



Annual Users' Conference

**ADVANCING RADIATION SAFETY.
EMPOWERING PROGRESS.**

M Resort, Henderson, NV | June 15 – June 18



MIRION
TECHNOLOGIES

ARGON™
World leaders in CBRN/
HazMat training systems

Advancing Radiation Safety.
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CBRN/HAZMAT training systems

Radiation Detection Simulation

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Mirion Connect | Annual Users' Conference 2026

Henderson, NV

Simulators and Sources

ACCURAD SIM



Simulators and Sources

GS4 (Gamma Simulation Source)



- **Risk-free** electromagnetic, magnetic and fluorescent simulation sources.
- From localized environments **up to 60 meters** (free space)
- **Dose rate and Dose readings** that trigger personal safety actions
- **Inverse square law** ($1/r^2$) response.
- **Shielding effects** of different materials.
- Developed with support of and evaluation by **US DoE, US Army, AWE and UKHSA.**
- **Portable Training**
- **Cost Effective** (radioactive source management)

Radsim Application

When planning a radiological exercise, you often need to represent a specific source activity level or alternatively, you may wish the student to detect a particular reading at a known distance from the source



Readings			
Level	Dose rate	Units	Meters
1	0.1	μ Sv/h	1.8
2	15	μ Sv/h	1.8
3	40	μ Sv/h	1.8
4	9.33	mSv/h	1.8
5	18.66	mSv/h	1.8
6	28	mSv/h	1.8

1. Dose Rate Reading at required distance

Readings			
Level	Neutrons	Units	Meters
1	9	cps	1.8
2	15	cps	1.8
3	22	cps	1.8
4	30	cps	1.8
5	42	cps	1.8
6	60	cps	1.8
7	80	cps	1.8
8	120	cps	1.8

No source connected

2. Neutron Activity

Readings		
Level	Activity for Cs137	Units
1	21.33	MBq
2	426.60	MBq
3	1,279.80	MBq
4	398,016.40	MBq
5	796,032.90	MBq
6	1,194,476.00	MBq
7	1,977,711.00	MBq
8	3,980,164.00	MBq

No source connected

3. Simulated Activity Level

Why to use the AccuRad Sim for Training

Training Gap	Qualification Question
Low activity training sources limit realism	Do the radioactive sources used in your training allow teams to realistically practise detection concepts such as time, distance and shielding?
Strict supervision prevents certain scenarios	Are there restrictions when training with radioactive sources that prevent you from running scenarios such as lost or uncontrolled radioactive sources?
Limited training locations	Are you able to conduct radiological detection training in the same environments where your teams would actually operate?
Limited training frequency due to exposure concerns	Do radiation safety requirements limit how often your teams can conduct detection exercises?
Training becomes controlled rehearsals rather than operational scenarios	How flexible are instructors when creating or modifying radiological scenarios during exercises using real sources?
Increasing regulatory burden and cost	Have regulatory requirements made it more complex or costly for your organisation to acquire, transport, or use radioactive sources for training?

*Quantity will depend on location where the customer train (centralized or deployed units) as well as how the training setup is configured (i.e., training in teams)



Train How, Where, and When you Want

You can safely and effectively simulate:

- Gamma radiation
- Lethal radiation readings
- Dose and dose rate
- Large area radiological releases – nuclear fallout
- ALARA Principles operational training
- Lost source, dirty bomb, urban search, border and port security screening exercises.

In any environment you choose:

