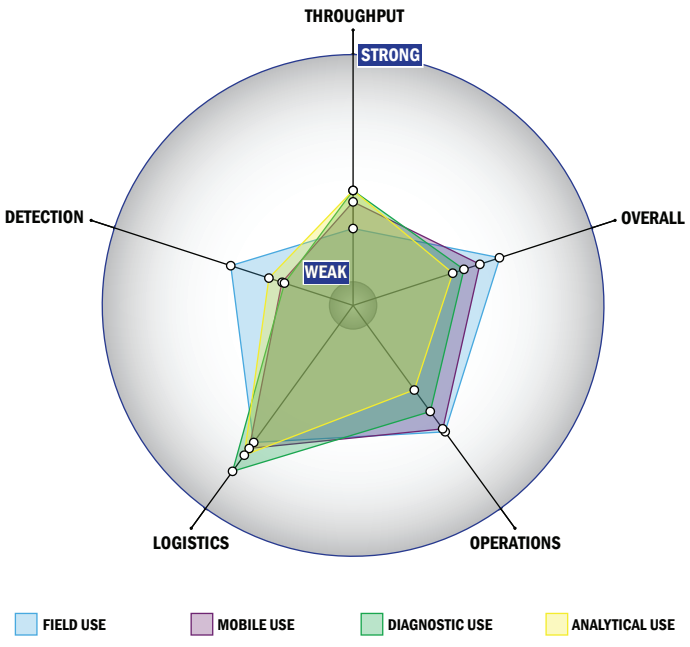
Scoring Analysis

System scores are compared across the four scenarios and ranked from highest to lowest.



Impact Chart

The Impact Chart is a spider graph representing specific categories and designed to give the reader a visual depiction of how a particular system is expected to operate across the four different scenarios. The score for each of the seven categories is presented as the percentage of the total possible score. Higher category scores extend the spokes of a graphic toward the outer edge of the chart. The area graphed for each of the four scenarios relates to how well the system performed in that scenario. Graphics for each of the four scenarios are super-imposed for ease of comparison.



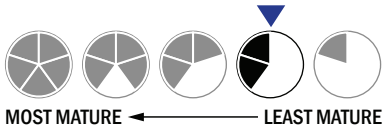
Evaluation Criteria

Throughput:

- Detection is instantaneous
- System is continuous and provides real time analysis with no defined tests/samples
- No set-up of the system is required

Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Between 1 and 5 kg
- Wireless and wired connections are available
- System or device uses batteries
- 4-8 hours battery life



Operations:

- Can be used from -21°C to 41°C
- Components must be stored at room temperature (27°C)
- Performance is not influenced by relative humidity
- Results can be viewed in real-time
- The system could easily be adapted into a fully autonomous system

Detection:

- Total dose, dose rate and count rate with operator selection to show the display, may differentiate between types of radiation
- Down to background level radiation for dose rate
- Down to background level radiation for count rate
- System is used for personnel detection