



Evaluation Study on Rural Telephony (Volume - I)

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Programme Evaluation Organisation
Planning Commission
Government of India
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Evaluation Study on Rural Telephony

VOLUME – I



सत्यमेव जयते

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Foreword

Development of communications infrastructure is an essential precondition for making available the benefits of liberalization to the rural masses and for further powering the growth engine of the country. It is a central objective of policy that every individual should have access to telecommunication systems of good quality.

The importance of telecom in everyone's life has increased enormously, amounting to a paradigm shift. It has become a basic infrastructure like electricity, road, water etc. for the general masses. Telecommunication is essential for implementation of various government schemes related to education, health etc. and also for day to day administration, maintaining law and order etc. However, while urban India has witnessed a telecom revolution the fruits of telecom development have still not adequately reached the rural masses. Recognizing the rural challenges and the potential role played by infrastructure in poverty removal, Government of India initiated the Rural Telephony Programme under the Bharat Nirman Yojana.

The Programme Evaluation Organization (PEO) of Planning Commission launched the evaluation study on Rural Telephony in order to measure the performance and impact of Village Public Telephones (VPTs) during the Bharat Nirman period. The core of the study methodology includes extensive field surveys, in depth interviews and interactions with users of VPT, non-users, custodians, BSNL officials at the state level, district level and field level. It is heartening to note that majority of the VPT users belong to under-privileged strata of society who have no other means of communication. VPTs have generally been accessible to public at large and have paved the way for connecting remote villages with the rest of the world, thus meeting the objectives of Universal Service Obligation. The utilisation pattern, however, indicates that VPTs are predominantly being used for personal communication. There is a need to give orientation to the villagers about the potential use of VPTs, particularly market and public informers, so that they can really serve as effective instruments for vitalizing the rural economy and for inclusive growth.

The study report contains two volumes. Volume I is structured into two Sections. First Section briefly introduces the study where importance of telecommunication is highlighted particularly in rural areas and brief outline of Rural Telephony Programme under Bharat Nirman Yojana is sketched. Second section of the report presents main observations of all India evaluation of VPTs. It describes the main findings of the study and an overview of achievement, limitations, impediments, challenges and future directions of the Rural Telephony under BNY.

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In Volume II of the report, comprehensive state specific reports of all the 12 States covered in the present study are described. Each state report comprises three parts - (1) State and district analysis of Rural Telephony viewed by the officials, (2) evaluation of performance on the chosen criteria of VPTs in the selected districts of the state, based on personal interaction with users, non users, custodians and group of villagers. (3) A comprehensive SWOT analysis of Rural Telephony in the state which highlights achievements, impediments challenges and future directions in that particular state.

Rural Telephony under Bharat Nirman has the potential to transform rural India. Many more initiatives and efforts in this can be implemented in near future, which will vitalize India's rural economy and creating a vast rural consumption market. Rural Bharat will be enabled to participate in transforming its own future and ensuring sustainable, inclusive growth for India.

I would like to compliment all the contributors for carrying out this study and finally bringing out the report.


(Montek Singh Ahluwalia)

December 22, 2010

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(Volume –I)**

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Preface

The development of rural connectivity through a strong communication network can play a very important role in enhancing the quality of life of rural people. To make every citizen the beneficiary of economic development from liberalization, it is necessary that everyone has equal access to development opportunities in the country. Thus, the effective system of communication through telecom is one of the very important tools to bring about development in rural areas. Rural connectivity comes very close to enablement of the community.

The Department of Telecommunication (DOT) of Government of India has adopted the promotion of rural telephony as one of the important thrust areas of development of rural people. It will not only improve the communication facilities in the remote rural villages, but also enhance the productivity and contribute a lot to economic growth by facilitating day to day market information and thereby increasing income of the residents of the rural areas. For the expansion of telephone network in rural areas, the DOT has evolved two strategies, market mechanisms in the viable areas by implementing the schemes of Village Public Telephones (VPTs) and Rural Community Phones (RCPs).

In order to boost up the progress in the creation of rural infrastructure, Government of India conceived Bharat Nirman programme as a time bound business plan during a four year period from 2005-06 to 2008-09. Six dimensions of rural infrastructure, namely rural roads, telephone connections, irrigation, water supply, housing and electrification were identified and over Rs. 1,74,000/ crore were earmarked for development of identified dimensions under the programme. This component of Rural Telephony was initiated during the year, 2005-06 and was targeted to provide Village Public Telephones (VPT) to 66,822 uncovered villages spread over 20 states of the country. The target for enhancement of rural telephony-connectivity under this programme is an innovative step to improve and upgrade the rural infrastructure, so as to enable the people to access the essential services and support them in transforming their own future.

The Development Evaluation Advisory Committee (DEAC) under the chairmanship of Dy. Chairman, Planning Commission entrusted Programme Evaluation Organization (PEO) to conduct evaluation study on Rural Telephony. In order to monitor the study, PEO constituted a Consultancy Evaluation cum Monitoring Committee (CEMC) consisting of officers from the Department of Tele Communication, Govt. of India, Subject Division and PEO of Planning Commission. The main purpose of the study is to examine how far the DOT has created the telephone facilities in the remote rural villages of the country by timely utilizing the allocated funds. At the same time, it needs to be verified as to the extent to which the communication network created through VPTs is being utilized by villagers and in what way the VPTs impact the economic growth in rural areas.

To address the process and outcome indicators underlying the objectives of the study, both primary and secondary data were collected from 24 districts/service areas, 240 villages, 2400 beneficiary households, 720 non beneficiary households spread over 12 different states of the country. Requisite information was also collected from knowledgeable persons such as sarpanch, village ward members, school teachers, village post masters, students, housewives

and people from the SC/ST and other economically backward community through Focus Group Discussions (FGD).

The main observations/findings that have been revealed by the evaluation study are; i) 79% of the VPT users belong to unprivileged people in rural areas, (ii) BSNL, as the service provider, has the highest percentage (38.49%) followed by Airtel (37.09%) for VPT users at their home, iii) overall observation for the country as a whole indicates that 67.69% users have not found any fault with VPTs installed in their villages and found free access to VPTs is available to 92.25% beneficiaries, iv) 77.60% of the users are of the opinion that the VPTs are installed in the convenient places of the locality.

The evaluation study has also thrown up some inadequacies which require to be addressed promptly by the implementing agencies for successful execution of the programme. These mainly are; i) mostly the VPTs are not having display meters and proper billing machines, so beneficiaries are being charged arbitrarily, ii) one of the major bottlenecks reported is the non-maintenance of batteries for the functioning of VPTs during prolonged power cuts in the villages, iii) the major challenge to VPT is the profuse availability of mobile phone services by other telecom players.

The study received constant support from Hon'ble Dy. Chairman, Planning Commission and Member Secretary, Planning Commission. The study was designed and conducted under the direction of Dr. R.C. Dey, Director, PEO with the assistance of Shri R.P. Bhatia, Statistical Officer, Shri Vipin Kumar and Shri L.N. Meena, Economic Officers of PEO, headquarters. The field investigation including data analysis and drafting of the report was conducted by the Council for Social Development (CSD), Southern Regional Centre, Hyderabad under the overall guidance and supervision of mine. The help and assistance received from all the officers especially, the efforts made by Prof. Manju Singh, CSD, Hyderabad in bringing out the report to its present shape is gratefully acknowledged.

New Delhi,
24th December, 2010



(Ratna. A. Jena)
Adviser, PEO

Executive Summary

INTRODUCTION

Rural connectivity holds key to rural development and poverty alleviation as well. The importance of telecom in everyone's life has undergone a paradigm shift. Instead of being one of the services, it has become a basic infrastructure like electricity, roads, water etc., for the general masses. Recognizing the rural challenges and the role played by infrastructure in poverty removal, Government of India is committed to enhance rural connectivity through a slew of measures such that rural users can access information of value and transact business as well as their improve quality of lives. The recent growth of Indian telecom has become a benchmark for other infrastructure sectors in India, which attempt to replicate the telecom success story. Government of India has initiated a flag ship programme Bharat Nirman Yojana that has a component of Rural Telephony. It has the potential to transform rural India. The main aim is to bridge the rural- urban divide and vitalize the rural economy of India to participate in transforming its own future. Planning Commission of India entrusted a study to Council for Social Development, SRC, Hyderabad to evaluate the performance of Village Public Telephones under the Bharat Nirman Programme. The main objectives of the study are to verify the effective coverage of VPT and to examine the level of consumer satisfaction. The latter is analyzed in terms of quality, reliability and transparency of the telecom services provided as well as on an estimation of average revenue per users vis-à-vis cost of providing rural telecommunication service. In addition, the aim of the study also includes identification of impediments in the implementation of the VPT, how far expectation of villagers have been fulfilled by the installation of the VPTs, the extent to which DOT has projected the demand of VPT and its services by analyzing the socio-economic profile of the users of the various telecom services, verification of regularity in payment of the bills, maintenance and usage pattern of VPT. The study also intends to examine the role of VPT towards improving the communication services and its impact on the economic growth in rural areas. The reference period of the study is from 2004-05 to 2008-09 during Bharat Nirman.

METHODOLOGY

The core of the study methodology includes extensive field surveys, in depth interviews and interactions with users of VPT, non-users, Custodians, BSNL officials at the state level, district level and field level. The study involved a three-pronged approach to collection of information: (a) conducting a field survey; (b) collection of data from secondary sources; and (c) in depth interactions with village leaders, teachers, Sarpanches, post masters and self help groups in the area. Apart from this, focus group discussion was also conducted among different categories of people. Both qualitative and quantitative data is used for the understanding of various issues

covered in the evaluation. As per the sample frame provided by Planning Commission for the present study, stratified random sampling is undertaken covering 12 states including North-East states. From each state, two districts are selected based on maximum and minimum coverage under VPTs. From each district 10 VPTs are selected based on simple random sampling and ten villages are chosen where the selected VPTs are already installed. From each village 10 beneficiary households and 3 non-beneficiary households are selected based on the list supplied by the custodian of the selected VPTs.

MAIN FINDINGS

The following is a concise recapitulation of the first hand observations from the field across the study sites covered in all India*. It consists of 12 states, 24 districts and 240 villages. Observations are based on the multilevel interaction with people including State and District officials, VPT custodians, beneficiaries and non-beneficiaries.

- **The Coverage of VPT:** Aggregate No. of VPTs provided by BSNL under Bharat Nirman was as on 31.03.10 is 62,302. The total number of VPTs provided on DSPT technology was 3681 and on other technology it was 61,673.
- **Socio Economic Profile of Users:** Present evaluation study reflects that VPT's are mainly used by underprivileged people having low SES in Rural India as about 79% of VPT users in all the states covered in the present study belongs to SC, ST and OBC category. Similarly it was observed that 17.2 % VPT users were females. All India distribution of primary occupation revealed that maximum percentage of users about 41.6 %, depend on agriculture and 10.9 % are non-agricultural casual labour. Data regarding educational qualification indicates that 25.9% of them are not literate and 15% are functional literates. Only 1.7% were having above graduate qualification. A very few (21.9%) of them owned pucca houses although 73.2% of them were having electricity at their houses. 50.4 % houses of VPT users were situated at the distance of more than 100 metres but less than 1 km. from pucca road. In terms of the distance from state highway it was revealed that about 39.8 % respondents on an average were staying upto 2 kms., and 29.7 % were staying more than 2 but less than 10 km. in all the states covered in the present study.
- Information regarding overall telephone availability at household level confirms that except those areas where network coverage is awfully weak or not available due to difficult location or remoteness, about 40% own telephones. Assam, Meghalaya, Arunachal Pradesh, Manipur, Orissa and Jharkhand are those states where telephone availability was found relatively less than other states included in the present study. The type of telephone

* State specific chapters reflect comprehensive sketch of each state in the report.

availability reveals that about 83.14 % of households were having mobiles whereas only 15.9 % were having landline phone. Regarding service providers details for VPT users at their home it was revealed that BSNL has the highest percentage (38.4 %) followed by Airtel (37.09).

