



GOVERNMENT POLYTECHNIC, NANDED

MICRO PROJECT

Academic year: 2020-21

TITLE OF THE PROJECT

Prepare a report on Mobile Value Added Service

Program: Information Tech.

Program code: IF 6I

Course: WMN

Course code: 22522

Name of Guide:- S. R. Shamraj



**MAHARASHTRA STATE
BOARD OF TECHNICAL EDUCATION
Certificate**

This is to certify that Mr. Vaibhav Dawane, Shivhar Bane, Harsh Zanwar
Roll No. 1568, 1547, 1570 of **6th** Semester of Diploma in **Information Technology**
of Institute, GOVERNMENT POLYTECHNIC has completed the **Micro Project**
satisfactorily in Subject - **WMN (22522)** for the academic year 2020 - 2021
as prescribed in the curriculum.

Place: Nanded

Date:

Exam. Seat No:

Subject Teacher

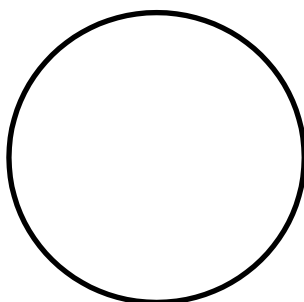
S. R. Shamraj

Head of the Department

S. N. Dhole Sir

Principal

DR. G.V. GARJE



WEEKLY PROGRESS REPORT

TITLE OF THE MICRO PROJECT:- Prepare a report on Mobile Value Added Services

WEEK	A C T I V I T Y P E R F O R M E D	S I G N O F G U I D E	DATE
1 ST	Discussion and finalization of Topic		
2 ND	Discussion and finalization of Topic		
3 RD	Preparation and submission of Abstract		
4 TH	Literature Review		
5 TH	Collection of Data		
6 TH	Collection of Data		
7 TH	Collection of Data		
8 TH	Collection of Data		
9 TH	Discussion and Outline of Content		
10 TH	Formulation of Content		
11 TH	Editing and 1 st Proof Reading of Content		
12 TH	Editing and 2 nd Proof Reading of Content		
13 TH	Compilation of Report and Presentation		
14 TH	Seminar		
15 TH	Viva-voce		
16 TH	Final submission of Micro project		

Sign of the student

Sign of the faculty

S. R. Shamraj

ANEEXURE II

Evaluation Sheet for the Micro Project

Academic Year: 2020-21

Name of the Faculty: S. R. Shamraj

Course: WMN

Course code: 22522

Semester: VI

Title of the project: Prepare a report on Mobile Value Added Service

Cos addressed by Micro Project:

A: Interpret Value Added Services

B. Study on MVAS

Major learning outcomes achieved by students by doing the project

(a) Practical outcome:

- 1) Deliver report effectively.

(b) Unit outcomes in Cognitive domain:

- 1) Prepare the points for computer presentation.
- 2) Make seminar presentation.

(c) Outcomes in Affective domain:

- 1) Function as team member.
- 2) Follow Ethics.
- 3) Make proper use of computer and Internet

Comments/suggestions about team work /leadership/inter-personal communication (if any)

.....

.....

Roll No.	Student Name	Marks out of 4 for performance in group activity (D 5 C o l . 8)	Marks out of 2for performance in oral presentation (D 5 C o l . 9)	Total out of 06
1547	Shivhar Bane			
1568	Vaibhav Dawane			
1570	Harsh Zanwar			

(Signature of Faculty)

S. R. Shamraj

INDEX

SR. NO.	CONTENT	PAG E NO.
1	Introduction	1
2	What Is Mobile Value Added Services ?	2
3	Importance of Mobile Value Added Services	3
4	Types of Mobile Value Added Services	4
5	Mobile Messaging Services	5
6	SMS	6
7	SMSC Deployment Architecture	7
8	EMS	8
9	WAP-Service	9
10	MMS Network Architecture	10
11	VMS	11
12	Voice Portal	12
13	Cell Broadcast Service	13
14	Push to Talk	14
15	Conclusion	15
16	Project Abstract	16
17	Sources Used	17

Introduction

In This, We are going to discuss about Mobile Value Added Services (M-VAS). What are the uses of Mobile Value Added Services. How important are Value Added Services. What will be the importance of the Mobile Value Added Services In India. Why it becomes the one of the major revenue generators in the telecom industry. And also we gonna learn what are the different Value Added Services are used in todays world.