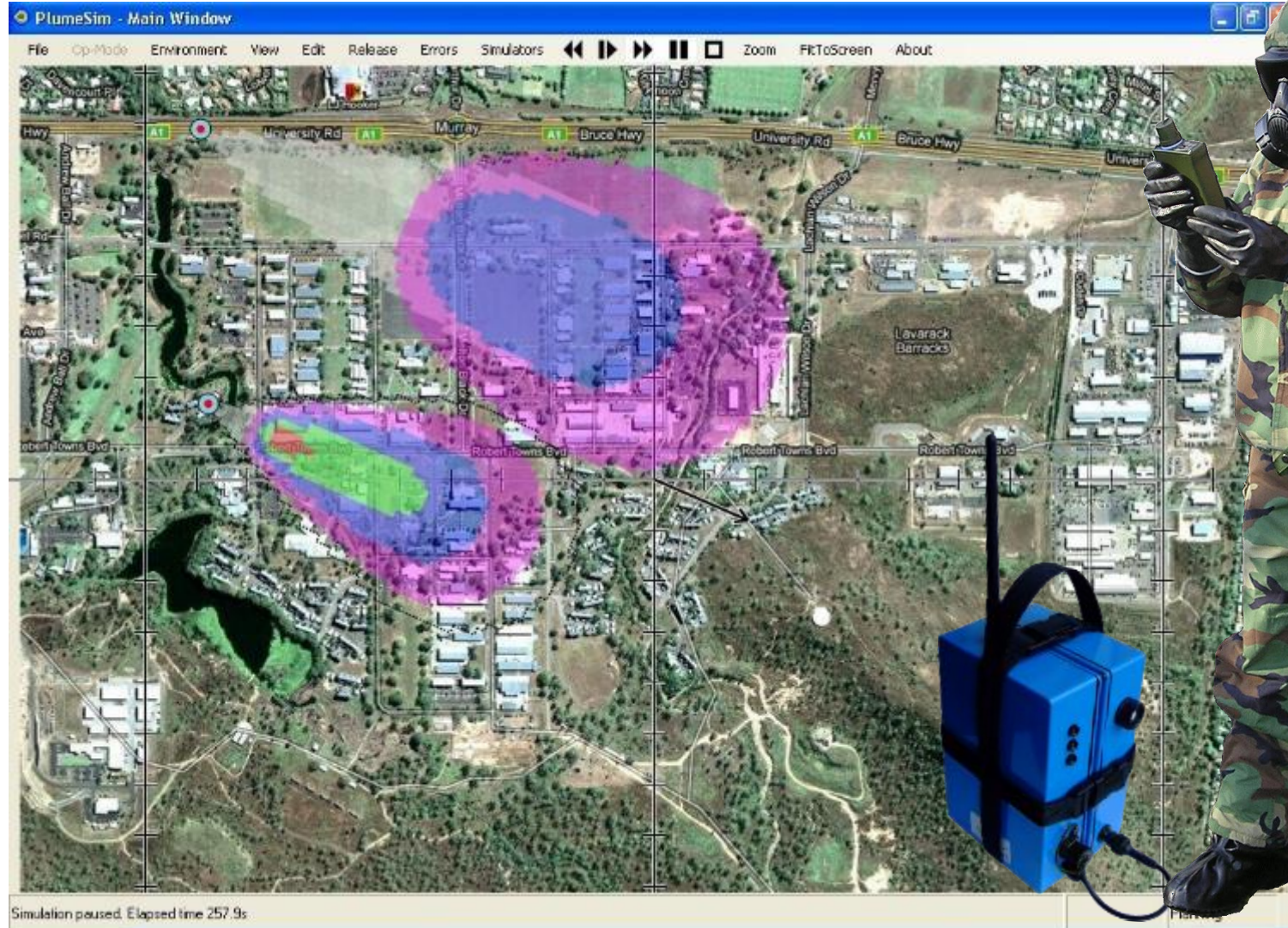
Stadiums, Shopping Centre's, Railway Stations, Government Facilities, Airports, Tunnels – Anywhere an attack may take place!



