INTEGRATED LOCAL IP MULTIMEDIA SUBSYSTEM FOR HOME ENVIRONMENT

MOISE BAUMA - 087893
CONCEPT NOTE

• The idea of this project is to design and to build a local IMS system that integrate GSM capabilities, like making calls, receiving call and Short Messages Services.

• This proposed system will have a local storage that will be share among users and an integrated local IP Multimedia System, that will provide video call, instant message and VoIP to the users, who are within the local network.
DESIGN

Local USERS

Computer Device

GSM Module

Storage Device

IMS Core

SYSTEM ON A LOCAL NETWORK
SERVICES

Computer Device

GSM Calls
SFTP
HTTP
VoIP Calls

Local USERS

SYSTEM ON A LOCAL NETWORK
JUSTIFICATION (WHY?)

- Communication and sharing of information have been key to almost everything, from a small group of people to big companies. At the same time, it becomes very difficult and expensive to communicate and share data, for a group of people or small businesses.

- This system will be of great benefit to family and other persons living or staying together.

- A user can just call the system if not sure about who is in the house, and the call will be sent to everyone who is connected to the local network (IMS).

- No need to wait or around with the storage device, just connect the device to the local network.
COMPONENTS

Computer device (Raspberry Pi)

GSM Module

Storage devices
INTERNET OF THINGS (IOT)

Local USERS

Computer Device

IoT device 1
IoT device 2
IoT device 3
IoT device 4

SYSTEM ON A LOCAL NETWORK
FUNCTIONALITIES

• The user will be able to call or text other users within the local network.

• A User who is within the local network can make GSM calls through the IMS local system.

• The user will be able to share file or document using the local IMS or by coping it to the local storage.

• A user who is out of the local network can make a GSM call to the system and it will be transmitted to all the user connected to the local network.

• The users can access the local storage. Storage device will be only accessible within the local network.
FUNCTIONALITIES

- Computer Device
- Storage Device
- IMS Core
- GSM Module

Local USERS → Computer Device → Storage Device → IMS Core → Other USERS

LOCAL NETWORK → LOCAL USERS

OTHER NETWORKS → OTHER USERS
PRIVACY (COMPUTER)

LOCAL USER 1

ACCOUNT 1

LOCAL USER 2

LOCAL NETWORK

ACCOUNT 2

Computer Device

Storage Device
PRIVACY (IMS)

ACCOUNT 1

ACCOUNT 2

LOCAL USER 1

LOCAL USER 2

LOCAL NETWORK

IMS Core
LIMITATION (STORAGE)

LOCAL USER 1

LOCAL USER 2

Computer Device

Storage Device

LOCAL NETWORK
THE END

THANKS FOR YOUR TIME AND ATTENTION