- **Reliability and Usage Pattern:** In most of the states users have reported reliable availability of VPT services during period of the enquiry except Orissa, Assam, Meghalaya and Manipur. They have not reported any major fault in the VPT services in the respective areas. Overall observations of India reveals that 67.6% users expressed that there was no fault and 92.25% shared that VPT's were always found open to access in last month. Thus VPTs were reported to be open for users maximum time. The states mentioned above were facing problems in providing reliable services due to reasons like naxalism, insurgency, difficult terrain, etc. It was reported that VPT services are usually not available due to bad weather, battery failure and power interruption. Usage pattern of users is described in terms of STD and Local Calls made in last 30 and 60 days. **Usage patterns of VPTs** confirm that at all India level 27.9% users have used VPT more than 6 times by a single user for local calls in last 60 days at the time of enquiry in the present study. In Manipur, Meghalaya, majority of the users have not used even once whereas in Andhra Pradesh, Chattisgarh and Jharkhand majority users have used VPT less than two times in last 30 days. Regarding STD call, about 90 % users on all India basis reported that they have not used VPT for STD dialing. All India data confirms that only 2.2% users have used STD facility in last 60 days.
- **Quality Aspects:** Quality of VPT service is assessed in terms of convenience of place of installation, technology used, type of instrument used at booth and its clarity of voice. Quality of VPTs was articulated quite satisfactory generally by the users. All India observation confirms that 77.6% VPT users found the place of VPT installation convenient and 19.5% very convenient. Only few VPTs that are installed inside the houses or some shops were reported inconvenient. Majority VPT users expressed that the technology used in VPTs are convenient (77.6%) and very convenient (19.6%) for users, only 2.8% VPT users were having opinion that technology is not at all convenient to them. The response regarding the level of convenience with clarity of voice confirmed that majority users (63.2% convenient and 28.3% very convenient) were satisfied in most of the states except Manipur, Orissa and Uttarakhand where clarity of voice was problem many of the times. Similarly, excluding Meghalaya and Manipur, connectivity was reported reliable by most of the VPT users. As far as VPT connectivity is concerned 64.9% VPT users confirmed it reliable and 27.2% highly reliable. Overall VPT's were perceived reliable at All India level.

- **Timeliness Aspect:** Timeliness aspect of VPT was studied in terms of its availability during day time, fixed time and always. Present study confirms that in all most all VPTs are opened regularly and most of the users are satisfied with the timeliness of the services in majority of the states. 70.7% VPT users opined that VPT's are always open whereas 15.2% users confirmed that VPT's are opened during day time. In most of the cases VPT's were found opened even on holidays.
- **Payment by Users:** Present evaluation study also attempts to explore whether VPT users are paying for its use, what is the mode and regularity of payment, do they get bill and whether there is any social restriction in terms of religion, caste, gender etc. Except some VPT users in the states of Himachal Pradesh, Uttarakhand, Orissa, Meghalaya and Arunachal Pradesh, majority 85.6% VPT users agreed that they pay for VPT use. In above mentioned states, comparatively fewer users were found paying for VPT service. About 69% users were paying in cash but some 14.4% users also reported paying partly cash and partly credit. Interestingly in some parts of the country, barter system was also observed that was expressed very convenient to rural poor. Most often VPT users were regular in payment. No user was getting bill for VPT use. As far as **SOCIAL RESTRICTIONS** is concerned, barring very few instances in some parts, there were no social restrictions observed in all over India related to accessibility and use of VPTs. About 98.5% VPT users shared that there is no restriction in the use of VPT in their area.
- **Improvement in Connectivity:** Access to telecommunications is perceived to have improved connectivity significantly in recent years. Observations related to usage of VPT in various connectivity dimensions confirm that except improvement in personal connectivity, there is no improvement reported in other dimension of connectivity. Percentage response of users as no improvement in various dimensions of connectivity is as follows business (68.5%), official (74%), medical(55.6%), fire(69.5%), police(73.3%) and natural calamities(76%). It is reported that VPT is never being utilized by the users for access of information to the purpose of business (80.9%), market (76.1%), employment opportunity (82.2%), education (75.9), weather forecasting (93%), health (70%), etc and 19% VPT users revealed using it as per the necessity for health service. These usage are supposed to enhance their economic status and expected to improve their lives drastically. It was revealed about the connectivity preference that the highest value was placed on an inter-village person to person communication for personal calls. Users shared that the benefit derived is the time or money saved in travel. The second highest value was in village to district level calls. In this case, they shared that money saved was of the order of one day of wages. Long distance calls were not found to be critical for rural people as far as social and business networks were concerned.

- **Transparency:** Regarding people's participation and transparency in the decision of VPT location, it was observed that except in the states of Rajasthan, Assam and Meghalaya, majority users were not the part of the decision. Only 32% VPT users in India were involved in the decision about location. Only 22.9% VPT's have displayed toll free numbers and 15% were having display of tariff rates in the study area. Rajasthan, Madhya Pradesh and in some VPTs located in Himachal Pradesh, Uttarakhand and Assam were having display board of tariff and toll free numbers. Complaint books were not observed in 96.9% of the VPTs all over India. A few VPTs in Madhya Pradesh, Orissa, Rajasthan, Uttarakhand and Assam was found having complaint books. Only 19.7% of VPT's covered under the study have displayed name and telephone number of grievance redressal officer.
- **Economic Aspects of VPTs:** Present study attempted to investigate the increase in income of after VPT installation in their areas. The economic aspect of VPT is not encouraging as per the opinion of VPT users across the states covered in the study. About 83.6% users shared no change in their income because of VPT installation in their area. Maximum 5 – 10 percent change is reported by users who observed some change in their income. Very minimal portion of Madhya Pradesh and Rajasthan reported more than 20 per cent increase in their income as opined by users. Although most of them perceive that communication can increase their financial capital (ability to earn more, get new businesses) with greater exposure and awareness. They shared that the need to travel has greatly reduced with improved access to telecommunications. Social capital (relationship with family members, friends etc) has also been positively influenced by telecommunications.
- **Repair and Maintenance:** In majority of the cases, repair and maintenance was reported satisfactory to some extent. All India observations confirms that in all the twelve state included in the study repair and maintenance in terms of time perceived satisfactory by about 61.7 % VPT users and highly satisfactory by around 19.9% VPT users whereas quality of repair shared 58.9% satisfactory and 21.9 % highly satisfactory by VPT users. In Manipur and Orissa particularly, users were not satisfied with the repair and maintenance.
- **Average Revenue Per Users (ARPU)** gives clear picture about the usage of the VPT in the specific village. ARPU calculation is made on the basis of aggregating income from telephone calls for the last three months at the time of undertaking the present study. Information regarding ARPU indicates that 39.3% of the VPTs are getting less than Rs 250 ARPU and 47.1% are earning between Rs. 250 – 500 ARPU per month. Only 4.1% VPTs in all the states reported having more than Rs. 1,000 ARPU. This indicates very low attraction towards VPT as far as business venture is concerned.

- **Status of Problem Resolution:** This was explored regarding location, accessibility, repair and maintenance, payment and related to other service providers. It revealed that in 36.3% of cases, problem with reference to location was resolved internally in many states like Andhra Pradesh, Uttarakhand, Meghalaya and Manipur whereas 49.8% of the users were not aware about the problem in states including Assam, Arunachal Pradesh, Rajasthan, Madhya Pradesh, Chattisgarh and Jharkhand. In some states e.g. AP, some parts of Himachal Pradesh, Uttarakhand and Meghalaya about 30% users reported that the problem solution regarding accessibility in terms of time and quality was resolved internally and on the other side 52.5% users shares that they are not aware about the problem (Chattisgarh, Jharkhand, Orissa, Madhya Pradesh, Rajasthan and Assam). In Manipur, parts of Himachal Pradesh and Jharkhand and Meghalaya 9.1% users stated that this problem was not resolved. In present study about 15% of the users expressed that problems of repair and maintenance were solved internally whereas around 65% were not aware about this (parts of Himachal Pradesh, Uttarakhand, Jharkhand, Chattisgarh, Orissa, Madhya Pradesh and Rajasthan). Many users in Manipur shared that it was not resolved in their state any way. When inquiry was made for problem solving related to payment to custodian, in states including Andhra Pradesh, Himachal Pradesh, Orissa and Manipur, majority users expressed that it is solved internally. Majority 86.4% users in entire study area were not aware about the problem solution related to alternative service providers. It reflects that people's participation in problem solution have high potential to improve the performance of VPTs.

Additionally an attempt is also made to have brief comparative understanding of VPT services in hilly and regions. In the present study, hilly areas include Arunachal Pradesh, Himachal Pradesh, Manipur, Meghalaya and Uttranchal. All other remaining states considered as plain region i.e., Andhra Pradesh, Assam, Jharkhand, Madhya Pradesh, Chattisgarh, Orissa and Rajasthan. It reflects that availability of VPT services was lesser and frequency of fault was higher in hilly area. Quality of VPT services in terms of clarity of voice and connectivity was also shared less convenient to VPT users in hilly area compared to plain area. Users in hilly areas also expressed their satisfaction level lower in terms of VPT access and repair & maintenance. Transparency was also observed relatively lower in hilly area.

Other Important Observations

- **STRENGTHS:** VPT installation is reported as a landmark in some villages in India where villagers get connected with rest of the world first time after 60 years of independence. VPT was the first phone installed in these villages under Bharat Nirman Yojana. It is especially useful in case of crisis – fire in the forest, conflict among tribal group, flood, during medical emergencies and natural disasters. Mostly VPT users were quite satisfied with the operation and approach of custodian. Repair and maintenance is undertaken by BSNL free

of charge. Regarding accessibility and responsiveness, VPT is described mostly accessible to all caste without any discrimination. Almost all VPTs are installed as per the guidelines of VPT installation with the consultation of Gram Sabha and Panchayat members in the villages. Poorest of poor are in a position to derive benefit from VPT by collating information for their lives. Barter system was also found exists that facilitates villagers to use telecommunication services with full convenience. Young generation glad to have connectivity to access information regarding employment. Reported increase in economic level through getting information about employment opportunities.

