TMUDFD
TMU for Digital Front Door
for
Healthcare Systems

TMUDFD is a widget or plug-in (a tiny SDK) that can easily be installed on any webpage to digitally transform the Healthcare System that owns and operates the webpage such that its operation can deal with visitors to the webpage, who may be customers, clients, or suppliers/providers of goods and/or services in a timely, effective and efficient manner.

The visitors need only have the use of a web browser for accessing the Digital Front Door services provided by the healthcare system online. The visitors are not required to download an app of any kind.

TMUDFD is a very convenient way of service and information provision by the Healthcare System, and it is easily and readily accessible by visitors online.

TMUDFD consists of

(a) TMU - a virtual interaction and video conference service enhanced with features that help realize approximation of PRESENCE among participants who are geographically apart through the application of technology for Mixed Reality Production.   www.tmu.ai

and

(b) an AI-assisted ML-enabled/informed Conversational Chatbot that is speech-enabled to support native language chat between the parties (30+ languages supported). The Chatbot may be enabled with the use of RPA software to read and voice data/information off of the Healthcare System's CRM and accounting system and certain spreadsheets for the purpose of information service provision accessible to clients/customers of the Healthcare System.

The Conversational Chatbot is able to deal concurrently with virtually unlimited number of visitors seeking/requiring information/service/advice of the healthcare system.

(a) + (b) = TMUBOT speech-enabled

(c) TMURGF (Revenue Generation Facility) – a facility that is ready for use for monetization of consultation service and/or for access to valuable chargeable information and/or services.

(d) Dashboard for real-time display of data relative to usage, billing, invoicing, orders, payment, network KPI, etc. Integration of the dashboard with RPA system employed by the Healthcare System would greatly enhance the productivity of work operation.

TMUBOT is very versatile and may be configured to cater to meeting various service requirements including but not limited to the following:

Administrative Functions

- General Information provision Q&A
- On-boarding a new customer/vendor/service provider or registration of patients
- Provision of Account Specific Information
- Collection of overdue payments
- Payment gateways

TeleHealth Information & Education

- The information/education materials may be provided in text and graphics with voiceover and/or in video
- It can be in Webinar or Blog formats

Virtual Waiting Room - in 2 versions

(i) for a patient arriving for an in-office medical appointment

In this context, a virtual waiting room is the process in which a patient can do check-in from their mobile device and remain in their vehicle until an examination room is available. This allows the patient to bypass the traditional waiting room, reducing the risk of exposure to both other patients and germs and viruses present on surfaces, shared devices and other materials such as magazines, books, papers, clipboards, and pens.

(ii) for a telehealth appointment

In the context of a telehealth appointment, a virtual waiting room is a process used by

- patients to indicate they are ready for their TeleMeetUp (TMU)

- staff who are viewing and managing a patient's TMU experience

- providers who are indicating they are ready to initiate the telehealth appointment with the patient or caregiver

(for more details refer to Footnotes at the end of this presentation)

TeleCare Service Provision to Rural Areas
for TeleMedicine & TeleHealth Service

TMUDFD or TMU for Digital Front Door is installed in a webpage owned and operated by an urban hospital or the Ministry of Health.

In this use case, the participants are required to use TMU Native App (instead of TMU Web App) which they can easily download from Google Play Store (for Android-OS version) or App Store (for iOS version).

TMUDFD as TMUBOT 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

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 TMUBOT 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 the urban hospital or the Ministry of Health where TMUDFD has already been installed and is prominently on display.

The CareGiver is greeted by TMUDFD and presented with the following Menu:

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

When the CareGiver clicks "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 pinpointing 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.

How does one use or interact with TMUDFD?

Anyone requiring and seeking medical advice or treatment would open the Homepage or a particular webpage designated for use by the user public for the purpose. At the webpage, the visitors are greeted by TMUDFD and become a participant in a TMUDFD session. They then simply follow the prompting by TMUDFD and navigate the service flow to obtain the

information or service that they seek as they interact with TMUBOT and live agents / medical specialists.

How to use TMUDFD to build a Digital Front Door for a healthcare system?

The process of building a Digital Front Door for a healthcare system begins with a discovery / exploratory discussion between a TMUDFD Specialist and the healthcare system's Administration and IT Personnel or the COO of the healthcare system. The TMUDFD Specialist and the healthcare system's personnel will work together to design and develop a Digital Front Door that meets the healthcare system's specific needs/requirement. The implementation of the Digital Front Door is to be carried out jointly by the healthcare system's IT personnel and TMUDFD Specialists. Write to TMUDFD@TMU.ai.

Footnotes

Virtual Waiting Room

"Virtual waiting rooms achieved instant adoption during the COVID-19 pandemic when concerns over risk and infection entered into public consciousness, and telehealth became non-negotiable for providing care during a time when the general population was urged to stay home whenever possible.

"Healthcare leaders can now empower their virtual waiting rooms with strategies that offer flexibility, safety, and security. We may face subsequent waves of COVID-19 or encounter other types of disruptions. Virtual waiting rooms reduce patient and staff exposure to illness and disease, optimize patient flow, and make it more sustainable for medical offices to offer telehealth as a new normal in delivering outpatient care.

"Virtual Waiting Room can be as simple as a patient-centered engagement solution like 2-way patient messaging and digital patient registration and check-in. Virtual Waiting Room serves both in-office visits and telemedicine visits. It can be used strategically with other patient engagement solutions already in place in the healthcare system. It is used to establish and support a digital patient experience that delights patients, drives better outcomes, and helps maintain financial stability for the practice, hospital, or healthcare system."