

Lacuna Space Overview

January 2020

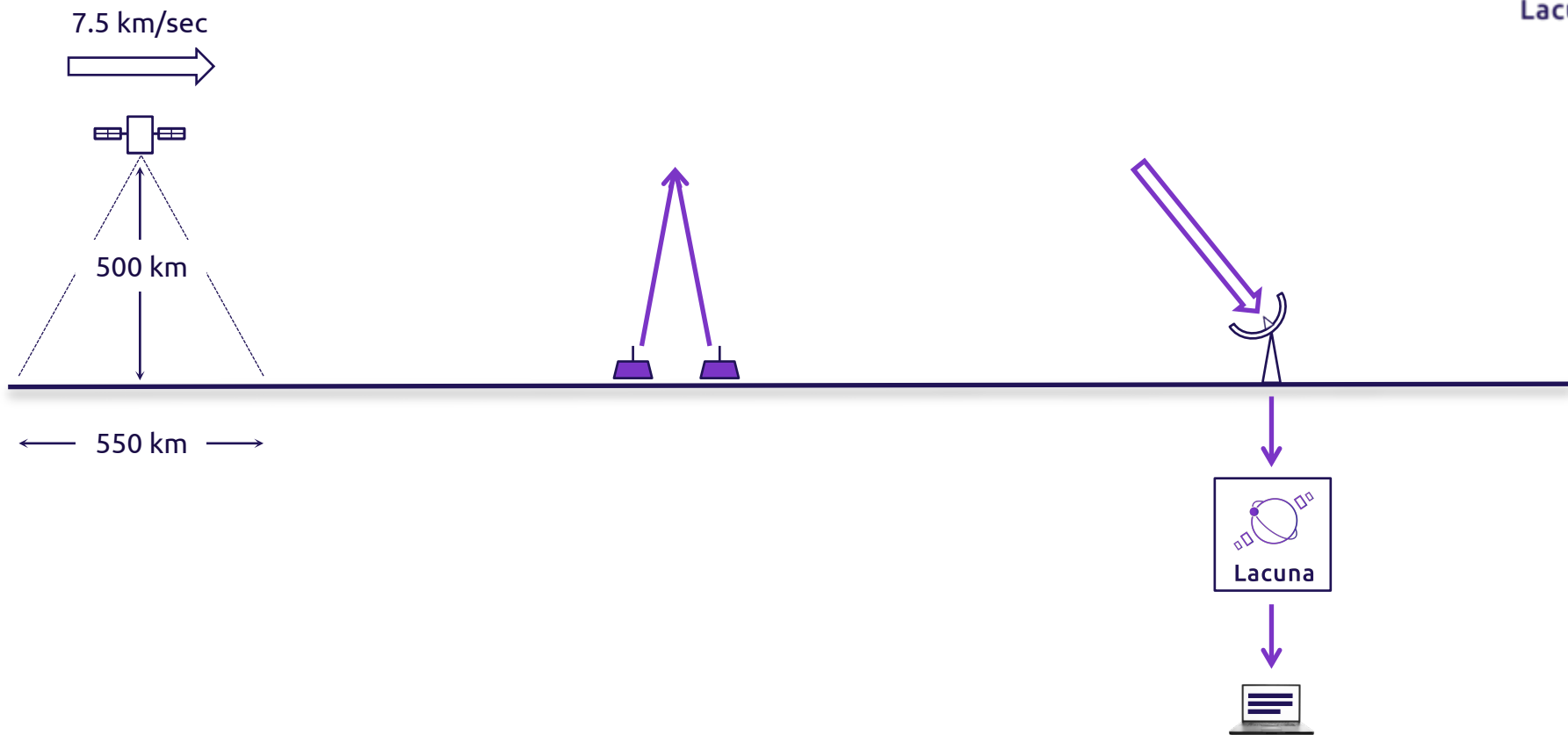




A world map with a black background, showing the distribution of mobile network connections. The map is overlaid with a dense network of colored lines and dots representing connections. The colors correspond to the legend: yellow for 4G, cyan for 3G, and red for 2G. The highest density of connections is in North America, particularly in the United States, where yellow (4G) connections are most prominent. Europe and parts of Asia also show significant concentrations of connections, with a mix of yellow, cyan, and red. Africa and South America show lower densities, primarily consisting of red (2G) and cyan (3G) connections. The lines represent the network infrastructure, while the dots represent individual connection points.

