WANTED BYTES

Transfer quickly images over a LoRa network

FILE TRANSFER POLICY

01 TCP like communication

02 Image fragmentation

03 Redundancy check

WHOa!

Long distance communication is cool, but sometimes they can be tricky

3600s

Time required to transfer 1Mb image

~~3600s~~

1200s

Time required with our solution

It's not magic, just simple tricks

Reduce the size

We compress the image size before the transfer

Increase the throughput

The image is transmitted simultaneously over different spreading factors

reconstruct the details

We use an mathematical upscaling algorithm to reconstruct the missing parts of the image

01

Reduce the size of the image

Lanczos Algorithm can compress an image and make it 3.6 times lighter

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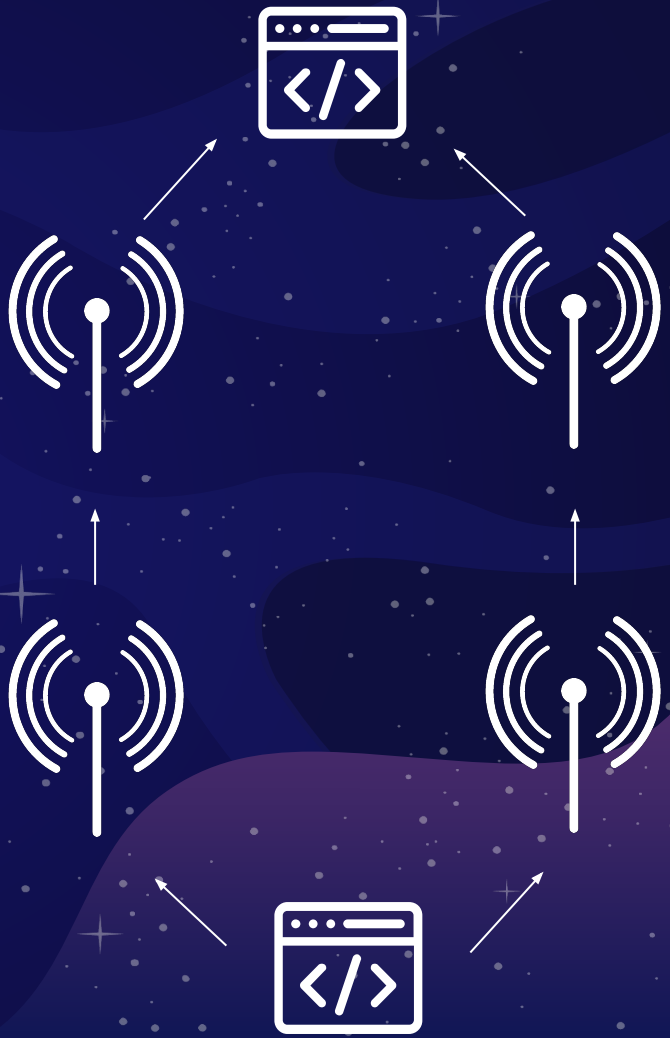

03

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Proof of concept

THANKS!

Other useful links:

https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9041044

https://slidesgo.com/theme/galaxy-gradient

http://saocompute.eurac.edu/hackathon_vertical_innovation/platform/