- **LIMITATIONS:** Mostly VPTs were not having display meters and proper billing machine and it was reported in some cases that custodians were charging arbitrarily. In many VPTs display board showing toll free numbers and tariff rates were not found. Some VPTs that were installed without consensus of villagers were reported inconvenient to many users. Even many villagers are not aware that it is public facility in some cases. Repair and Maintenance is limiting the proper functioning of VPTs in some places. Problem of battery and its maintenance is observed almost every where across the country except where VPTs are based on Land line technology. Prolonged power cuts and interrupted supply making difficulties in charging and maintenance of batteries that makes VPT dysfunctional. In solar battery too, the problem of charging persist in cloudy weather. Maintenance of VPT is expressed difficult in far flung area where there is no approach road. Shortage of BSNL staff and vehicle for repair is also reported. Remote locations of VPTs from tower create problems in getting signals in some of the villages. Those VPTs are unable to catch proper and regular signals. Profuse availability of services by other telecom players with better services in terms of connectivity, bill delivery / payment, repair and maintenance discourage villagers to use VPTs. Another major challenge in optimum utilization of VPT is, the ignorance of villagers about its usage that how VPT could change their quality of lives through accessing multiple information only with a call. Naxal threat and communal disturbances were also observed as one of the limiting factors for optimum utilization of VPTs in a small number of parts.
- **FUTURE DIRECTIONS:** In India the discussion on rural telephony has remained confined to technological solutions to the problem of extending coverage to areas with low subscriber density. The utilization aspect of the problem has been largely ignored. Yet it has been widely observed that mere provision of access does not ensure its use; a whole lot of personal, social and economic factors intervene. Villagers should have proper orientation about the potential use of VPT as most of them using VPT merely for personal communication. Important numbers of government departments, agencies, market links, health services, knowledge centers should be made easily available for extensive use by the villagers. Incorporation of extended facilities – Internet, Fax, STD and ISD would

strengthen VPT for maximum utilization. Proactive role by BSNL officials for making product VPT attractive and economical viable. Branding exercise to position VPT as the lifeline for rural development needs to be established. Efforts should be made for increasing earning with add on services. A need is felt to set up of Battery charger unit to facilitate the charging of battery as this is the prime device for functionality of VPT. Bill delivery system should be improved for timely delivery. Bill collection mechanism should also made customer friendly to avoid and minimize DNP cases. Fellowship/ training programmes could be facilitated for local rural youth and local people for managing quick fault repair for better functioning especially in remote geographic location with convergence of other Government programmes. One of the solutions suggested for improved efficiency of VPT is to link existing and successful micro-credit organizations that are trusted at the village level (that play a key role in the village development) to expand VPT coverage in rural areas. Small loans to rural entrepreneurs (perhaps targeted to women and youth) can enable entrepreneurs to establish VPT for high ARPU providing a range of services including telephone, fax, email and even web, photocopy and computer word-processing services. Some of the stakeholders have suggested the need of redesigning the scope and management systems for managing implementing departments by putting in place a third party program assessment process. The assessment can be carried out not only at the end of the program, but also at periodic intervals, so that any bottlenecks can be detected and removed out early. It is felt that a total overhauling of the concerned department would improve the performance.

Bharat Nirman, including Rural Telephony, has the potential to transform rural India. Many more initiatives and efforts in this can be implemented in near future, vitalizing India's rural economy and creating a vast rural consumption market. Rural Bharat will be enabled to participate in transforming its own future, ensuring sustainable, inclusive growth for India.

Introduction

"Information is critical to the social and economic activities that comprise the development process. Telecommunications, as a means of sharing information, is not simply a connection between people, but a link in the chain of the development process itself." [Hudson 1995].

Development of Telecommunication and the communications infrastructure are essential preconditions for making available the benefits of liberalization to the rural masses and for further powering the engine of growth of the nation. It is a firm belief of the policy planners of India that every Indian should have the opportunity to connect with the world beyond their geographical boundaries, and Government should work to ensure that every individual has access to a dial tone wherever and whenever tapped.

Gandhiji said "The Soul of India resides in Rural India". India is a vast country having an area of about 3,287,000 square kilometers with nearly 70 % of its total population of about 1.15 billion, living in the rural areas. There are more than six lakh villages in the country. The gains from liberalization and economic development must percolate to all the segments in the country and every citizen has to be the beneficiary.

The last five years, have seen a phenomenal spurt in the growth of tele-density in the country riding on the evolution of wireless technologies, policies of Government and the Regulator. The total subscribers as on May 2009 is 452.91 million compared to nearly 8 million in March 1994. However, there is a huge digital divide between Urban and Rural sectors and the rate of growth of telecom penetration in rural India has been low as compared to urban. As of September 2008, the urban teledensity (No of telephones per 100 persons) was 72.47 as against the rural teledensity of only around 12.72. During the last two decades, though several attempts have been made to extend the benefits of the telecom revolution to rural masses yet the gap between urban and rural tele-density has widened.

Around the world, governments, international agencies, and academics have recognized telecom as an enabling infrastructure – allowing the people it connects to reach out and communicate, seek business, and wider their knowledge. There is plenty of evidence to show that telephones have a high correlation with GDP per capita. Surveys and studies have repeatedly shown that access to information and communication technologies allows the benefits of information availability, business opportunities and social connections that translate into brighter education and economic opportunities. Rural development gets a boost by a reliable infrastructure of enhanced telecommunications. Participation by rural and poor segments of society in the information economy should be a strategic priority both for social

reasons as well as for the reason of economic development being a goal in itself. Access to the telecommunication network drives economic growth and provides economic opportunity.

Rural India is still, unfortunately, on the wrong side of the digital divide, which prevents a significant portion of our population from attaining their full potential. Given that communication is a human need and right, and that a strong communications network enables commercial and social ties, it is essential to bridge this urban and rural divide between urban and rural India. Special emphasis needs to be placed on the role of telecommunications in enabling rural citizens to integrate effectively in the Indian economy and then to the new Global Economy. Successful systems require not just appropriate technology but primarily that all other elements like people, policies, processes, incentives, institutions, and infrastructure are present and work well. Special transition policies are required to give a fair chance and to help rural India to adjust to the new marketplace of telecommunications.

Perceiving the current background reflected in the following Table I.1, Government of India introduced policy changes from time to time to ensure sustained growth in the telecom sector. In the last few years, the exponential growth of mobile phones was primarily in metros and large urban conglomerate leading to further increase in the digital divide.

Table I.1 : Telecom Resources (as on September 2008)

1	Total Number of Telephone subscribers (Wire line + Wireless) (million)	353.66
a.	Rural (million)	101.71
b.	Urban (million)	251.95
2.	Total Number of Wireless Subscribers (million)	315.31
a.	Rural (million)	90.76
b.	Urban (million)	224.55
3.	Teledensity	30.64
a.	Rural	12.74
b.	Urban	72.47
4.	Total Number of Telephone Exchange of BSNL	38,202
a.	Rural	29,492
b.	Urban	8,710
5.	BTSS	
a.	Rural	1,06,518
b.	Rural Shared	29,723
c.	Total BTs including Urban	2,22,137
6.	Connectivity of Rural BTSS	
a.	No. of BTS on OFC / UG Cable	21,795
b.	Microwave	84,458
c.	Satellite Link	265

Source: Telecom Regulatory Authority of India, Draft Recommendations on an Approach to Rural Telephony – Suggested Measures for an Accelerated Growth 4th March, 2009, Mahanagar Doorsanchar Bhawan, Jawahar Lal Nehru Marg, New Delhi – 110002.

However, the year 2008 has seen a laudable trend of more and more operators focusing on the semi urban and rural markets. To sustain this, the operators require facilitating measures to reach rural markets. There is a need for evolving the policy and regulatory environment necessary to encourage service providers to move to these apparently less lucrative markets. The year wise growth in teledensity is shown in Table I.2.

Table I.2 : Rural Vs. Urban Teledensity Teledensity details (Phones per 100)

Sl. No.	Month	Year	Rural	Urban	Overall
1.	March	2004	1.70	21.30	7.58
2.	March	2005	1.74	26.20	9.08
3.	March	2006	1.86	37.99	12.70
4.	March	2007	5.78	47.24	18.22
5.	March	2008	9.34	63.67	25.64
6.	December	2008	12.62	81.30	33.23

RURAL CHALLENGES:

The pace of India's economic growth over the last few years has been noticed and commended by many all over world. But satisfaction on this account is shadowed by vast income disparities and continuing high level of poverty in rural India. Almost half of rural India lives in deprivation, with no access to essentials such as roads, power, water and connectivity. Unemployment is rife.

The importance of telecom in everyone's life has undergone a paradigm shift. Instead of one of the service, it has become a basic infrastructure like electricity, roads, water etc. for the general masses. To implement Government's various schemes related to education, health etc. and for day-to-day governance, for maintaining law and order, telecom has become a basic need. It is visibly clear that it is still a challenge in villages and remote places, while urban India witnesses a telecom revolution. The fruits of telecom liberalization have still not reached the rural masses. In a market where margins are getting reduced, setting up of telecom infrastructure in rural areas is not very lucrative. The service providers expect some kind of customized friendly policies for rural telephony, and also want to be compensated by the Regulator and the government for operating in rural areas. The crux of the problem is not so much that low revenues make a poor business sense but because the investments needed are high. Rural markets are, therefore, not high on the business radar of operators.

Rural India therefore presents a huge opportunity but it also represents a huge investment for telecoms operators. The key factor is the much lower population density of the rural areas – cost is driven largely by coverage (and area), while revenue opportunity is driven by population.

As per ICRIER (Indian Council of Research on International Economic Relations) report titled as “India-the impact of mobile phones” published in Jan 2009, there is a positive relationship between GDP per capita and telephone density indicators. The other findings of the report are that, it is the level of telecom penetration (not the growth), which contributes to economic growth and there is enormous variation between states, between urban and rural areas, and between poor and rich households in the cities.

Recognizing the rural challenges and the role played by infrastructure in poverty removal, Government of India has initiated **Rural Telephony Programme under Bharat Nirman Yojana** to bridge the divide and support them to participate in transforming their own future. It would make the pathways and ensure sustainability and inclusive growth in India.

BHARAT NIRMAN

The Bharat Nirman Yojana is a significant milestone in India’s journey of economic reforms. By building rural infrastructure, it aims to create an enabling environment for rural India to realize true potential. Bharat Nirman, the rural infrastructure development programme led by the government of India, is a critical first step in poverty reduction as it will help build essential infrastructure such as roads, power, irrigation, housing, telecommunications and drinking water.

Bharat Nirman is a time-bound massive plan for rural infrastructure by the Government of India in partnership with State Governments and Panchayat Raj Institutions 2005-2009.







It was launched in 2005 for implementation during the four-year period, 2005–09. The first half of the programme was in the Tenth Plan period and the second half coincides with the first two years of the Eleventh Plan period (2007–12). The six components included under the programme are irrigation, drinking water, electrification, roads, housing, and rural telephony. The main tasks of Bharat Nirman are –

- Every village to be provided electricity: 1,25,000 villages to be covered by 2009 as well as 2.3 crore households to be connected.
- Every habitation over 1000 population and above (500 in hilly and tribal areas) to be provided an all-weather road: 66,802 habitations to be covered by 2009.
- Every habitation to have a safe source of drinking water: 55,067 uncovered habitations to be covered by 2009. In addition all habitations, which have slipped back from full coverage to partial coverage due to failure of source and habitations which have water quality problems to be addressed.
- Every village to be connected by telephone: 66,822 villages to be covered by November 2007.
- 10 million hectares (100 lakhs) of additional irrigation capacity to be created by 2009.