4G CONNECTIONS
3G CONNECTIONS
2G CONNECTIONS











Early trials



Plant Power! Netherlands



**Wildlife monitoring, Antarctica
Project Arriba**



Elephant tracking, South Africa

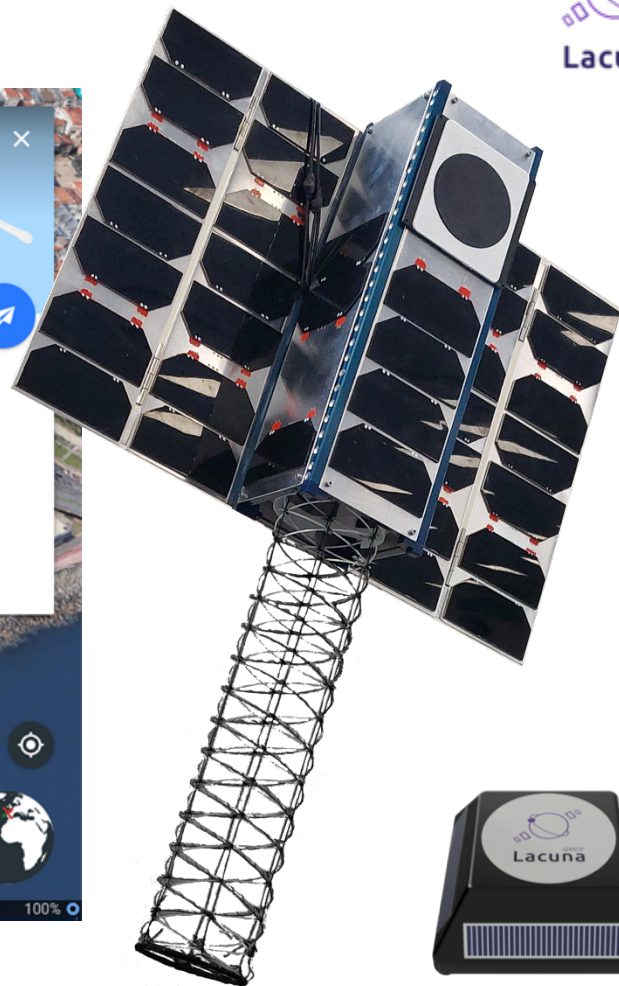


**Weather monitoring, Netherlands
Community application**



Yacht tracking, Atlantic and Europe

Doejong sailing boat

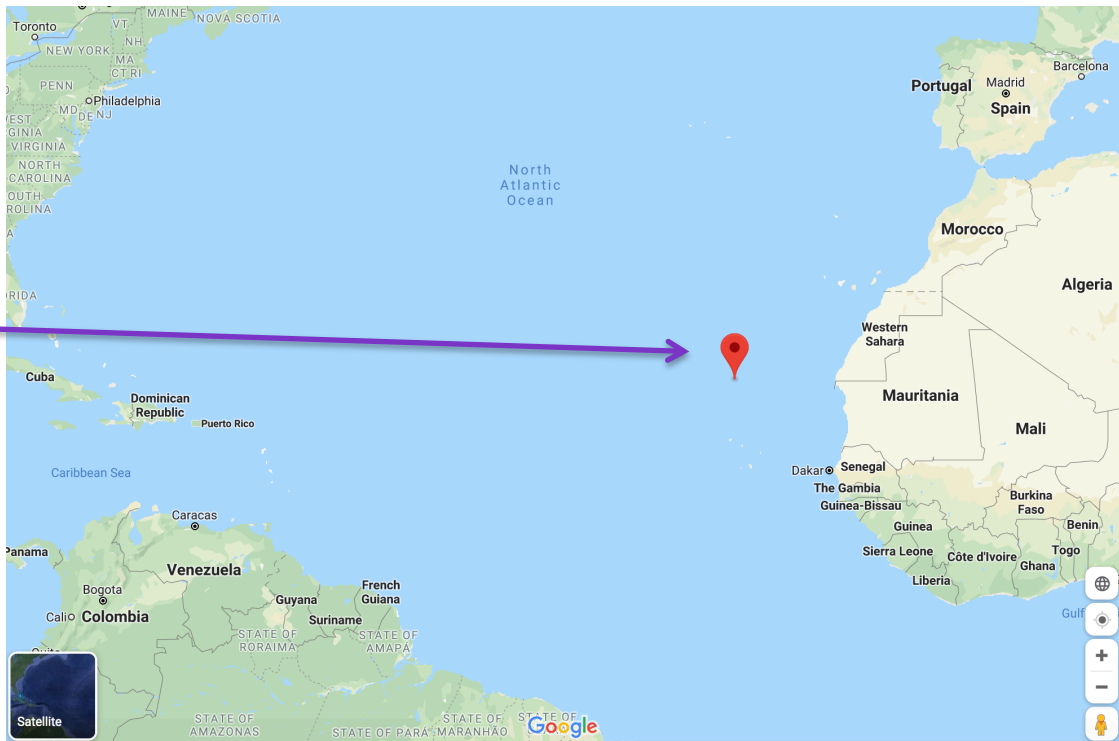


Doejong sailing boat

```
"metadata": {  
  "time": "2020-01-25T07:58:58.966025178Z",  
  "frequency": 868.1,  
  "modulation": "LORA",  
  "data_rate": "SF12BW125",  
  "airtime": 1974272000,  
  "coding_rate": "4\\5",  
  "gateways": [  
    {  
      "gtw_id": "eui-f01898219e90f018",  
      "time": "2020-01-24T23:38:25.49Z",  
      "channel": 1,  
      "rssi":  
      "snr": 0,  
      "rf_chain": 0  
    }  
  ]  
}
```


Doejong sailing boat

```
"payload_fields": {  
  "accx": 25,  
  "accy": -5,  
  "accz": 101,  
  "alt": -2,  
  "fixage": 175,  
  "humidity": 58,  
  "lat": 21.194908094103,  
  "length": 25,  
  "lng": -24.829542924735,  
  "pdop": 808,  
  "pressure": 10209,  
  "sequence": 6,  
  "temperature": 20.78,  
  "tleage": 12,  
  "ttf": 205,  