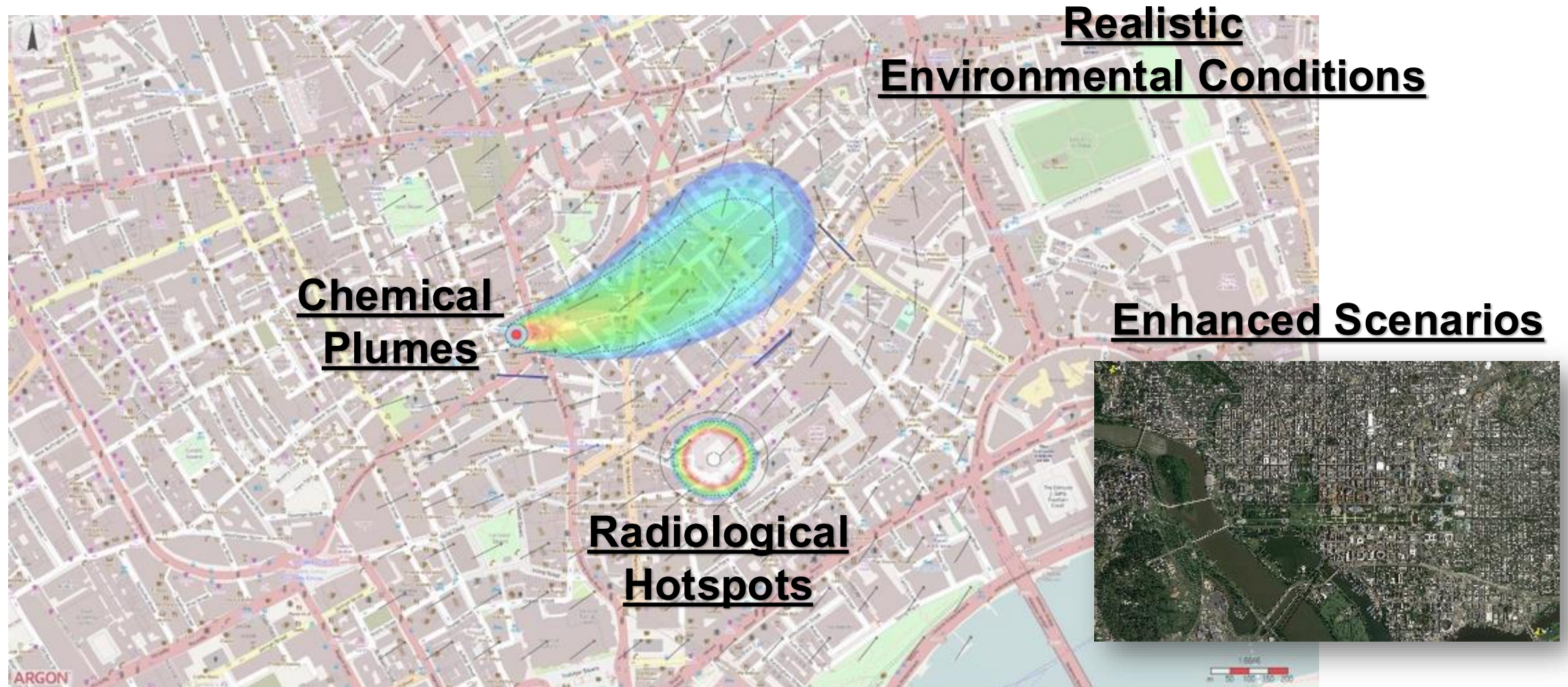
PlumeSIM Wide Area Instrument Training

Instrumented wide area field exercise training.

- Planning Mode
- Table Top Exercise
- Field Exercise
- After Action Review

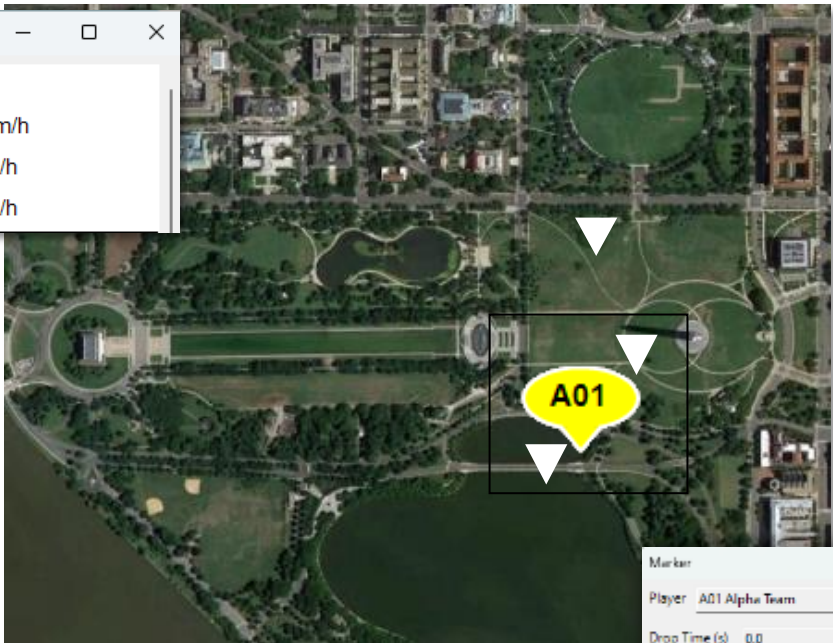


Planning Mode



PlumeSIM Tabletop Mode

Readings	
	
Cumulative Dose	Current Threat Level
Inhaled 3.7 nRem	Inhaled 0.25 µRem/h
Beta 15 mRem	Beta 0.93 Rem/h
Gamma 7.6 mRem	Gamma 0.55 Rem/h