- 60 lakh houses to be constructed for the rural poor by 2009 While the agenda is not new, the effort here is to impart a sense of urgency to these goals, make the programme time-bound, transparent and accountable. These investments in rural infrastructure will unlock the growth potential of rural India.

The investment proposed to be made is of the order of Rs. 1,74,000 crore during the four-year period. The objective of the Bharat Nirman Yojana is to impart a sense of urgency to create rural infrastructure by setting time-bound goals under various schemes, which form a part of the Bharat Nirman Yojana. The Programme imposes a responsibility on the State to create these facilities in a transparent and accountable manner. It is expected to require investment of Rs 174,000 crores by 2009 (Exhibit 1). Its objectives are laudable: once achieved, the programme will ensure basic infrastructure across Bharat.

Exhibit 1
Bharat Nirman and Infrastructure Programme

Infrastructure Sector	Objective by 2009	Budget (Rs. Crore)
 ROADS	<ul style="list-style-type: none"> • 100 % of habitations* to be connected by an all-weather road (1.5 lakh km. of roads to be constructed; 1.9 lakh km. of associated roads to be upgraded) 	48,000
 POWER	<ul style="list-style-type: none"> • Remaining 1.25 lakh villages to be electrified and 2.34 crore (Below poverty line) households to be connected 	16,255
 HOUSING	<ul style="list-style-type: none"> • Construction of 60 lakh houses for the rural poor 	15,000
 TELECOM CONNECTIVITY	<ul style="list-style-type: none"> • 100 % of villages (66,822 still pending) to get Village Public Telephones by November 2007) 	450
 IRRIGATION	<ul style="list-style-type: none"> • 10 million hectares of irrigation potential to be created 	68,600
 DRINKING WATER SUPPLY	<ul style="list-style-type: none"> • 100 % habitations (55,067 still uncovered) to have a safe source of drinking water. • 2.8 lakh habitations that have slipped back and 2.2 lakh habitations with water quality problems also to be addressed. 	25,700

* Habitations with over 500 people in hilly or tribal areas and 1,000 in other areas

Source: Bharat Nirman website, press articles.

The target for enhancement of rural telephony-connectivity is an innovative step under Bharat Nirman to improve or upgrade the rural infrastructure, so as to enable the people to access the essential services. The present telephone density in India is about 0.8 per hundred persons as against the world average of 10 per hundred persons. It is also lower than that of many developing countries of Asia like China (1.7), Pakistan (2.0), Malaysia (13.0) etc. This programme is covered under the Monitorable Targets (27 national targets), so as to connect every village by telephone and provide broadband connectivity to all villages by 2012-by State-Wide Area Net-Works (SWANS) for better e-Governance, Common Service Centers (CSSs) etc. In first phase of RURAL TELEPHONY Programme under Bharat Nirman Yojana, 66822 revenue villages not having telephone connectivity are to be provided with Village Public Telephone (VPT) scheme. The village public telephone scheme is operational with the subsidy support from the Department of Telecom's Universal Service Obligation Fund (USOF). All villages have been brought under the scheme except those having population of less than 100, those lying in deep forests and those affected with insurgency. About 5,000 remote villages are being provided with the telephone service using satellite technology. USOF assigns the task of providing VPTs on the basis of bids through open tender and in this case the work has been assigned to Bharat Sanchar Nigam Ltd., From the USOF, assistance is provided for both capital expenditure as well as operational expenditure. It is estimated that a total sum of Rs. 451 crore would be required to provide VPTs in these 66,822 villages and the entire sum will be met out of USOF and no separate allocation from Government would be required. It would facilitate to improve the tele-density in rural areas and move to the next step of making every village a knowledge centre with telecommunication. For this high-speed Internet connection providing the necessary knowledge content relevant to the villages for the benefit of all sections of the society is required

Table I.3: State-wise data (as on 31.03.2009) for village telephones to be provided in Bharat Nirman

Sl. No.	Name of the State	Phone to be provided	% share to total	Total No. of Habitations	% of Non-Connectivity of Habitation
1.	Andhra Pradesh	1074	2.0	67401	2.0
2.	Assam	8931	13.0	22963	39.0
3.	Jharkhand	1694	3.0	35769	5.0
4.	Gujarat	4144	6.0	35282	12.0
5.	Himachal Pradesh	1002	1.0	16997	6.0
6.	Jammu & Kashmir	1755	3.0	9270	19.0
7.	Madhya Pradesh	11894	18.0	55719	21.0
8.	Chattisgarh	5043	8.0	29544	17.0
9.	Maharashtra	6441	10.0	5663	11.0
10.	North East	3678	6.0	22118	17.0
11.	Orissa	4899	7.0	28299	17.0
12.	Rajasthan	12386	19.0	19945	62.0
13.	Uttaranchal	3881	6.0	8645	45.0
	Total	66822	100.0	408624	16.0

USOF signed the agreements with M/s BSNL in November 2004 to provide subsidy support for provision of VPTs in 66822 uncovered villages as per Census 1991 in the country excluding those villages having population less than 100, those lying in deep forests and those affected with insurgency. Subsidy support in the form of Capital and Operational expenses will be provided for provision of these VPTs for a period of five years from the date of installation of the VPTs. The provision of VPTs in these villages has been included as one of activities under Bharat Nirman Yojana. Out of these, 14183 remotely located villages were to be provided VPTs through Digital Satellite Phone Terminals (DSPTs) as per the agreement signed. Some of the VPTs, which were initially proposed to be provided on DSPTs, are also being provided through the Wireless coverage now available in these villages on account of network expansion. The VPTs were to be provided in phases covering 20 %, 40 % and 40 %, respectively over a period of three years. Since there was a delay in getting transponders from Department of Satellite and supply of DSPT equipment by the vendor, the remaining VPTs are likely to be provided in a phased manner.

Re-verification work of the VPTs has been undertaken by BSNL/ DoT as per Census 2001 and about 55000 villages still remaining uncovered will also be provided with VPT facility with subsidy support from USO Fund in the next phase.

Criteria for installation of VPT in the Village
(to be followed by Telecom Department)

- (i) In each revenue inhabited villages, one VPT is to be provided
- (ii) Should be located preferably in grocery shop, medicine shop & other places of public access.
- (iii) The location of VPT to be installed is to be decided in consultation with the public representative.
- (iv) VPT is being provided in uncovered villages identified as village by Census of India 1991 and 2001. Now, VPTs are being provided under these two agreements done by BSNL with USO (F).

New VPTs to be provided in the remaining villages as per Census 2001. As per Census 2001, there are about another 62,443 uncovered villages, which are yet to be provided with VPT facility. Such uncovered villages shall also be provided with VPT facility with subsidy support from USOF. Agreements in this regard have been signed with BSNL on 27.02.2009.

Operation and Maintenance of Village Public Telephone in the revenue villages identified as per Census 1991 and Installation of Village Public Telephone in the additional revenue villages as per Census 2001. For installation of Village Public Telephone in the revenue villages, identified as per 1991 Census, only the Operating Expenses and Revenue shall be taken into account for determining the Net Cost. For the additional revenue villages identified as per 2001 Census, Capital Recovery in addition shall also be taken into account for determining the Net Cost. Provided that in the case of the Village Public Telephone which are still to be installed in the villages identified as per Census 1991, Capital Recovery shall also be taken into account while determining the Net Cost.

**GUIDELINES FOR PROVISION OF VPT SERVICE
MAINTENANCE AND PERFORMANCE MONITORING OF THE VPTs**

Provision of fault free and efficient VPT service is one of the prime concerns of the Administrator. The broad guidelines given below should be followed by the Universal Service Provider (USP) to ensure proper functioning of VPTs.

- (1) Testing of VPTs should be carried out regularly from the exchange.
- (2) Testing of WLL links should be carried out daily from Main Exchange.
- (3) Meter reading should be checked fortnightly and low reading should be taken as indication of the system not performing properly and subsequently be checked.
- (4) VPT Custodians should be advised to book their fault at telephone exchange and / or the nominated nodal officer.
- (5) Inspection schedules should be formulated by Universal Service Provider and should be strictly adhered to.
- (6) Monthly / Weekly performance report should be maintained for monitoring and kept ready for inspection by USF Administration.
- (7) Meetings should be held with villagers to sort out the grievances.
- (8) VPTs disconnected for non-payment may be shifted to new location / custodian.
- (9) Un-serviceable components of the system should be replaced.
- (10) In case of public complaints about non-availability of VPT on account of their less accessible location etc. USPs are authorized to relocate VPTs in grocery shops and such other locations etc.
- (11) In cases where meter readings remain zero due to non-use of VPTs for a prolonged time and not due to faults, USPs are authorized to shift VPTs to other suitable location. Selection of alternate custodian / location in the same village in this situation should be made by USP.
- (12) The VPT should be available to general public without discrimination for at least 12 hrs., preferably from 7 AM to 7 PM.
- (13) The VPTs provided by using any wireless technology shall use Fixed Wireless Terminal (FWT) only as Customer Premises Equipment.

TERMS OF REFERENCE

The Planning Commission of India has entrusted the study ‘Evaluation of Rural Telephony’ to Council for Social Development, Southern Regional Centre, Hyderabad. Major focus of this study was to evaluate performance of Village Public Telephones under the Bharat Nirman Yojana.

Objectives of the Study

The main objectives of the study are:

