

## **Under 30 Satellite Companies Spire And ICEYE Team Up To Fight Crime On The High Seas**

Finnish satellite startup [ICEYE](#) and San Francisco-based satellite startup [Spire](#), both cofounded by alums of the *Forbes* 30 Under 30, announced Tuesday that they are embarking on a joint project to help government and NGO customers track possible sources of crimes on the high seas, ranging from illegal fishing to piracy.

The product offered by the two companies focuses on the tracking of so-called "dark vessels"—ships on the ocean that aren't broadcasting a signal that can be tracked by the [Automatic Identification System](#) (AIS), which is used by governments and traffic control systems to monitor the real-time positions of ships at sea. Spire already offers a service for its customers to track ships by AIS signal, but increasingly heard requests from customers around dark vessels.

"As use cases came out in discussions with customers and government, dark vessel detection became quite a popular request," Iain Goodridge, Spire's head of product marketing told *Forbes*.

One reason for this is that ships will often turn off their AIS when they're about to engage in illegal activity. Those activities range from illegal fishing to dumping waste to smuggling goods to piracy. So being able to track a ship that wasn't broadcasting its AIS is of particular interest.

ICEYE, in the meantime, has also been offering imaging services related to shipping. ICEYE's satellites use synthetic aperture radar (SAR) rather than cameras or spectroscopes. SAR is a type of radar capable of creating high resolution 2- and 3-dimensional images. It's particularly of interest for maritime applications because unlike other types of satellite imaging, SAR can be used to see through clouds and other weather to monitor the surface.

The capabilities of the two companies' satellites provided an ideal way to collaborate in order to track dark vessels, says ICEYE CSO and cofounder Pekka Laurila. "We knew what Spire was doing and we could see the complementarity over there and vice versa."

The two companies' collaboration will offer two basic services to detect dark vessels. In one service model, a customer would ask the two companies to monitor a particular area of the ocean at a given time. ICEYE would then use its satellites to locate all the ships in that area at that time, which can then be compared with Spire's detection of AIS signals. Any ship that ICEYE detects by radar that's not broadcasting an AIS signal could then be flagged for investigation.

In the second service model, Spire would alert a customer when a vessel in an area they are interested in has turned off its AIS signal, while ICEYE would use its satellites to continue monitoring that ship so that authorities will know exactly where they should be investigating.

Spire and ICEYE won't be the first companies to offer monitoring or detecting dark vessels, but what the companies believe they bring to the table is a unique combination of capabilities that can be brought to bear more frequently than existing services. Spire has several dozen satellites in orbit, while ICEYE has recently added two more satellites to its constellation of SAR-imaging satellites.

"Previously, dark vessels might have been detected every once in awhile but not tracked," explained Laurila. "Or because this detection would be relatively predictable with sparse satellite flights, you could act in between flights if you were smart. Now we're increasing potential for detection that can work as a deterrent."

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