What Is Mobile Value Added Services ?

Mobile Value Added Services (MVAS) are defined as mobile services that are offered by mobile service providers apart from the voice communication services. The **MVAS** such as sending short message service (SMS), multimedia messaging service (MMS), mobile email & IM, mobile money, location based services, mobile advertising, and mobile infotainment enables mobile subscribers to use smart phones and tablets for several non-voice purposes. The quick innovations in technology have led to the evolution of **MVAS** beyond the voice communication services. It helps mobile service providers to create and sustain new revenue streams and drive ARPU. Rising mobile phones, network penetration, and increased return on marketing spend are some of the factors driving the **mobile value added services** market.

Importance of Mobile Value Added Services

The **VASs** provided by operators in the telecom Industry are one of their main sources of income. **VASs** can increase the ARPU. **VAS** is one of the major areas where different telecom operators can compete with each other by offering different services in order to attract more customers. **VASs** are becoming part of the network operator's core business; hence there are increasingly no boundaries between the **VASs** and the operators.

More and more customers expect services beyond simple voice calls. Customers have started to select their operators based on the type of **VASs** the operator provides, so it is important for operators around the world to introduce new and innovative value added services in order to both attract more customers and retain their market. In summary, **VASs** are considered the most important area for the operators and the demand for **VASs** are very high among subscribers.

Types of Mobile Value Added Services

- Mobile Messaging Services
- SMS
- SMSC Deployment Architecture
- EMS
- WAP-Service
- MMS Network Architecture
- VMS
- Voice Portal
- Cell Broadcast Service
- Push to Talk

• **Mobile Messaging Services**

Mobile Messaging Service typically from a mobile phone or mobile device. Examples include SMS texting, Multimedia Message Service (MMS) to a host of wireless access protocol (WAP) mobile messaging services like WhatsApp, WeChat, Kakao, Kik, Line, etc. The latter being device agnostic, meaning they can be installed and used on many different types of mobile phone platforms

- **SMS (short message service)**

SMS (short message service) is a text messaging service component of most telephone, Internet, and mobile device systems. It uses standardized communication protocols that let mobile devices exchange short text messages. An intermediary service can facilitate a text-to-voice conversion to be sent to landlines. SMS, as used on modern devices, originated from radio telegraphy in radio memo pagers that used standardized phone protocols. These were defined in 1986 as part of the Global System for Mobile Communications (GSM) series of standards. The first test SMS message was sent on December 3, 1992, when Neil Papwort, a test engineer for Sema Group, used a personal computer to send "Merry Christmas" to the phone of colleague Richard Jarvis. SMS rolled out commercially on many cellular networks that decade and became hugely popular worldwide as a method of text communication. By the end of 2010, SMS was the most widely used data application, with an estimated 3.5 billion active users, or about 80% of all mobile phone subscribers.