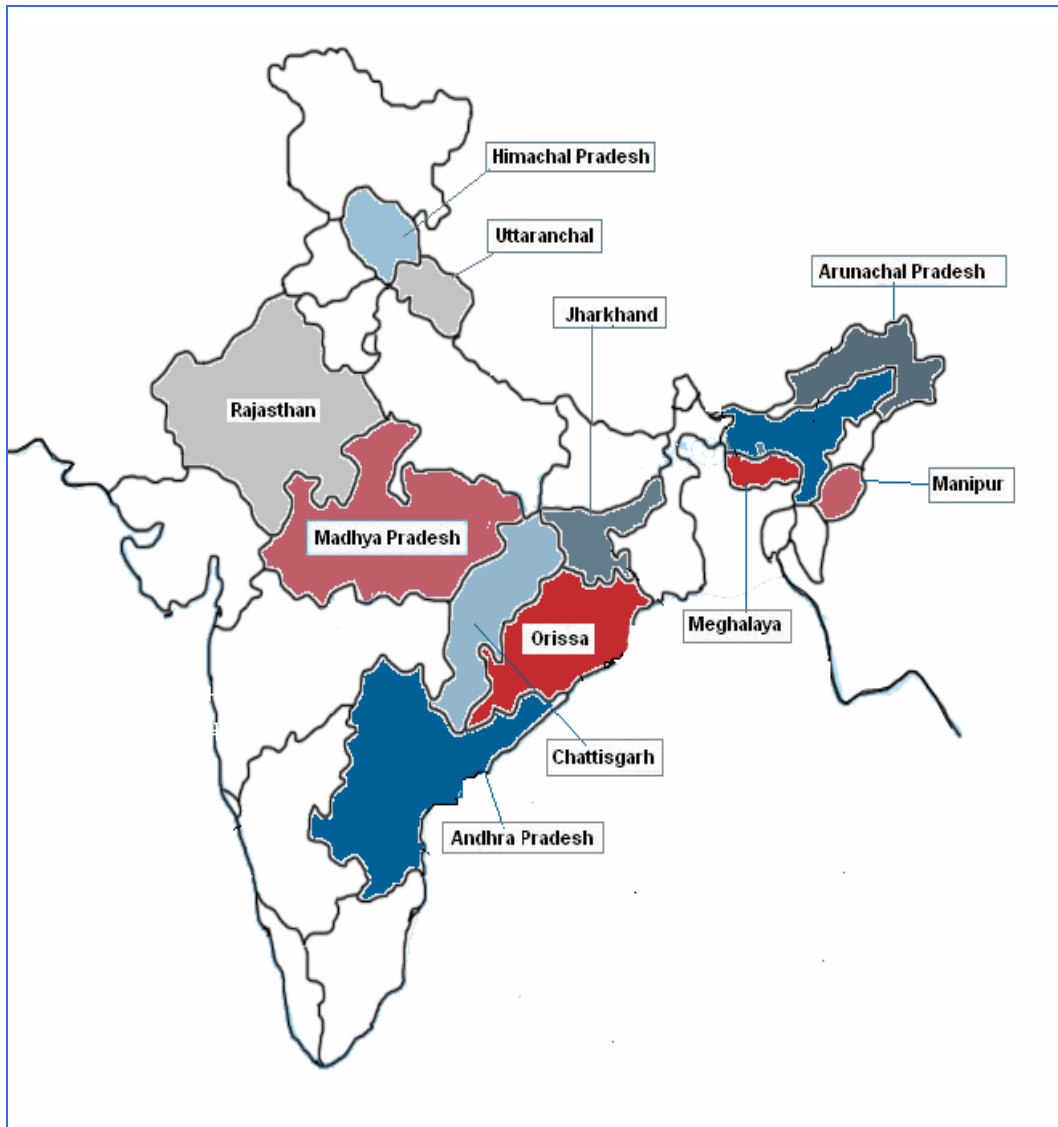
- To verify the effective coverage of VPT in terms of rural population and area.
- To examine the level of consumer satisfaction in terms of -
 - (i) Quality, reliability, responsiveness, transparency and timelines of telecom services provided through VPTs.
 - (ii) Assessment of revenue collection and toll charges, an estimate of average revenue per users (ARPU) vis-à-vis of providing rural tele-communication service.
- To find out the nature of impediments / problems encountered (if any) in implementing the project of village public telephones (VPTs) in different regions and the way by which same has been sorted out.
- To examine how far expectation of villagers have been fulfilled by the installation of the VPTs.
- To examine the extent to which DOT has projected the demand of VPT and its services by analyzing the socio-economic profile of the users of the various telecom services.
- To study the impact of the telecom services through VPTs and its contribution towards economic growth in rural areas.
- To verify the regularity in payment of telephone bills by the concerned custodian.
- To examine the quality of maintenance of village telephones (VPTs) by the concerned service providers.
- To study the usage pattern of village public telephone (VPTs) by the various users.

The reference period of the study is 2005-06 to 2007-09 during Bharat Nirman.

STUDY AREA, METHODOLOGY AND SAMPLE

Study Area

The present study has been carried out in 12 states of India. The states are - (i) Andhra Pradesh; (ii) Assam; (iii) Meghalaya; (iv) Manipur; (v) Arunachal Pradesh; (vi) Himachal Pradesh; (vii) Uttaranchal; (viii) Rajasthan; (ix) Jharkhand; (x) Chattisgarh; (xi) Orissa and (xii) Madhya Pradesh. Exhibit 1 reflects the states covered in the present study.



Methodology

Extensive field surveys, in depth interviews and interactions with users of VPT, non- users, BSNL officials at the state level, district level and field level constituted the core of the study methodology. The study involved a three-pronged approach to collection of information: (a) conducting a field survey; (b) collection of data from secondary sources and (c) in depth interactions with village leaders, teachers, Sarpanches, post masters and self help groups in the area. Apart from this, focus group discussion was also conducted among different categories of people. Both qualitative and quantitative data is used for the understanding of various issues covered in the evaluation.

Exhibit 2: Field Interaction in different study locations



So information on various dimensions of VPT is gathered on the basis of - (i) perceptions of both beneficiaries as well as non-beneficiaries of VPT (ii) Interactive session with State and district officials including field staff of implementing department i.e., BSNL (iii) Secondary data on VPT's and Village, District and State level profiles of sample states;; (iv) reports on FGDs on different issues like actual and potential use, location, accessibility, connectivity, repair and maintenance, payment etc. The observation aimed to capture the effects of VPT on the socio- economic lives of users of VPT in the refer locations. A special household survey was conducted in these study villages. Focus group discussions (FGDs) in the villages (separately for men and women) include as interviews with sarpanch, ward member, knowledgeable person, school teacher, village post master, leaders in the village including self help group (SHG) leaders, house wives and individuals from SC & ST community.

The Instruments

One of the most important steps of any investigation is the preparation of the instruments to be used in the study. The multi level schedules for State, District, Village (Custodian), Beneficiary, Non-Beneficiary as well as Checklist for Focused Group Discussion were developed in consultation of experts including REO, Planning Commission, Hyderabad and PEO, Planning Commission New Delhi. Detail methodological modus operandi is finalized after formal approval of Consultancy Evaluation cum Monitoring Committee (CEMC) under the chairperson ship of Dr. S. Bhavani, Senior Advisor, PC & PEO. Principal Investigator, Prof. Manju Singh made presentation on the methodology of the project at office of Planning Commission in Delhi on April 17, 2009. The study instruments were piloted and enriched subsequently before the data collection procedure.

Orientation of the Study

Orientation programme for the state coordinators and field investigators were carried out in four rounds for in depth understanding of the whole process and instruments of the Study. The first orientation programme was conducted in CSD, Hyderabad on May 11, 2009 which was attended by high ranking officials such as Dr. R.C. Dey from Planning Commission, New Delhi as well as regional representatives of the Planning Commission including Mr. Koil Pillai, Hyderabad and Mr. Pradhan, Bhubaneswar. The project team from CSD also participated in the orientation programme. The orientation catered to the methodology and manuals for the filling up of questionnaire. Role plays of canvassing the schedules were also organised. The second orientation programme was held in Dehradun, Uttaranchal on May 28, 2009 for the orientation of field teams from Himachal Pradesh, Rajasthan and Uttaranchal. The third orientation programme held in CSD, Hyderabad on June 5, 2009 for the training of researchers from Madhya Pradesh, Jharkhand, Chattisgarh and Orissa. The fourth round took place in Guwahati, Assam and was attended by team members from Assam, Meghalaya, Manipur and Arunachal Pradesh. The instruments were piloted and enriched subsequently before the data collection procedure.

Photo 2: Training Programme of Survey Personnel



Sample Households for the 12 States

This report was compiled by the research team of CSD using varied primary and secondary data. Both qualitative and quantitative information is collected. Primary data is collected with the help of well-structured schedules at different levels – State, District, Village Level (Custodian), beneficiaries and non-beneficiaries. Observations were appendage with focused group discussions at the village level.

The study adopts multi-stage stratified random sampling method for the collection of data. A five stage stratified random sampling is undertaken covering 12 states including North-East states. Selection of zones and states form the first and second stage; districts and selection of VPT from each of the district comprises the third and fourth stage; and selection of beneficiary and non-beneficiary form the final stage.

The country is divided into seven zones, namely east, west, north, south, north east Assam, North East I and North East II. From each zone, states are selected based on their percentage of achievements in implementing the targeted VPTs. From South and North east Assam zone, one state each is selected (since there is only one service area / state in the zone); and in case of other zones, two states are selected excluding East and North East 1. From the former three states are selected while from the latter only 2 are selected. Thus a total of 12 states are selected – Andhra Pradesh, Assam, Meghalaya, Manipur, Arunachal Pradesh, Himachal Pradesh, Uttaranchal, Rajasthan, Jharkhand, Chattisgarh, Orissa and Madhya Pradesh. From each state, two districts are selected based on maximum and minimum coverage under VPTs.

Table I.4. List of Sample States and Districts

State / Service Area		District / Service Areas	
1.	Andhra Pradesh	1.	Chittoor
		2.	Srikakulam
2.	Himachal Pradesh	3.	Shimla
		4.	Dharmshala
3.	Uttaranchal	5.	Srinagar
		6.	Almora
4.	Jharkhand	7.	Hazaribagh
		8.	Dumka
5.	Chattisgarh	9.	Surguja
		10.	Baster
6.	Orissa	11.	Koraput
		12.	Phulbani
7.	Madhya Pradesh	13.	Rewa
		14.	Mandla
8.	Rajasthan	15.	Sriganga Nagar
		16.	Udaipur
9.	Assam	17.	Bongaigaon
		18.	Jorhat
10.	Meghalaya	19.	West Khasi Hills
		20.	West Garohills
11.	Manipur	21.	Senapati
		22.	Ukarul
12.	Arunachal Pradesh	23.	Lohit
		24.	Papumpare

From each district 10 VPTs are selected based on simple random sampling and ten villages are chosen where the selected VPTs are already installed. From each village 10 beneficiary households and 3 non-beneficiary households are selected based on the information supplied by the custodian of the selected VPTs. However in some states like-Manipur, Arunachal Pradesh, Himachal Pradesh and Uttarakhand less than the targeted numbers could be contacted even after intensive efforts because of non availability of users in difficult hilly terrain during study period.

Table I.5. Sample Structure for the 12 States

Sl. No.	Level Unit	Sample Size
1.	State / Service area	12
2.	District / service area	24
3.	VPTs	240
4.	Villages	240
5.	Beneficiary Households	2400
6.	Non-beneficiary households	720
7.	FGD	240

ORGANIZATION OF THE REPORT

This report is organized into three sections. This is arranged to cover all the aspects as per the terms of reference entrusted by Planning Commission to CSD research team. Present first section briefly introduces the study where importance of telecommunication is highlighted particularly in rural areas and brief outline of Rural Telephony Programme under Bharat Nirman Yojana is sketched. Later on, terms of references with clear objectives and the methodology of the study is mentioned in the section.

In the second section of the report, comprehensive state specific reports of all the 12 states covered in the present study are described. Each state report comprises three parts – (1) State and district analysis of Rural Telephony viewed by the officials, (2) Evaluation of performance on the chosen criteria of VPTs in the selected districts of the state that is based on personal interaction with users, non users, custodians and group of villagers. And lastly in part (3) A comprehensive SWOT analysis of Rural Telephony in the state highlights achievements, impediments challenges and future directions in that particular state.

Section three of the report throws light on All India review. It briefly notes the findings of the study with reference to evaluation of the programme and as an overview of achievement, limitations/ impediments, challenges and future directions of the Rural Telephony under BNY.

