

Newsletter

VOLUME 2, January 2015



Dear Readers,

2014 was an exciting and meaningful year for the UAV industry. The focus of the industry shifted from the platform towards applications. From our perspective, as a data driven company, more and more in the industry understood that the emphasis is shifting towards application development that requires a holistic approach combining the sensor with suitable algorithms. In this field, there are few companies that have the capability of, developing a sensor that suits the appropriate algorithm for a specific application. Many of you have heard us talking about our Robin sensor as a vegetation driven remote sensing sensor that can serve agriculture and other industries (e.g. forestry, infrastructure). We think that this approach will prevail, and that versatile platforms that can accept various sensors will lead the market.

2015 is going to be as exciting as 2014. The US market is starting to open up as the FAA begins to issue permits to various operators and the result has been that remote sensing by UAVs is attracting increasing attention. Other mapping applications are beginning to attract attention from various users that are aware of the advantage of using UAV in their applications.

I would like to take this opportunity to wish you all a prosperous and successful 2015.

Robi Stark, CEO



2014 HIGHLIGHTS

- Sensilize's Robin was successfully integrated into various UAV platforms, Quadcopter and Fixed wings, and effectively performed test flights in Israel, Sweden and Canada.
- Dr. Robi Stark's article "[Thoughts on New Technology in Agriculture: Unmanned Aircraft Systems](#)" was published in The Farmer's Edge Journal.
- Two new members have joined the company: Mr Eli Alef as the company COO and Ms. Daniela Heller Pearlshtein as our senior remote sensing specialist.
- Sensilize is following and participating in a full growing cycle of wheat in northern Negev fields, Israel.
- We launched our new online social networks.

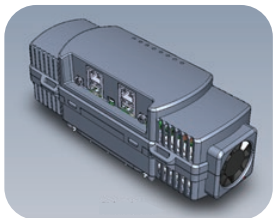
RECENT POSTS

ABOUT SENSILIZE

- [sUAS News](#) - [Sensilize, deeper insight into your crops](#)
- [PrecisionAg](#) - [Sensilize: Advanced Remote Sensors For Agriculture](#)

COMING SOON...

The new Robin Sensor



Side view



Bottom view

- Sensilize CEO Dr. Robi Stark will be presenting at the World Agritech Investment Summit in San Francisco on March 2015
- Sensilize's solution with its new Robin sensor, 7 multispectral bands and an additional RGB camera will be released to the market by April 1st 2015.
- Sensilize will sponsor the European Conference on Precision Agriculture in Tel Aviv, Israel in July 2015.

SENSILIZE BUZZ

Sensilize has captured a great deal of interest within the professional Ag and UAV community, attending the following conferences: Intergeo 2014, Berlin; CropTech and Drones for Farming, UK; ARA conference, New Orleans, USA.

SENSILIZE

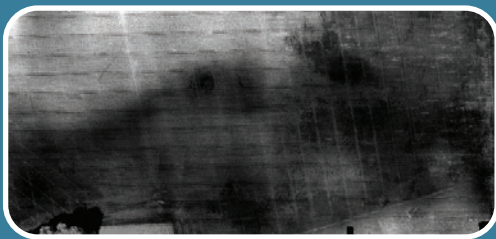
ALGORITHMS DEVELOPMENT

By: Yoav Zur - Sensilize CTO

As the CTO of Sensilize I would like to share new features and processes that we are developing in order to match difficulties addressed to us by various clients. One such request is to receive viable data under partly shaded skies, with minimal involvement of a human operator in the process. This process of de-shading or retrieving remote sensing data in shaded areas has been a great challenge in remote sensing for a long time. In the shade the amount of light is diminished and therefore the ability to retrieve their data is lower, as the sensor senses fewer details in less light. Therefore, it can be stated that de-shading is a factor of the sensor capabilities, mostly its signal to noise ratio (SNR). The higher the SNR of the sensor, the better its ability to retrieve good data in shaded areas, and its ability to define the shade. Another factor that influences the ability to correct shades is the ability to map the contour of the shaded area and apply to it different algorithms that can compensate for the lack of energy in these areas.

At Sensilize, we are developing a method that can automatically define the presence of cloud shades in the scene, define their contour and apply a corrective factor. The challenge is to generate an interpretation image that will be coherent regardless of cloud shades. These algorithms are robust and give meaningful results only on imagery that is acquired by a sensor with high SNR (bigger than 100) such as the Robin.

Below is an example of a scene with clouds. On the left, is the original image without the de-shading algorithm and on the right the same scene after processing with Sensilize de-shading algorithms. From these images, it is clear that the ability to de-shade the clouds and retrieve viable information in these areas is feasible. At the moment we are testing these algorithms on additional scenes in order to achieve higher accuracy and robustness.



Original grayscale image
Flown with a SmartPlanes platform

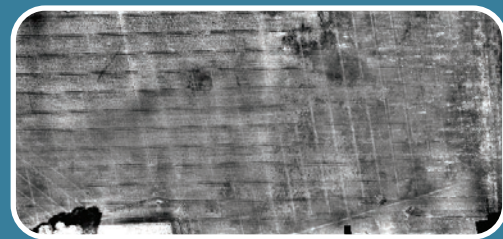


Image After Sensilize's
De-Shadowing algorithm

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