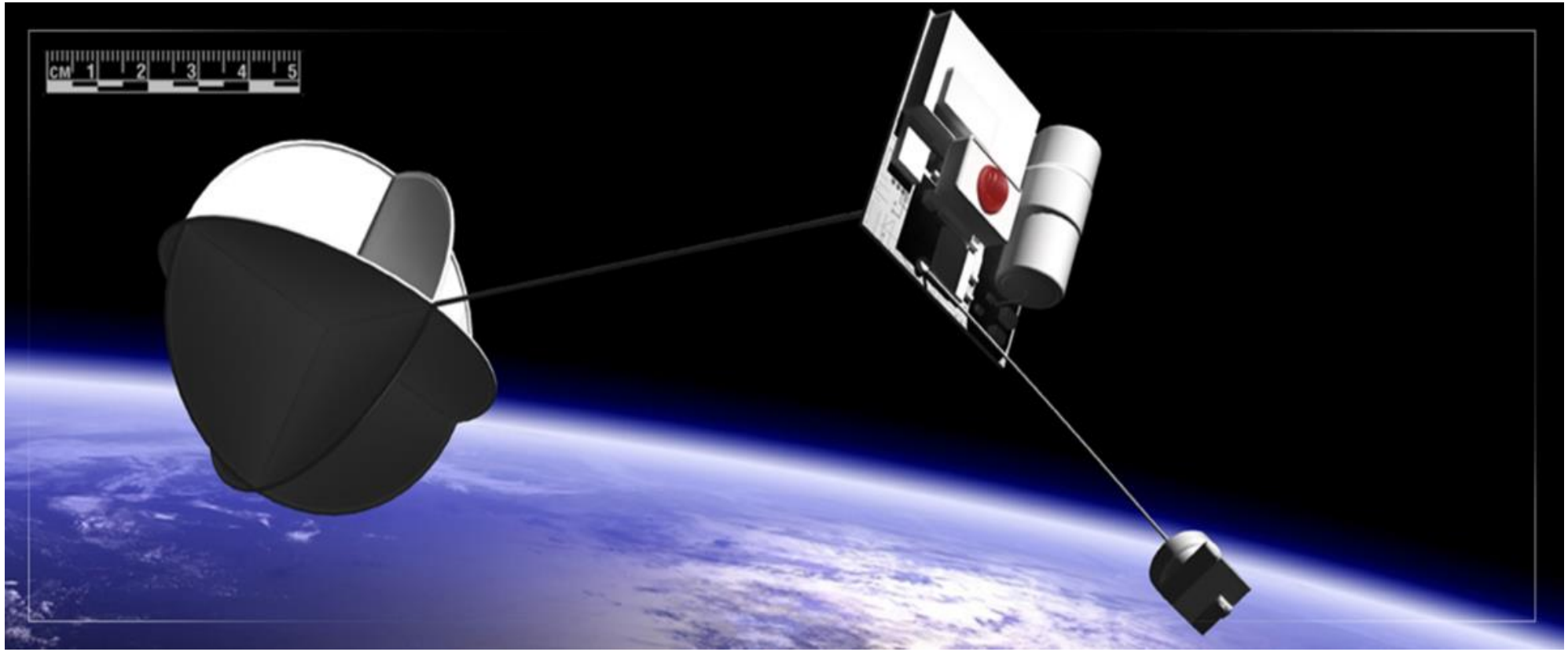
THUMBSAT



What is ThumbSat?

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- ThumbSat is the proposal from MxSpace to develop a satellite system that combines the latest technology in femto-satellites and easy accessibility to the end users.

- It is intended to provide service to academic institutions, satellite amateurs and other scientific communities that wish to experiment diverse payloads that can be loaded on these very small satellites, or take pictures using the camera integrated.

How does it work?

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25 satellites will be located at 400 km high (LEO)

ThumbSat will collect data for about 96 hours.

ThumbSat will orbit Earth for some weeks, then it will fall to the atmosphere.

400.15 - 401 MHz Mobile Satellite Service

Low cost but high gain Yagi antenna

Cientific Instances will be able to measure the payloads.