SECTION-II

All India Evaluation of VPTs under Bharat Nirman: Main Observations

Telecom connectivity constitutes an important part of the efforts to upgrade the rural infrastructure. In addition, rural connectivity holds key to rural development and poverty alleviation as well. The importance of telecom in everyone's life has undergone a paradigm shift. Instead of being one of the services, it has become a basic infrastructure like electricity, roads, water etc. for the general masses. To implement various government schemes related to education, health etc. and for day to day governance, for maintaining law and order, telecom has become a basic need. While urban India witnesses a telecom revolution, it is visibly clear that it is still a challenge in villages and remote places. The fruits of telecom liberalization have still not reached the rural masses. In a market where margins are getting pressed, setting up of telecom infrastructure in rural areas is not very lucrative. The crux of the problem is not so much that low revenues make a poor business sense but because the investments needed are high. Rural India presents a huge opportunity but it also represents a huge investment for telecom operators. The key factor is the much lower population density of the rural areas – cost is driven largely by coverage (and area), while revenue opportunity is driven by population. Rural markets are, therefore, not high on the business radar of operators.

Recognizing the rural Challenges and the role played by infrastructure in poverty removal, Government of India is committed to enhance rural connectivity through a slew of measures such that rural users can access information of value and transact business as well as their quality of lives. The recent growth of Indian telecom has become a benchmark for other infrastructure sectors in India, which attempt to replicate the telecom success story.

Government of India has initiated a flag ship programme **Bharat Nirman Yojana that has a component of Rural Telephony. It has the potential to transform rural India. The main aim is to bridge the rural- urban divide and vitalize the rural economy of India to participate in transforming its own future. The current extent and pattern of diffusion of telecommunication technology in India aims to perpetuate the top-down approach to development, keeping the disadvantaged out of the process.**

The target for enhancement of rural telephony-connectivity is an innovative step under Bharat Nirman to improve or upgrade the rural infrastructure, so as to enable the people to access the essential services. In first phase of Rural Telephony Programme under Bharat Nirman Yojana, 66822 revenue villages not having telephone connectivity were to be provided with Village Public Telephone (VPT) scheme. The village public telephone scheme is operational with the subsidy support from the Department of Telecom's Universal Service Obligation Fund (USFO).

All villages have been brought under the scheme except those having population of less than 100, those lying in deep forests and those affected with insurgency. About 5,000 remote villages are being provided with the telephone service using satellite technology. USOF assigns the task of providing VPTs on the basis of bids through open tender and in this case the work has been assigned to Bharat Sanchar Nigam Ltd. From the USOF, assistance is provided for both capital expenditure as well as operational expenditure. It is estimated that a total sum of Rs.451 crore would be required to provide VPTs in these 66,822 villages and the entire sum will be met out of USOF and no separate allocation from Government would be required. It would facilitate to improve the tele-density in rural areas and move to the next step of making every village a knowledge centre with telecommunication. For this, high-speed Internet connection providing the necessary knowledge content relevant to the villages for the benefit of all sections of the society is required.

Planning Commission of India entrusted a study to **Council for Social Development, SRC, Hyderabad** to evaluate the performance of Village Public Telephones under the Bharat Nirman Programme. The main objectives of the study are to verify the effective coverage of VPT and to examine the level of consumer satisfaction. The latter is analyzed in terms of quality, reliability and transparency of the telecom services provided as well as on an estimation of average revenue per users vis-à-vis cost of providing rural telecommunication service. In addition, the aim of the study also includes identification of impediments in the implementation of the VPT, how far expectation of villagers have been fulfilled by the installation of the VPTs, the extent to which DOT has projected the demand of VPT and its services by analyzing the socio-economic profile of the users of the various telecom services, verification of regularity in payment of the bills, maintenance and usage pattern of VPT. The study also intends to examine the role of VPT towards improving the communication services and its impact on the economic growth in rural areas. The reference period of the study is from 2004-05 to 2008-09 during Bharat Nirman.

The core of the study methodology includes extensive field surveys, in depth interviews and interactions with users of VPT, non-users, Custodians, BSNL officials at the state level, district level and field level. The study involved a three-pronged approach to collection of information: (a) conducting a field survey; (b) collection of data from secondary sources and (c) in depth interactions with village leaders, teachers, Sarpanches, post masters and self help groups in the area. Apart from this, focus group discussion was also conducted among different categories of people. Both qualitative and quantitative data is used for the understanding of various issues covered in the evaluation. All the schedules were finalized in consultation with planning commission following the approval of the Consultancy Evaluation cum Monitoring Committee (CEMC), Planning Commission, New Delhi. Data is supplemented with focused group discussions at the village level.

The study adopts multi-stage stratified random sampling method for the collection of data as per the Terms of Reference provided by Planning Commission for the present study. A five stage stratified random sampling is undertaken covering 12 states including North-East states. Selection of zones and states form the first and second stage; districts and selection of VPT from each of the district comprises the third and fourth stage; and selection of beneficiary and non-beneficiary form the final stage.

From each state, two districts are selected based on maximum and minimum coverage under VPTs. From each district 10 VPTs are selected based on simple random sampling and ten villages are chosen where the selected VPTs are already installed. From each village 10 beneficiary households and 3 non-beneficiary households are selected based on the list supplied by the custodian of the selected VPTs. However in some states like-Manipur, Arunachal Pradesh, Himachal Pradesh and Uttranchal less than the targeted numbers could be contacted even after intensive efforts because of non availability of users in difficult hilly terrain during study period.

Main Observation - ALL INDIA

The following is a concise recapitulation of the first hand observations from the field across the study sites covered in all India. It consists of 12 states, 24 districts and 240 villages. Observations are based on the multilevel interaction with people including State and District officials, VPT custodians, beneficiaries and non-beneficiaries. Later in the section of this write up Overall **SWOT** analysis (**S**trengths, **W**eaknesses, **T**hreats and **O**pportunities) reflects transparent and crystal clear picture of this initiative.

THE COVERAGE OF VILLAGE TELEPHONNE (VPT)

The Summary of aggregate No. of VPTs provided in various technologies as on 31.03.10 are as follows.

Table II.1. Summary of VPT's as on 31.03.2010 under Bharat Nirman Programme

Sl. No.	Name of the Service Area	No. of villages to be provided VPTs under Bharat Nirman	VPT provided		
			On DSPT	On other technologies	VPTs provided
1	Andaman & Nicobar	0	0	0	0
2	Andhra Pradesh	675	0	675	675
3	Assam	8775	0	8775	8775
4	Bihar	0	0	0	0
5	Jharkhand	1564	0	1564	1564
6	Gujarat	4097	25	4072	4097
7	Haryana	0	0	0	0
8	Himachal Pradesh	1000	36	964	1000
9	Jammu & Kashmir	1753	43	1501	1544
10	Karnataka	0	0	0	0

Contd ...

Table II.1. Summary of VPT's as on 31.03.2010 under Bharat Nirman Programme (Contd...)

Sl. No.	Name of the Service Area	No. of villages to be provided VPTs under Bharat Nirman	VPT provided		
			On DSPT	On other technologies	VPTs provided
11	Kerala	0	0	0	0
12	Madhya Pradesh	11854	20	11834	11854
13	Chhattisgarh	3509	120	3363	3483
14	Maharashtra	6275	225	6045	6270
15A	Meghalaya (NE-I)	1504	538	641	1179
15B	Mizoram (NE-I)	93	42	50	92
15C	Tripura (NE-I)	75	0	75	75
16A	Arunachal Pradesh (NE-II)	646	326	302	628
16B	Manipur (NE-II)	861	314	547	861
16C	Nagaland (NE-II)	28	1	27	28
17	Orissa	4122	978	3144	4122
18	Punjab	0	0	0	0
19	Rajasthan	11924	98	11822	11920
20	Tamil Nadu	0	0	0	0
21	Uttar Pradesh (East)	0	0	0	0
22	Uttar Pradesh (West)	0	0	0	0
23	Uttaranchal	3547	915	2591	3506
24	West Bengal	0	0	0	0
	Total	62302	3681	57992	61673

It was reported that in some isolated and uncovered parts of the states like Orissa, Uttaranchal, Assam, Meghalaya and Arunachal Pradesh BSNL services is found more reliable than other service providers and was being used by most of the users but in the other parts many telephone users confirmed using telecom services provided by Airtel, Idea, etc.

SOCIO ECONOMIC PROFILE OF USERS

The observation of the present evaluation study reflects that VPT's are mainly used by underprivileged people having low SES in Rural India as about 79% of VPT users that includes 31 % OBC, 12.4 % SC and 35.8 % ST in all the states covered in the present study as reflected in the Table II.2.

Table II.2 : Social Group of VPT Users

Category	No. of Users	Percent
General	444	20.7
OBC	665	31.0
SC	266	12.4
ST	767	35.8
Total	2142	100.0

Similarly it was observed that 17.2 % VPT users were females among sample interacted. All India Distribution of primary occupation revealed that maximum percentage of users about 41.6% depends on agriculture, 10.5% on non-agricultural labour, 10.9% on salaried work and 9.4% on agricultural labour as shown in the Table II.3.

Table II.3. Primary Occupation and Educational Qualification

S. No.	Primary Occupation (Self)	No. of Users	%
1	Cultivator	891	41.6
2	Agriculture Casual Labour	202	9.4
3	Own Business	178	8.3
4	Self employed in household industry	15	0.7
5	Self employed in Services (other than business)	50	2.3
6	Non-agricultural casual labour	225	10.5
7	Salaried work	234	10.9
8	Homemaker	134	6.3
9	Livestock management	20	0.9
10	Pensioner/retired	38	1.7
11	Non-working Adults	32	1.5
12	Non-working children	1	0.1
13	Students	35	1.6
14	Dependents	55	2.6
15	Others	32	1.4
	Total	2142	100

S.No.	Educational Qualification	No. of Users	%
1	Not literate	555	25.9
2	Functional literate	322	15.0
3	Primary	304	14.2
4	Upper Primary	306	14.3
5	High School	336	15.8
6	Intermediate	188	8.8
7	Graduate	108	5.0
8	Above Graduation	23	1.0
	Total	2142	100.0

Data regarding educational qualification above indicates that 25.9 % of them were not literate and 15% were functional literates. Only 1.7 % were having above graduate qualification. About 14.2% were having primary and upper primary qualification. 8.7 % were having intermediate educational qualification.

Regarding ownership of house, it was observed that a very few VPT users (21.9%) were having pucca houses whereas 33% were owning semi-pucca and maximum 45.1% were having kutcha houses as shown in table II.4. Regarding availability of electricity at their home, Table II.5 shows that observations were highly encouraging. Majority 73.2% VPT users were having electricity at their home.

Table II.4. Type of house

Type of House	No. of Users	Percent
Kucha	965	45.1
Semi-pucca	707	33.0
Pucca	470	21.9
Total	2142	100.0

Table II.5. Status of Electrification

Availability	No. of Users	Percent
Electricity not available	574	26.8
Electricity available	1568	73.2
Total	2142	100.0

Following two Tables II.6 and II.7 shows the accessibility of VPT users to pucca roads and state highways. 50.4 % houses of VPT users were situated at the distance of more than 100 metres but less than 1 km. from pucca road. In terms of the distance from state highway it was revealed that about 40 % respondents on an average were staying upto 2 kms., and 31 % were staying more than 2 but less than 10 km in all the states covered in the present study.

