

TeleMeetUp (TMU) with MRESENCE for TeleHealth & TeleMedicine Service Provision By Amref

Ecocarrier would propose the mode of operation described as follows for TeleHealth & TeleMedicine service provision that is easily and readily accessible by the user public, the healthcare professionals and stakeholders of the service provision.

Design

The service provision is to be based on TeleMeetUp (TMU) with MRESENCE Service Platform which provides cloud-based managed services for Virtual Interactions and Video Communication between/among participants who are geographically apart.

It is a managed service that is maintained by Ecocarrier Inc. in AWS (Amazon Web Services) Cloud for global deployment including all Africa.

The TeleHealth and TeleMedicine service is available through the use of

- TMU Widget and/or
- TMUBOT

in ways that are easily consumable forms and accessible and instantly available by/to the users who may be

- Patients
- Medical Professionals
- Administration Officers
- Stakeholders

A TMU Widget is a Plug-In or a tiny SDK that can be easily installed in any webpage (with a few lines of code) of the local service provider, in this case on the homepage of Amref's website.

A click or tap on the TMU Widget by an on-line visitor will instantly initiate and set up a TeleMeetUp or TMU (logo) session for

- interaction with a FAQ (Frequently Asked Questions) facility for the visitors to obtain information and answers that they seek to have and additionally
- setting up Virtual Interaction and Video Conference sessions between the visitors and live human agents

TMUBOT is a TMU Widget that is incorporated with an AI (Artificial Intelligence) - assisted Conversational Chabot. It is also a Widget or a Plug-in that can be easily installed on any webpage of a website – but typically it is installed on the homepage of the website.

The advantage of having the AI-assisted Conversational Chatbot is that the visitors are not required to seek out the questions and answers at a FAQ Facility.

Instead, the visitors are greeted by TMUBOT's chatbot function, and they can chat with it in a conversational manner to pose questions and obtain the answers as required.

Any time when the TMUBOT's chatbot function is unable to provide the answer to a question posed, it will transfer the call with the visitor to a live (human) agent.

Note that TMUBOT's chatbot function can handle conversation with virtually unlimited number of visitors concurrently.

Note also that TMUBOT possesses NLP (Natural Language Processing) and NLU (Natural Language Understanding) capability. It can easily be used to automate Self-Service Conversation. It is capable of Machine Learning – it studies the conversations between the live agent with visitors and understands them and includes them in its resource for use to do better in future automated conversation. Live agents can get hints/advice from the AI-assisted Chatbot function of TMUBOT when they are in TMU conversation with visitors.

At anytime during the interaction between the visitor and TMUBOT, the visitor may select on the menu to speak with a medical specialist for certain kind of medical treatment or a certain department for making reports, or to attend a webinar and training session in progress.

It is a very efficient way for providing accurate detailed information to the on-line visitors.

This function is especially useful for providing TeleHealth information to the community that Amref services.

Here is a description of how we envisage the operation of TMU Widget and TMUBOT for deployment by Amref:

TeleCare Service Provision to Rural Areas for TeleMedicine & TeleHealth Service

TMU Widget is configured for this use case with a menu that suits the application such as

- Triage
- Mental HealthCare
- Education for Public Health

- Routine & Incidental Reporting
- Hygiene & Clean Water

and is installed in the homepage of Amref Health Africa at <https://amref.org/enterprises/> or <https://amref.org/enterprises/leap/> mHeath Platform of Leap.

The concept design of the TeleCare Service Provision is for medical care services to be provided to rural parts of a country by utilizing the medical facility available in hospitals in the urban part of the country through the application of MRESENCE technology as cloud-based managed services.

Typically a CareGiver, who is an adult with minimum high school education, in a Community Center is required to operate a Tablet or a Smartphone and to use the Chrome browser in the Tablet or Smartphone to open the Homepage of Amref Health Africa where TMU Widget has already been installed and is prominently on display. The CareGiver clicks on the TMU Widget and is presented with the following Menu:

- Triage
- Mental HealthCare
- Education for Public Health
- Routine & Incidental Reporting
- Hygiene & Clean Water

When the CareGiver clicks on “Triage”, a TMU Session is instantly launched to connect the CareGiver with a Triage Nurse in the urban hospital.

The CareGiver then talks to the Triage Nurse and discusses the condition of the patient at hand.

Virtual interactions among the Triage Nurse, the CareGiver and the Patient will help to determine what course of action to take for medical treatment of the Patient.

The CareGiver brings the back camera of the Tablet or Smartphone near to the Patient for the Triage Nurse to see and examine the condition of the Patient.

The Triage Nurse uses a Tablet or Smartphone running TMU Native App (Android or iOS) during the interaction so that the back camera of the Tablet or Smartphone can capture the Triage Nurse’s hands, and the image of the hands is merged with the video of the Patient. The use of the Tablet/Smartphone running TMU Native App enables the SWISTWIT (See What I See Touch What I Touch) function to be used by the Triage Nurse to pinpoint or finger-point a particular body part or place or object as required during discussion/interaction for greater clarity in explanation.

During the TMU Session, upon determining what care the patient needs, the Triage Nurse will reach out to the appropriate doctor or specialist to further examine the Patient and to deal with the Patient's condition.

During the conversation and interaction among the CareGiver, Triage Nurse, Doctor/Specialist and Patient, they can make use of the excellent functional features of TMU to effectively and efficiently explain and demonstrate ideas and actions to take so as to determine the Patient's condition and to prescribe treatment.

(Note that the Doctors/Specialists should also be equipped with a Tablet or Smartphone running TMU Native App if they want to be able to use the SWISTWIT function.)

These include

- Native language chat with automatic language translation in real time which enables a Doctor/Specialist who is a foreign language speaker to speak and write in his/her preferred language in discussion with the CareGiver
- Screen-sharing of documents and images on any of the participants' screen during discussion
- Whiteboarding for drawing and sketching out ideas and illustrations to help explain ideas and designs with greater clarity
- SWISTWIT (See What I See Touch What I Touch) function for pin-pointing and finger-pointing on certain part of a document or some design or some body parts of the patient
- The entire virtual interaction among the participants is automatically captured and recorded in multi-media for use for various purposes in posterity.

For references please view videos at

www.mresence.com

www.telemeetup.com

[TeleCare Digital Platform for Rural Africa](#)

[TMU Widget for Amref](#)