Study of the existing

↳ WeMeshNetwork.

EPITECH.
L'ECOLE DE L'INNOVATION ET DE L'EXPERTISE INFORMATIQUE

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Description

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Summary

Présentation et description du projet WeMeshNetwork. L'idée étant de créer une plateforme décentralisée pour des utilisateurs ciblés lors de rassemblements importants. Une étude des potentiels concurrents avec comparaison des points faibles et points forts de chacun est mise en place. Le positionnement de notre idée est aussi indiqué avec une estimation approximative de pérennité du projet.

Summary

Partie 1

↳ Reminders.

a. Epitech

EPITECH meanwhile, is a school of computer expertise. Its curriculum and pedagogy is innovative. Indeed, it is mainly based on practical rather than theoretical skills as other schools. Epitech takes place over five years including one abroad. During the school year, students will have the opportunity to do several internships in companies and alternations.

b. What is EIP?

A EPITECH Inovative Project (EIP) is a project to do and achieve in two years. It begins in the third year Epitech to conclude at the end of the fifth and final year of the course. Its purpose is to create an innovative project that will for certain groups commercialize it or build a future around (creating a start-up, for example).

WeMeshNetwork Project

Our project is called for now WeMeshNetwork. Its purpose is to allow users to communicate with each other through a network sharing, one phone to another without using a telecommunications network. The usefulness of this idea will be mainly in places where the telephone network is not present or saturated.

Communication is essential in our society today, people want to know constantly what their friends does when they are not together a few minutes in a single gathering.

WeMeshNetwork will be useful for users who want to communicate with their friends present in the same place , exchange messages or other things. Our goal is to be able to create a way of transmitting information from one cell A to cell B with no network available. For this, the mesh technology is useful . Indeed, it allows you to connect all mobile sets and passing information from one phone to another using all those that lie between the two terminals.

Partie 2

↳ existing projects.

Project Meshnet

Project Meshnet is an encrypted decentralized network. Indeed, the project is created on secure protocols that transfer data from one laptop to another private networks. Its purpose allows users to exchange files, or calls without been intercepted by third-party organizations that can filter and analyze the uploaded content.

Meshnet project was abandoned due to a lack of investment by developers on open source project. Several attempts to continue the project were conducted between 2011 and 2013 until the official announcement of the arresting about the development of the idea by a developer.

www.projectmeshnet.org

openmesh

OpenMeshProject is an open source project that aims to create a private network to disseminate information through the mesh network. Its usefulness will essentially allow countries that prohibit access to the Internet and information. Users will have the opportunity to create their own private network and disseminate across the country to communicate freely and without censorship.

The project was abandoned due to a lack of response to calls for tenders to develop the project open source. Investors have funded antennas but the lack of technical capacity to implement such a national platform initiated the project failure.

www.openmeshproject.org

SERVAL | **RECLAIM** YOUR PHONE

Serval Mesh is an Android application that allows voice calls, text messages and sharing files between multiple phones using wifi. Everything is done without obtaining a SIM card or any other infrastructure such as mobile towers and wifi hotspots or internet access.

Cellular networks are not available everywhere. In Australia, for example, about 75% of the land area has no mobile coverage. Let mobile phones form autonomous networks provides a low cost effective solution for communities to enjoy mobile communications in distant areas.

The project was abandoned because of a lack of financial resources. Users can download the application and have a very minimal use on a local area.

www.servalproject.org
Project files: github.com/servalproject

Partie 3

↳ Our position.

a. What do we bring ?

Our idea is part of a statement. That of finding ourselves in an event involving thousands of people and not being able to communicate together as the mobile network was saturated.

To solve this problem, we have the idea of link together mobile phones on the area using a mobile app as well as a connector. These links are used to create a communications network similar to the Internet, a decentralized, mesh between machines or rather « mesh network ».
Connected via the application on the network , users can call , chat, share content via the phone numbers of their contacts.

This project is primarily devoted to events. We want to offer the opportunity to promoter to communicate their content to users via the application. We also provide a minimum operational service with the help of relays.

The major problems of existing projects is that they target a too small number of user compared to the surface . The connector we offer serves to simplify the operation . This increases the compatibility between phones but also to increase the number of target persons .

We only use technology that works on time today, which are already used in similar mesh network. (Trusting , PGP , asymmetric encryption ...).

b. Which will not be covered

The problem with this project is linked to the number of users because with no phone connected, there is no possible network.

Serval Project is substantially close to our idea except that they directly target the world's population with compatibility between users almost close to zero. At the opposite we want the focus on a certain limited area to reach a maximum number of users.

Regarding the two other similar projects, the only common point with our idea is the fact that they establish a decentralized and secure network. However, we do not want to offer a kind of subnet internet like them.

c. The obsolete

The basis of the project may in no case be obsolete because it is the architecture of any decentralized network today. The use of this tool to make a means of communication is rather a concept for the future although it is already present at the moment.

The only problem is related to mobile phone manufacturers. Indeed, the connector is that we want to provide a solution to compatibility issues but we know that it is also a potential barrier to use. More different phones use the same technology, the easier it will inter-connect users and therefore increase their number.

Partie 4

↳ Conclusion.

Strength:
- Free application
- Simplicity
- No need of internet connection or mobile networks.
- Creator of social ties

Weaknesses:
- Requires that the application and the connector are used by many people as possible so that we can have a viable network.

Opportunities:
- Allow countries less developed to communicate easily
- Innovative technologies.
- Creation over the time of a global communications network.
- Promotions of events.

Threats:
- Strong differences between the manufacturers of mobile phones.