Table II.6. Distance of house of Users from Pucca Road

Distance	No. of Users	Percent
100 metres or less	362	16.9
More than 100 metres but less <=1 km.	1079	50.4
More than 1 km.	701	32.7
Total	2142	100.0

Table II.7. Distance of House from State Highway

Distance	No. of Users	Percent
Upto 2 kms	853	39.8
More than 2kms but <=10	653	30.5
More than 10 kms	636	29.7
Total	2142	100.0

Information regarding overall telephone availability as seen in table II.8, at household level confirms that except those areas where network coverage was awfully weak or not available due to location or remoteness, about 40% own telephones. Assam, Meghalaya, Arunachal Pradesh, Manipur, Orissa and Jharkhand are those states where telephone availability was found lesser than other states included in the present study.

Table II.8. Telephones Availability

Availability	No. of Users	Percent
Telephone not available	1282	59.9
Telephone available	860	40.1
Total	2142	100.0

Table II.9. Type of Telephone

Type of phone	No. of users	Percent
Landline	137	15.93
Mobile	715	83.14
Others	8	0.93
Total	860	100.0

Table II.10. Details of Service Provider

Service Provider	Frequency	Percent
BSNL	331	38.49
Airtel	319	37.09
Vodafone	73	8.49
Idea	67	7.79
Reliance Communications	48	5.58
Others	22	2.56
Total	860	100.0

Above tables II.9 and II.10 reflects the type of telephone availability and about the service providers. It reveals that about 83.14 % of households were having mobiles whereas only 15.9 % were having landline phone. Regarding service providers details for VPT users at their home it was revealed that BSNL has the highest percentage (38.49%) followed by Airtel (37.09).

RELIABILITY AND USAGE PATTERN

Most of the states have reported reliable availability of VPT services during period of the enquiry except Orissa, Assam, Meghalaya and Manipur and have not reported any major fault in the VPT services in the respective areas. Overall observations of India reveals that 67.69% users expressed that there was no fault in the VPT at their villages 92.25 % shared that VPT's were found open in last month. Thus VPTs were reported to be open for users maximum time. Trend in second last month is also observed same as shown in tables II.11 and II.12 below.

Table II.11. Availability of VPT Services in Last Month

Faulty			Busy			Closed		
No. of Fault	No. of Users	Per cent	No. of Fault	No. of Users	Per cent	No. of Fault	No. of Users	Per cent
0	1450	67.69	0	1763	82.30	0	1976	92.25
1	269	12.56	1	133	6.20	1	103	4.81
2	214	9.99	2	112	5.22	2	33	1.54
3-10	129	6.02	3-15	110	5.13	3-10	25	1.17
10-20	16	0.75	15-30	24	1.12	10-30	5	0.23
20-30	64	2.99						
Total	2142	100.00		2142	100.00		2142	100.00

Table II.12. Availability of VPT Services in 2nd Last Month

Faulty			Busy			Closed		
No. of Fault	No. of Users	Per cent	No. of Fault	No. of Users	Per cent	No. of Fault	No. of Users	Per cent
0	1531	71.48	0	1821	85.01	0	1980	92.43
1	210	9.80	1	98	4.58	1	76	3.55
2	130	6.07	2	86	4.01	2	52	2.43
3-10	196	9.15	3	50	2.34	3-10	30	1.40
10-20	13	0.61	4-12	61	2.85	10-30	4	0.19
20-30	62	2.89	12-30	26	1.21			
Total	2142	100.00		2142	100.00		2142	100.00

The states mentioned above were facing problems in providing reliable services due to reasons like naxalism, insurgency, difficult terrain, etc. It was reported that VPT services are usually not available at the time of bad weather, due to battery failure and power interruption.

USAGE PATTERN

Usage pattern of VPT confirms in Table II.13 that in last 60 days 27.9% users have used VPT for local calls more than six times, 13.7% users 5-6 times, and 34% users have not made any local call during the time of enquiry in present study. Regarding STD calls, it was observed that more than 90% VPT users have not made a single call during last 60 days. All India observation reflects that only 3.5% users have made STD calls two or less time and only 2.2% users have made STD calls more than six times (Table II.14).

Table II.13. Details of local calls from VPT

No. of Calls	Last 30 days		Last 60 days	
	No. of Users	Percent	No. of Users	Percent
No calls	765	35.7	729	34.0
2 or less	406	19.0	244	11.4
3 to 4	435	20.3	278	13.0
5 to 6	253	11.8	293	13.7
More than 6	283	13.2	598	27.9
Total	2142	100.0	2142	100.0

Table II.14. Details of STD calls from VPT

No. of Calls	Last 30 days		Last 60 days	
	No. of Users	Percent	No. of Users	Percent
No calls	1939	90.5	1942	90.7
2 or less	101	4.7	76	3.5
3 to 4	48	2.2	47	2.2
5 to 6	29	1.4	29	1.4
More than 6	25	1.2	48	2.2
Total	2142	100.0	2142	100.0

QUALITY ASPECTS

Quality of VPT service is assessed in terms of convenience of place of installation, technology used, type of instrument used at booth and its clarity of voice (Tables II.15, II.16, II.17 and II.18). Quality of VPTs was articulated quite satisfactory generally by the users. All India observation confirms that 77.63% VPT users found the place of VPT installation convenient and 19.5% very convenient. Only few VPTs that are installed inside the houses or some shops were reported inconvenient (2.80%).

Table II.15. Level of Convenience of Place of Installation

Place of installation	Level of convenience			Total
	Not at all convenient	Convenient	Very convenient	
Gram Panchayat	2	6	4	12
Anganwadi	0	27	6	33
Sarpanch house	1	263	174	438
Open space	0	13	0	13
School	0	11	1	12
Post office	0	29	0	29
Telephone Exchange	0	1	0	1
Shop	10	435	90	535
Others	47	878	144	1069
Total	60 (2.80%)	1663 (77.63%)	419 (2.80 %)	2142 (100%)

Majority VPT users expressed that the technology used in VPTs are convenient (77.6%) and very convenient (19.6%) for users, only 2.8% VPT users were having opinion that technology is not at all convenient to them. Present study also attempts to study the level of convenience regarding type of instrument used while dialing. Data reflects that a very few (2.8%) expressed that the instrument is not convenient while making calls. Other majority felt the use of instrument convenient and very convenient.

Table II.16. Level of Convenience with Technology Used

	Level of convenience			Total
	Not at all convenient	Convenient	Very convenient	
Landline	57	1195	375	1627
Mobile	3	468	44	515
Total	60 (2.80%)	1663 (77.63%)	419 (2.80 %)	2142 (100%)

The response regarding the level of convenience with clarity of voice confirmed that majority users (63.2% convenient and 28.3% very convenient) were satisfied in most of the states except Manipur, Orissa and Uttarakhand where clarity of voice was problem many of the times. Similarly, excluding Meghalaya and Manipur, connectivity was reported reliable by most of the VPT users. As far as VPT connectivity is concerned 64.9% VPT users confirmed it reliable and 27.2% highly reliable. Overall VPT's were perceived reliable at all India level.

Table II.17. Level of Convenience with Type of Instrument

Type of instrument	Level of convenience			Total
	Not at all convenient	Convenient	Very convenient	
Dial Key Board	7	246	123	376
Single touch Key board	50	1181	234	1465
Cordless	0	3	8	11
Others	3	233	54	290
Total	60 (2.80%)	1663 (77.63%)	419 (2.80 %)	2142 (100%)

Quality aspect of VPT is also seen in terms of the clarity of voice. It was observed that most of the VPT users found clarity of voice convenient and very convenient as reflected.

Table II.18. Level of convenience in clarity of voice

Clarity of voice	Level of convenience			Total
	Not at all convenient	Convenient	Very convenient	
Never	6	9	3	18
Rarely	28	209	19	256
Often	16	653	158	827
Always	10	792	239	1041
Total	60 (2.80%)	1663 (77.63%)	419 (2.80 %)	2142 (100%)

TIMELINESS ASPECT

Timeliness aspect of VPT was studied in terms of its availability during day time, fixed time and always. Present study confirms that in all most all VPTs are opened regularly and most of the users are satisfied with the timeliness of the services in majority of the states.

Table II.19. Timeliness availability of the service (working hours)

Timings	Frequency	Percent
During day time	326	15.2
During night	27	1.3
Always	1514	70.7
Fixed timings	275	12.8
Total	2142	100.0

70.7% VPT users opined that VPT's were always open whereas 15.2% users confirmed that VPT's were opened during day time. 12.8% users expressed that VPT was opened in fixed timings and about 1.3% conveyed that it was opened in the night also (Table II.19). In most of the cases VPT's were found opened even on holidays.

PAYMENT BY USERS

Present evaluation study also attempts to explore whether VPT users are paying for its use, what is the mode and regularity of payment, do they get bill and whether there is any social restriction in terms of religion, caste, gender etc. Except some VPT users in the states of Himachal Pradesh, Uttarakhand, Orissa, Meghalaya and Arunachal Pradesh, majority 85.6% VPT users shared that they pay for VPT use. In above mentioned states, comparatively fewer users were found paying for VPT service.

Table II.20. Paying for use of VPT Service

	No. of Users	Percent
No	309	14.4
Yes	1833	85.6
Total	2142	100.0

About 85.6 % conveyed that they are paying for VPT use as reflected in the Table II.20. No user was getting bill for VPT use. As far as **SOCIAL RESTRICTIONS** is concerned, barring very few instances in some parts, there were no social restrictions observed in all over India related to accessibility and use of VPTs. About 98.5% VPT users shared that there is no restriction in the use of VPT in their area (Table II.21).

Table II.21. Social restrictions in VPT service usage

	Frequency	Percent
No	2110	98.5
Yes	32	1.5
Total	2142	100.0

About 69 % users were paying in cash, 1.4% in credit but some 14.4% users also reported paying partly cash and partly credit. About 14% users were found making calls at VPT without making payment (Tables II.22). Interestingly in some parts of the country barter system was also observed. Most often VPT users were regular in payment.

Table II.22. Mode of payment for VPT service usage

Mode of Payment	No. of Users	Percent
Cash	1484	69.3
Credit	29	1.4
Partly cash, partly credit	308	14.4
Others	12	.6
Not paying	309	14.4
Total	2142	100.0

IMPROVEMENT IN CONNECTIVITY

Access to telecommunications is perceived to have improved connectivity significantly in recent years. Observations related to usage of VPT in various connectivity dimensions confirm that except improvement in personal connectivity, there is no improvement in other dimension of connectivity.

