

Advancing and Democratizing

Citizen Science

with **GeoRobotiX**

Powered by
OpenSensorHub



Integrating Sensors, Actuators & Processes



Mobile Field Data Collection

Handheld sensors technologies that enable citizen scientists to collect scientific observations while moving across a landscape.



Water, Air and Environmental

Soil pollution, heavy metals, endocrine disruptor, Particulate matter sensors, toxic gas sensors, personal exposure monitoring sensors, emission source monitoring, Pollutant specific air sensors, Water sensors: River gauges, buoys, sea ice sensors, submarine sensors.



Meteorological

Temperature, pressure, humidity, precipitation, wind speed/direction (at sea surface, ground, and at altitude), UV radiation, lightning strikes and Doppler radar.



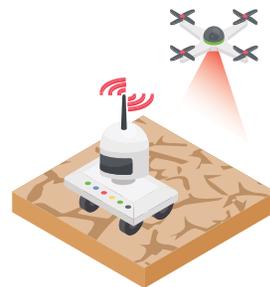
Wildlife Tags and Trackers

Motion detectors, thermal sensors, GPS beacons, disturbed earth sensors, camera traps, etc.



Space & airborne Remote Sensing

Electro-optical (EO), Infra-red (IR), multi-spectral imagery (MSI), hyper-spectral imagery (HSI), Full Motion Video (FMV), Wide-Area Motion Imagery (WAMI), SAR, LiDAR, sonar, CBRNE sensors, and acoustic sensors.



Autonomous Platforms

Robots, unmanned airborne vehicles, unmanned underwater vehicles.

Getting started with GeoRobotix



Cloud Platform Subscription (SAAS)

Harness the GeoRobotix platform without bothering to own or manage your own Cloud computing resources. GeoRobotix provides various SaaS Cloud Subscription levels to allow you to securely leverage the power of your Sensors, Things, and Robots as location-enabled, geospatially-aware web accessible services immediately.



On-Premises/Self-Hosted Platform Subscription

Deploy the GeoRobotix platform on-premises or on your own Cloud computing resources. Whether on your own compute infrastructure, or in your leased commercial Cloud, we offer "OnPrem" SaaS Subscriptions that let you deploy the GeoRobotix platform and securely integrate it into your larger enterprise capabilities.



Expert Services

Beyond GeoRobotix platform subscriptions, and the support and maintenance services included therein, GeoRobotix offers world leading expertise to formulate and implement your next generation sensor and IoT vision. GeoRobotix offers strategies and decades of implementation know-how that you can harness to master the world around you.

FAQs

How to deploy?

The Citizen Science community has made so many scientific instruments more accessible to a wider public. This community is interested in providing more comprehensive observational coverage of the challenges facing our planet at local, regional, national, transnational, and international scales. Still, deploying them within a common space-time framework has proven to be a challenge. Deploying these Sensors, Things and Robots as location-enabled, geospatially-aware, web accessible services would revolutionize the Citizen Science landscape – organizing all manner of scientific observations in space and time.

How to secure?

While Citizen Science may not be considered a mission critical activity, there is still the need for public confidence in the scientific observations, their provenance, and that they have not been manipulated by nefarious actors. As such, it is desirable that each Sensor, Thing, and Robot be secured with role based access that allows their data to be part of a secure chain of custody, in service of their scientific purpose. OSH offers the fine grained security necessary to do that.

How to discover?

There are so many different citizen scientists deploying their instruments, for their own experimental purposes, with no necessary coordination with others. This can lead to an experimental landscape that is dense with a wide range of Sensors, Things, and Robots, where visual discovery becomes less and less useful. Citizen scientists and their computational resources need to discover observations based on location, time, sensor/actuator type, observations thresholds, and more. OSH provides this discoverability for those seeking to navigate and manage the deluge of data that the Citizen Science landscape can offer, over time and space.

How to task and dispatch?

Most Citizen Science instruments are simply emplaced and left to take readings. The future of Citizen Science should be capable of managing a complex landscape of tasking and dispatch across the many sensors, actuators, and processes that will densely occupy a given environment. Having all of these integrated as location-enabled and geographically-aware web accessible services will also open them up to dynamic tasking and dispatch, including automated tipping and cueing. OSH enables such opportunities to tear down tasking and dispatch stovepipes, to enable smarter and more rapid Citizen Science.

How to administer/manage?

As the exciting field of Citizen Science expands, the landscape of sensors, actuators and processes will continually change and evolve, and new Sensors, Things and Robots will need to be actively administered/managed as they are added to this landscape. OSH offers a host of administrative tools for managing your Citizen Science resources, and leveraging these tools to support greater scientific insight.

Contact us

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