ESILV
ENGINEERING SCHOOL
DE VINCI PARIS

CAMPUS
CYBER

INTER-CAMPUS DECENTRALIZED NETWORK WITHOUT INTERNET

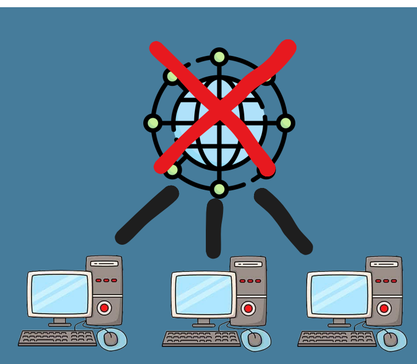
USING MESHTASTIC TO ENABLE COMMUNICATION DURING A COMPLETE INTERNET OUTAGE

TEAM 5301

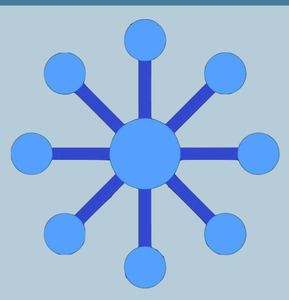
01 – CONTEXT

WHAT IS INTERNET WHAT HAPPENS IF THE INTERNET DISAPPEARS COMPLETELY?

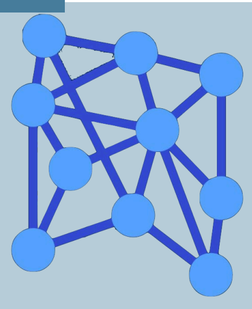
HOW CAN COMMUNICATION CONTINUE BETWEEN USERS AND WEBSITES WITHOUT A CENTRAL INFRASTRUCTURE?



02 – OBJECTIVES



CENTRALIZED



DECENTRALIZED

OUR GOAL :

DESIGN A RESILIENT, DECENTRALIZED NETWORK TO ENSURE COMMUNICATION REMAINS INTACT, EVEN IN THE EVENT OF A TOTAL INTERNET SHUTDOWN.

ENABLE CONTINUOUS MESSAGE TRANSMISSION WITHOUT DEPENDING ON CENTRAL SERVERS OR INTERNET ACCESS

03 – STATE OF ART

DECENTRALIZED NETWORK SOLUTIONS:

PURELY SOFTWARE: RETROSHARE , IPFS

HARDWARE AND SOFTWARE COMBINED: MESHTASTIC , LIBREMESH

04 – OUR SOLUTION

DECENTRALIZED MESH NETWORK:

EACH NODE ACTS AS A TRANSMITTER AND RELAY, ENSURING MESSAGES CAN TRAVEL EVEN IF SOME PARTS OF THE NETWORK FAIL.

A DECENTRALIZED STRUCTURE THAT GUARANTEES COMMUNICATION CONTINUITY WITH NO SINGLE POINT OF FAILURE.

04 – WHY MESHTASTIC?

EXCEPTIONAL RESILIENCE : RELIABLE COMMUNICATION EVEN IN EXTREME CONDITIONS.

HIGH AUTONOMY : INDEPENDENT OPERATION WITH LOW-POWER, LONG-RANGE RADIO TECHNOLOGY

MESSAGE TRANSMISSION VIA A SECURE, DECENTRALIZED RADIO NETWORK

05 – VISUAL USE CA

DESIGN A DECENTRALIZED NETWORK CAPABLE OF SENDING MESSAGES EVEN IN THE EVENT OF A COMPLETE INTERNET OUTAGE.

RESILIENCE

SECURITY

AUTONOMY

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