  "voltage": 3.899816592,  
  "voltread": 3227  
},  
..
```



Workshop



1000003	2020-01-24 21:53:16	28°C	32.125%			4.32V / 2.79V		v255	52.1619 / 5.37671	6	Meetjestad #1 (De WAR)	0.099km	-49	12.75	867.1Mhz, SF8BW125, 4/5CR
											Meetjestad #4 (De Koperhorst)	1.249km	-114	6	867.1Mhz, SF8BW125, 4/5CR
1000003	2020-01-24 21:44:59	28°C	43.1875%			2.3V		v255	52.1619 / 5.37671	5	eui-f01898219e90f018	-		0	868.1Mhz, SF12BW125, 4/5CR
1000003	2020-01-24 21:44:59	28°C	32.125%			4.36V / 2.79V		v255	52.1619 / 5.37671	4	eui-f01898219e90f018	-		0	868.1Mhz, SF12BW125, 4/5CR
1000003	2020-01-24 21:44:59	28°C	43.1875%			2.2V		v255	52.1619 / 5.37671	3	eui-f01898219e90f018	-		0	868.1Mhz, SF12BW125, 4/5CR
1000003	2020-01-24 21:26:16	28°C	32.125%			4.44V / 2.78V		v255	52.1619 / 5.37671	2	Meetjestad #1 (De WAR)	0.099km	-51	12.75	867.1Mhz, SF8BW125, 4/5CR
											Meetjestad #4 (De Koperhorst)	1.249km	-113	3.5	867.1Mhz, SF8BW125, 4/5CR
1000003	2020-01-24 21:11:16	28°C	43.0625%			2.28V		v255	52.1619 / 5.37671	1	Meetjestad #1 (De WAR)	0.099km	-99	11.5	867.1Mhz, SF8BW125, 4/5CR

Amersfoort

De Bilt, 24-01-2020

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