Academic Instances can track the satellites and study the telemetry

This guy is watching pictures of the Earth

How does it work?

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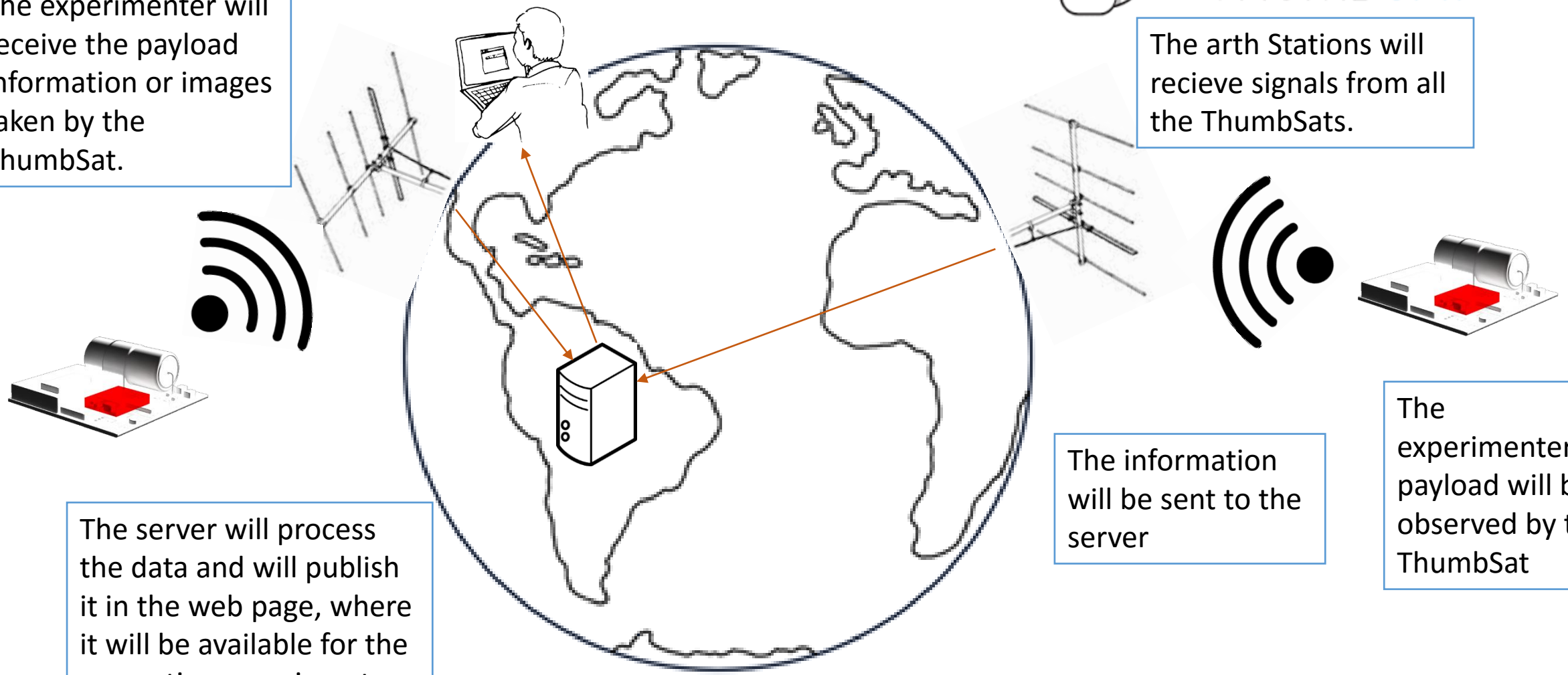
The experimenter will receive the payload information or images taken by the ThumbSat.



The arth Stations will recieve signals from all the ThumbSats.

The server will process the data and will publish it in the web page, where it will be available for the respective experimenters.