• SMSC Deployment Architecture

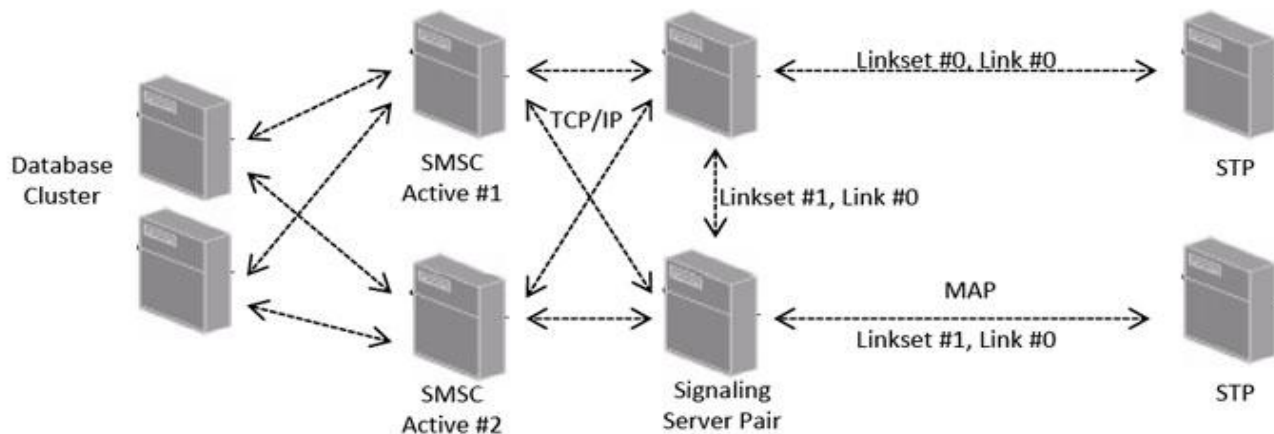


Figure : SMSC

Short Message Service Center (SMSC) is a carrier-class high-performance SMS Center for GSM/UMTS networks with features for MNOs, MVNOs, and Fixed Line Operators. Our SMS Center product is a fully scalable, software-based, and cloud-ready mobile network element. Short Message Service Center (SMSC) is a highly scalable, high capacity software based SMSC. The SMSC allows for simple and cost-effective deployment in GSM/UMTS mobile networks, as well as fast and easy dynamic scaling. The Modulo SMSC supports virtualization, as it is a software-based solution. It can run on any standard linux system and on any standard server hardware, or it can also run on a cloud server.

• **EMS (Element Management System)**

An element management system (EMS) consists of systems and applications for managing network elements (NE) on the network element-management layer (NEL) of the Telecommunications Management Network (TMN) model. An element management system manages one or more of a specific type of telecommunications network element. Typically, the EMS manages the functions and capabilities within each NE but does not manage the traffic between different NEs in the network. To support management of the traffic between itself and other NEs, the EMS communicates upward to higher-level network management systems (NMS) as described in the telecommunications management network layered model. An element management system manages one or more of a specific type of telecommunications network element. Typically, the EMS manages the functions and capabilities within each NE but does not manage the traffic between different NEs in the network. To support management of the traffic between itself and other NEs, the EMS communicates upward to higher-level network management systems (NMS) as described in the telecommunications management network layered model.

• WAP-Service

Wireless Application Protocol (WAP) is a technical standard for accessing information over a mobile wireless network. WAP achieved some popularity in the early 2000s, but by the 2010s it had been largely superseded by more modern standards. Almost all modern handset internet browsers now fully support HTML, so they do not need to use WAP markup for web page compatibility, and therefore, most are no longer able to render and display pages written in WML, WAP's markup language. Before the introduction of WAP, mobile service providers had limited opportunities to offer interactive data services, but needed interactivity to support Internet and Web applications such as email, stock prices, news and sports headlines.