Marker

Player A01 Alpha Team

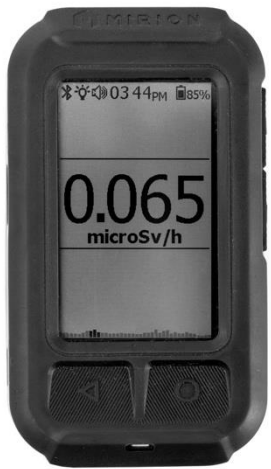
Drop Time (s) 0.0

☐ Gas ☐ Biological ☒ Radiological

2 mR/hr

OK Cancel



Operator

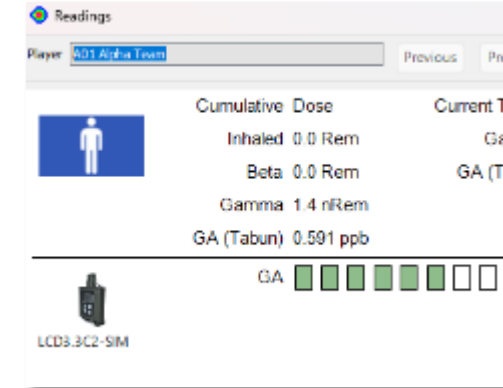


Instructor



PlumeSIM Field Exercise

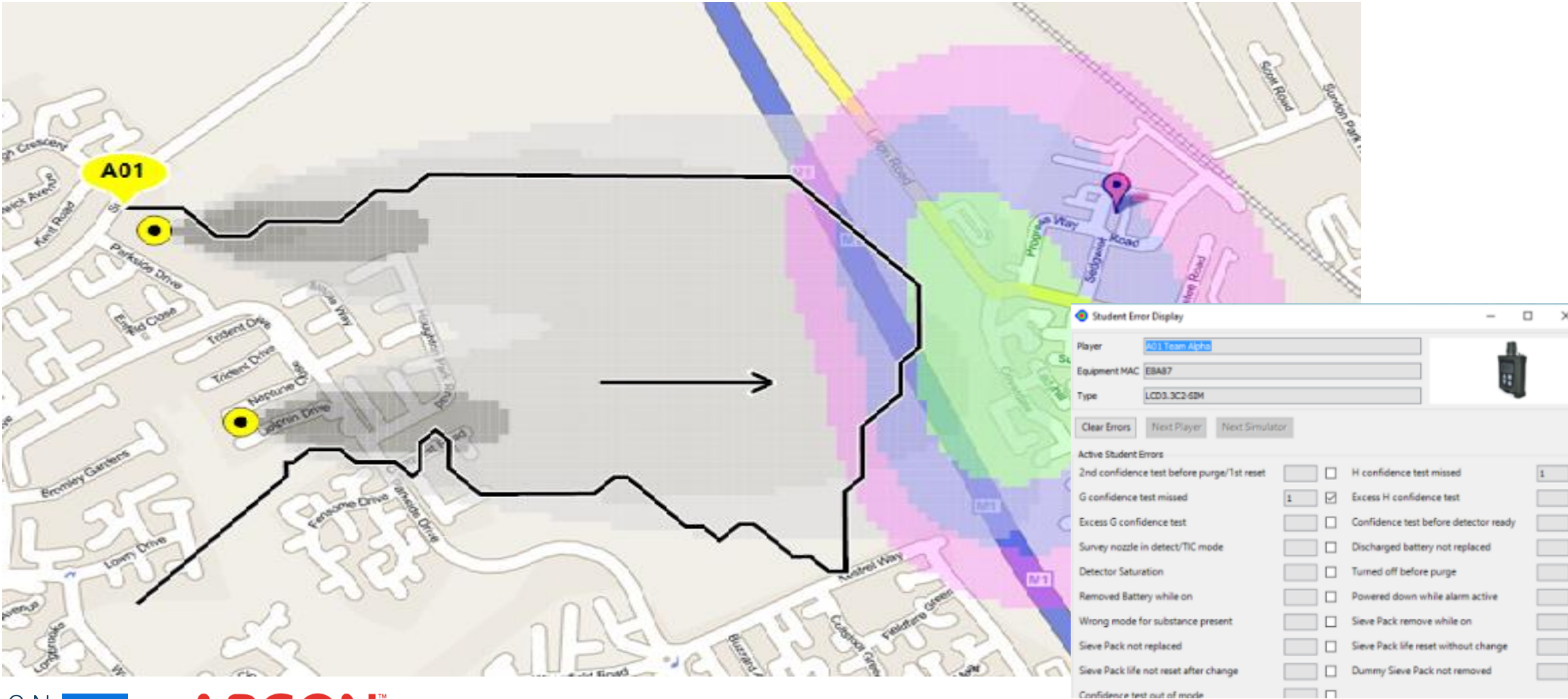
Scenarios can be broadcast and updated in real time. Individual trainee positions and simulator use errors are also provided back to the Base Control Unit in real time, offering the opportunity for command and control functions to develop improved decision making skills based on realistic responses.



Where required, the radio communication between the Base Control Station and the Player Units can be supplemented by the use of radio repeater booster stations.



PlumeSIM Field Exercise





<https://www.argonelectronics.com/>