The information will be sent to the server

The experimenters payload will be observed by the ThumbSat

Description of the satellites

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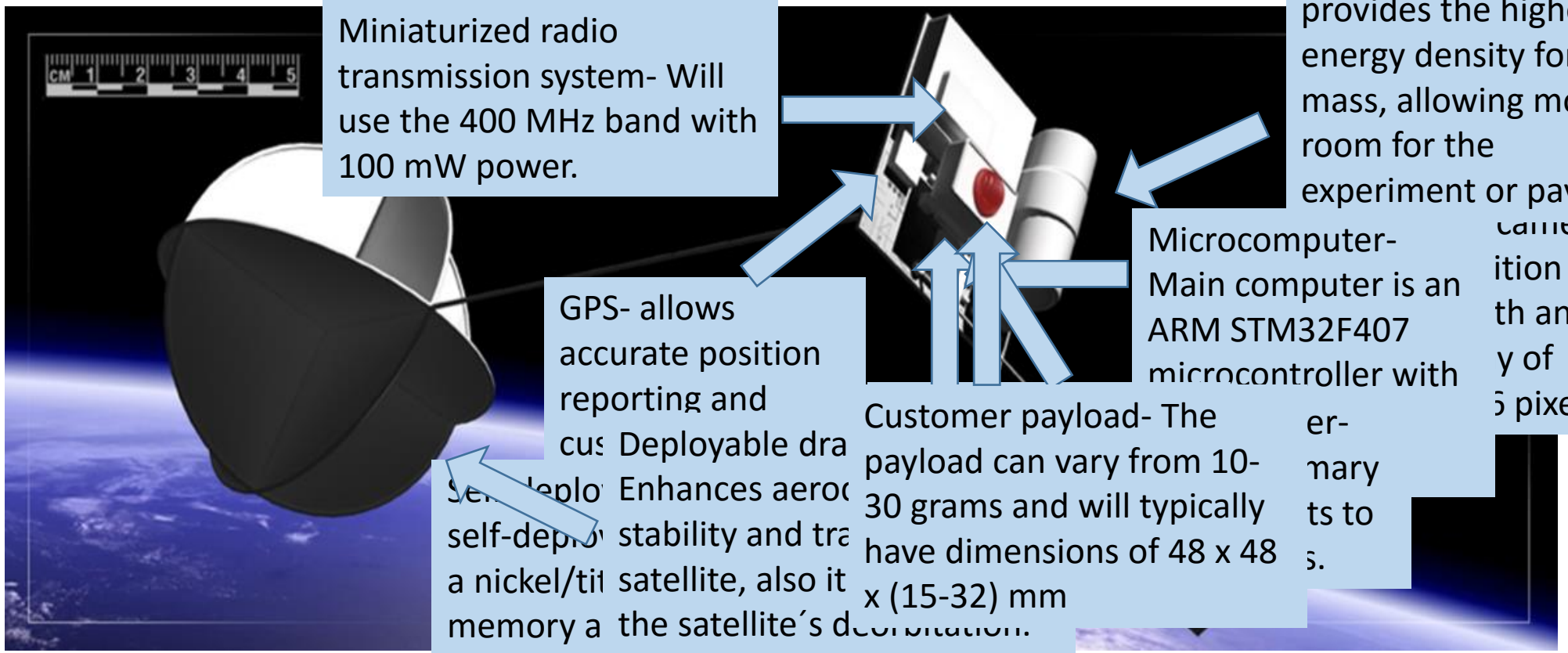
- Each ThumbSat will be part of a constellation of 25 satellites that each will weight less that 100 grams and are no more than 50 millimeters long of each side.

- The bus of the femtosatellites will be the same for all and only the payload will be modified depending of the necessities of the experiment.

Description of the satellites

- Each Bus will have the following sistems:



Miniaturized radio transmission system- Will use the 400 MHz band with 100 mW power.

Lithium battery- will last for about 96 hours, provides the highest energy density for its mass, allowing more room for the experiment or payload

Microcomputer- Main computer is an ARM STM32F407 microcontroller with

GPS- allows accurate position reporting and

Customer payload- The payload can vary from 10-30 grams and will typically have dimensions of 48 x 48 x (15-32) mm

Any questions?

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THANK YOU!

Please visit the web site www.thumbsat.com

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