• MMS Network Architecture

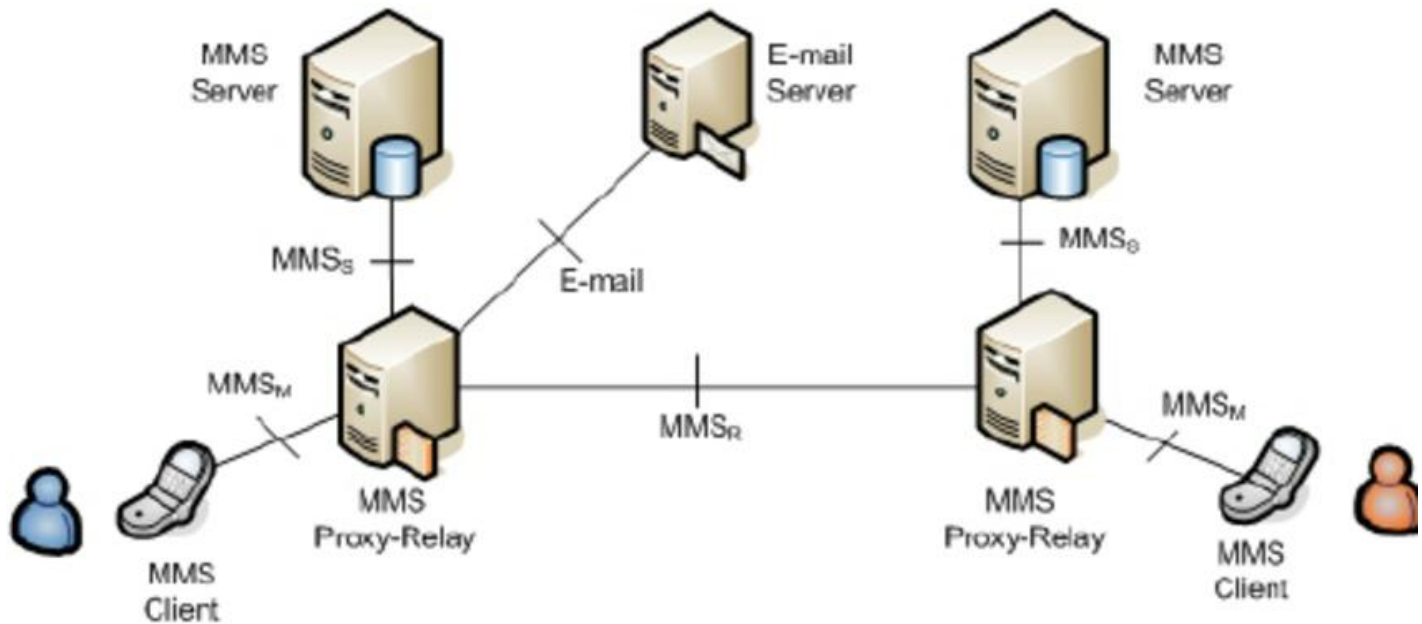


Figure : MMS Network Architecture

The MMS Architecture is the set of standards used by the Multimedia Messaging Service in mobile networks. The standard consists of a number of interfaces between components found in the mobile network:

1. MM1: the interface between MMS User Agent and MMS Center (MMSC, the combination of the MMS Relay & Server). Delivered as HTTP over a packet switched data session.
2. MM2: the interface between MMS Relay and MMS Server.
3. MM3: the interface between MMSC and other messaging systems. Using SMTP.
4. MM4: the interface between MMSC and foreign network providers. Using SMTP.
5. MM5: the interface between MMSC and HLR.
6. MM6: the interface between MMSC and user databases.
7. MM7: the interface between MMS Value-added service applications and MMSC. Typically Content Providers using HTTP / SOAP for delivery.
8. MM8: the interface between MMSC and the billing systems.
9. MM9: the interface between MMSC and an online charging system.
10. MM10: the interface between MMSC and a message service control function.
11. MM11: the interface between MMSC and an external transcoder.

• VMS

A voicemail system (also known as voice message or voice bank) is a computer-based system that allows users and subscribers to exchange personal voice messages; to select and deliver voice information; and to process transactions relating to individuals, organizations, products, and services, using an ordinary phone. The term is also used more broadly to denote any system of conveying a stored telecommunications voice messages, including using an answering machine. Most cell phone services offer voicemail as a basic feature; many corporate private branch exchanges include versatile internal voice-messaging services, and *98 vertical service code subscription is available to most individual and small business landline subscribers. Voicemail systems are designed to convey a caller's recorded audio message to a recipient. To do so they contain a user interface to select, play, and manage messages; a delivery method to either play or otherwise deliver the message; and a notification ability to inform the user of a waiting message.

• Voice Portal

Voice portals are the voice equivalent of web portals, giving access to information through spoken commands and voice responses. Ideally a voice portal could be an access point for any type of information, services, or transactions found on the Internet. Common uses include movie time listings and stock trading. In telecommunications circles, voice portals may be referred to as interactive voice response (IVR) systems, but this term also includes DTMF services. With the emergence of conversational assistants such as Apple's Siri, Amazon Alexa, Google Assistant, Microsoft Cortana, and Samsung's Bixby, Voice Portals can now be accessed through mobile devices and Far Field voice smart speakers such as the Amazon Echo and Google Home. Voice portals have no dependency on the access device; even low end mobile handsets can access the service. Voice portals talk to users in their local language and there is reduced customer learning required for using voice services compared to Internet/SMS based services.

• Cell Broadcast Service

Cell Broadcast (CB) is a method of sending messages to multiple mobile telephone users in a defined area at the same time. It is defined by the ETSI's GSM committee and 3GPP and is part of the 2G, 3G, 4G LTE (telecommunication) and 5G standards. It is also known as Short Message Service-Cell Broadcast (SMS-CB). One Cell Broadcast message can reach a large number of telephones at once. Cell Broadcast messages are directed to radio cells, rather than to a specific telephone. The latest generation of Cell Broadcast Systems (CBS) can send to the whole mobile network (e.g. 1,000,000 cells) in less than 10 seconds, reaching millions of mobile subscribers at the same time. A Cell Broadcast message is an unconfirmed push service, meaning that the originators of the messages do not know who has received the message, allowing for services based on anonymity. Cell Broadcast is compliant with the latest EU General Data Protection Regulation (GDPR) as mobile phone numbers are not required by CB. The originator (alerting authority) of the Cell Broadcast message can request the success rate of a message.

• Push to Talk

Push-to-talk (PTT), also known as press-to-transmit, is a method of having conversations or talking on half-duplex communication lines, including two-way radio, using a momentary button to switch from voice reception mode to transmit mode. For example, an air traffic controller usually talks on one radio frequency to all aircraft under his/her supervision. Those under the same frequency can hear others' transmissions while using procedure words such as "break", "break break" to separate order during the conversation (ICAO doc 9432). In doing so, they are aware of each other's actions and intentions, and do not hear any background noise from the ones who are not speaking. Similar considerations apply to police radio, the use of business band radios on construction sites, and other scenarios requiring coordination of several parties. Citizens Band is another example of classic push-to-talk operation. The PTT switch is most commonly located on the radio's handheld microphone, or for small hand-held radios, directly on the radio. For heavy radio users, a PTT foot switch may be used, and also can be combined with either a boom-mounted microphone or a headset with integrated microphone.

CONCLUSION

In this report, we found that there are lots of new MVAS services are coming onto the market. There is a tremendous increase in the revenue for the telecommunication sector. However in order to derive the full benefits of these services, every subscriber should have an advanced mobile handset. The new VAS that are introduced daily have a tremendous effect on the way that people use their mobile phones and the mobile phone is proving to be more like a friend. With the introduction of 3G services in India the scenario is drastically changing due to introduction of new VAS.

PROJECT ABSTRACT

Value Added Services (VASs) have become one of the major revenue generators in the telecom industry. Most of the telecom subscribers have started using VAS and it has become an important service for the customers. The objective of the project is to evaluate and analyse the need for value added services in India. The report begins with a discussion of existing VAS provided by 2G wide area cellular technologies and how these will change with the introduction of 3G technology. The report concludes with conclusions explaining the different insights that are gained from the analysis of the VAS (M-Commerce), Ringback tones provided by OnMobile, role of content providers in the Value chain and the survey results.

Sources Used

1. <https://www.google.com/>
2. https://en.wikipedia.org/wiki/Main_Page



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This is to certify that Mr. Vaibhav Dawane Roll No. 1568 of 6th Semester of Diploma in Information Technology of Institute, GOVERNMENT POLYTECHNIC has completed the **Micro Project satisfactorily** in Subject – WMN(22522) for the academic year 2020- 2021 as prescribed in the curriculum.

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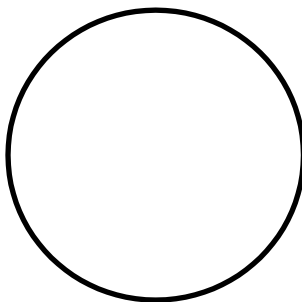
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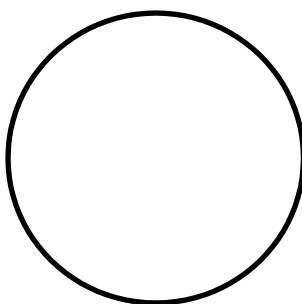
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Place: Nanded

Date:

Subject Teacher

S. R. Shamraj

Head of the Department

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