Table II.23. Improvement in Connectivity

Level of Improvement	Personal Communication	Business Networking	Official Purposes
No improvement	155 (7.2)	1468 (68.5)	1586 (74.0)
Marginal Improvement	1188 (55.5)	488 (22.8)	428 (20.0)
Significant improvement	799 (37.3)	186 (8.7)	128 (6.0)
Total	2142 (100.0)	2142 (100.0)	2142 (100.0)

Table II.24. Emergency Management

Level of Improvement	Medical	Fire	Police	Natural calamities
No improvement	1190 (55.6)	1488 (69.5)	1570 (73.3)	1629 (76.1)
Marginal Improvement	708 (33.1)	470 (21.9)	396 (18.5)	346 (16.2)
Significant improvement	244 (11.4)	184 (8.6)	176 (8.2)	167 (7.8)
Total	2142 (100.0)	2142 (100.0)	2142 (100.0)	2142 (100.0)

Percentage response of users as no improvement in various dimensions of connectivity is as follows business (68.5%), official (74%), medical (55.6%), fire (69.5%), police (73.3%) and natural calamities (76%). It is reported that VPT is never being utilized by the users for access of information to the purpose of business (80.9%), market (76.1%), employment opportunity (82.2%), education (75.9), weather forecasting (93%), health (70%), etc., and 19% VPT users revealed using it as per the necessity for health service (Tables II.23 and II.24). These usages are supposed to enhance their economic status and expected to improve their lives drastically. It was revealed about the connectivity preference that the highest value was placed on an inter-village person to person communication for personal calls. Users shared that the benefit derived is the time or money saved in travel. The second highest value was in village to district level calls. In this case, they shared that money saved was of the order of one day of wages. Long distance calls were not found to be critical for rural people as far as social and business networks were concerned.

TRANSPARENCY

Regarding people's participation and transparency in the decision of VPT location, it was observed that except in Rajasthan, Assam and Meghalaya states, majority users were not the part of the decision. Only 32% VPT users in India were involved in the decision about location (Table II.25).

Table II.25. Involvement in VPT location decision

	Frequency	Percent
No	1456	68.0
Yes	686	32.0
Total	2142	100.0

Table II.26. Toll free numbers displayed

	Frequency	Percent
No	185	77.08
Yes	55	22.92
Total	240	100.00

Regarding display of toll free numbers as per the DOT guidelines, it was found that only 23% VPT's have displayed toll free numbers (Table II.26) and 15% were having display of tariff rates in the study area (Table II.27). Rajasthan, Madhya Pradesh and in some VPTs located in Himachal Pradesh, Uttarakhand and Assam were having display board of tariff and toll free numbers.

Table II.27. Tariff displayed

	Frequency	Percent
No	204	85.0
Yes	36	15.0
Total	240	100.0

Similarly regarding display of tariff rates on VPTs, it was observed that only 15% of VPT surveyed have display tariff rates at their VPTs. Other 85% VPTs were not found displaying tariff rates.

Table II.28. Complaint book available

	Frequency	Percent
No	234	96.9
Yes	10	4.1
Total	244	100.0

Every custodian of VPT has to keep complaint book at VPT, but it was observed that complaint books were not found in 96.9% of the VPTs all over India (Table II.28). A few VPTs in Madhya Pradesh, Orissa, Rajasthan, Uttarakhand and Assam was found having complaint books. Only 19.7% of VPT's covered under the study have displayed name and telephone number of grievance redressal officer.

ECONOMIC ASPECTS OF VPTS

Present study attempted to investigate the increase in income of after VPT installation in their areas. The economic aspect of VPT is not encouraging as per the opinion of VPT users across the states covered in the study. About 83.6 % users shared no change in their income because

of VPT installation in their area (Table II.29). Maximum 5 – 10 percent change is reported by users who observed some change in their income. Very minimal portion of Madhya Pradesh and Rajasthan reported more than 20 per cent increase in their income as opined by users. Although most of them perceive that communication can increase their financial capital (ability to earn more, get new businesses) with greater exposure and awareness. They shared that the need to travel has greatly reduced with improved access to telecommunications. Social capital (relationship with family members, friends etc) has also been positively influenced by telecommunications.

Table II.29. Utility Aspect

	No. of Users	Percent
No	1790	83.6
Yes	352	16.4
Total	2142	100.0

REPAIR AND MAINTENANCE

In majority of the cases, repair and maintenance was reported satisfactory to some extent. All India observations confirms that in all the twelve states included in the study repair and maintenance in terms of time perceived satisfactory by about 61.7 % VPT users and highly satisfactory by around 19.9 % VPT users whereas quality of repair shared 58.9 % satisfactory and 21.9 % highly satisfactory by VPT users (Table II.30). In Manipur and Orissa particularly, users were not satisfied with the repair and maintenance.

Table II.30. Level of satisfaction about repair and maintenance - Time & quality

Level of satisfaction	Time		Quality	
	No. of Users	Percent	No. of Users	Percent
Not satisfactory	391	18.25	408	19.05
Satisfactory	1323	61.77	1263	58.96
Highly satisfactory	428	19.98	471	21.99
Total	2142	100.00	2142	100.00

Average Revenue Per Unit (ARPU)

ARPU gives clear picture about the usage of the VPT in the specific village. ARPU calculation is made on the basis of aggregating income from telephone calls for the last three months at the time of undertaking the present study. Information regarding ARPU indicates that 39.3% of the VPTs are getting less than Rs 250 ARPU and 47.1% are earning between Rs. 250 – 500 ARPU per month (Table II.31). Only 4.1% VPTs in all the states reported having more than Rs. 1,000 ARPU. This indicates very low attraction towards VPT as far as business venture is concerned.

Table II.31. ARPU

	No. of Users	Percent
Less than 250	96	39.3
250-500	115	47.1
501-750	17	7.0
751-1000	6	2.5
More than 1000	10	4.1
Total	244	100.0

STATUS OF PROBLEM RESOLUTION

In all over India was explored regarding location, accessibility, repair and maintenance, payment and related to other service providers. It revealed that in 36.3% of cases problem with reference to location was resolved internally in many states like Andhra Pradesh, Uttrakhnad, Meghalaya and Manipur whereas 49.8% of the users were not aware about the problem in states including Assam, Arunachal Pradesh, Rajasthan, Madhya Pradesh, Chatisgarh and Jharkhand. In some states e.g. Andhra Pradesh, some parts of Himachal Pradesh, Uttrakhand and Meghalaya about 30% users reported that the problem solution regarding accessibility in terms of time and quality indicated was resolved internally and on the other side 52.5% users shares that they were not aware about this in states like Chatisgarh, Jharkhand, Orissa, Madhya Pradesh, Rajasthan and Assam. In Manipur, parts of Himachal Pradesh and Jharkhand and Meghalaya 9.1 % users stated that this problem was not resolved. Present study found that about 15 % of the users expressed that problems of repair and maintenance were solved internally whereas around 65% were not aware about this in some parts of Himachal Pradesh, Uttrakhand, Jharkhand, Chatisgarh, Orissa, Madhya Pradesh and Rajasthan (Table II.32 and II.33). Many users in Manipur shared that it was not resolved in their state any way. When inquiry was made for problem solving related to payment to custodian, in states including Andhra Pradesh, Himachal Pradesh, Orissa and Manipur, majority users expressed that it is solved internally. Majority 86.4% sers in entire study area were not aware about the problem solution related to alternative service providers. It reflects that people’s participation in problem solution have high potential to improve the performance of VPTs.

Table II.32. Problem Resolution with reference to Location and Accessibility

	Location		Accessibility (Time)		Accessibility (Quality)		Alternate service providers	
	No. of Users	Percent	No. of Users	Percent	No. of Users	Percent	No. of Users	Percent
Internally	778	36.3	656	30.6	639	29.8	196	9.2
Externally	154	7.2	166	7.7	185	8.6	59	2.8
Not resolved	144	6.7	195	9.1	262	12.2	36	1.7
Not aware	1066	49.8	1125	52.5	1056	49.3	1851	86.4
Total	2142	2142	2142	100.0	2142	100.0	2142	100.0

Table II.33. Problem Resolution with reference to Repair & Maintenance and Other Service Providers

	Repair in Maintenance in Time		Repair in Maintenance in Quality		Other Service Providers	
	No. of Users	Percent	No. of Users	Percent	No. of Users	Percent
Internally	325	15.2	310	14.5	196	9.2
Externally	271	12.7	267	12.5	59	2.8
Not resolved	163	7.6	170	7.9	36	1.7
Not aware	1383	64.6	1395	65.1	1851	86.4
Total	2142	100.0	2142	100.0	2142	100.0

ACCESS TO INFORMATION

It is expected that VPT installation at village level would increase access to information for various purpose. Table II.34 reflects that VPT users were not observed. Making use of this instrument for accessing information at expected level. In case of accessing information for health it was found using 17.1 % for education 11.5 % and for Market 10.6 % rarely at all India level. Most of the people have never used VPT for getting information.

Table II.34. Access to Information

	Information on	Never	Rarely	As per necessity	Frequently	Total
a.	Employment Opportunity	1760 (82.2)	142 (6.6)	188 (8.8)	52 (2.4)	2142 (100.0)
b.	Market	1630 (76.1)	226 (10.6)	233 (10.9)	53 (2.5)	2142 (100.0)
c.	Development & Welfare scheme of Govt. on -					
	1. Health	1501 (70.1)	319 (14.9)	300 (14.0)	22 (1.0)	2142 (100.0)
	2. Education	1625 (75.9)	247 (11.5)	246 (11.5)	24 (1.1)	2142 (100.0)
	3. Related to Agrl.	1723 (80.4)	155 (7.2)	228 (10.6)	36 (1.7)	2142 (100.0)
	4. Others	1809 (84.5)	118 (5.5)	187 (8.7)	28 (1.3)	2142 (100.0)
d.	Natural Calamity / Weather forecasting	2001 (93.4)	79 (3.7)	52 (2.4)	10 (0.5)	2142 (100.0)
e.	Rail / Road transport	1749 (81.7)	207 (9.7)	163 (7.6)	23 (1.1)	2142 (100.0)
f.	Health Services	1350 (63.0)	367 (17.1)	410 (19.1)	15 (0.7)	2142 (100.0)
g.	Agrl. related	1670 (78.0)	153 (7.1)	275 (12.8)	44 (2.1)	2142 (100.0)
h.	Business related	1732 (80.9)	117 (5.5)	246 (11.5)	47 (2.2)	2142 (100.0)

COMPARATIVE OBSERVATION REGARDING HILLY AND PLAIN AREAS

A comparative analysis is attempted to understand the differences of performance of VPT in hilly and plain geographic region. In the present study, hilly areas include Arunachal Pradesh, Himachal Pradesh, Manipur, Meghalaya and Uttranchal. All other remaining states considered as plain region i.e., Andhra Pradesh, Assam, Jharkhand, Madhya Pradesh, Chattisgarh, Orissa and Rajasthan.

Socio Economic Profile

General details of VPT reflects the socio-economic profile of VPT users in present study. It is observed that VPT is being used by more number of General Category (31.9 %) in hilly areas comparative to plain areas (14.7 %) given in Table II.35. Similarly, higher percentage of ST VPT users (52.3 %) were seen in Hilly area than plain areas (27.0 %).

Table II.35. Social Group

Social Group	Plain	Hilly
General	206 (14.7)	238 (31.9)
Other Backward Classes (OBC)	635 (45.5)	30 (4.0)
Scheduled Caste (SC)	179 (12.8)	87 (11.7)
Scheduled Tribe (ST)	377 (27.0)	390 (52.3)
Total	1397 (100)	745 (100)

Regarding ownership of houses 40 % of VPT users in hilly area were owing semi-pucca house where as in plain area it was only 29.3 %. Although there was not much difference in the proportion who owns pucca houses (Table II.36).

Table II.36. Type of house

Type of House	Plain	Hilly
Kucha House	674 (48.2)	291 (39.1)
Semi-pucca House	409 (29.3)	298 (40.0)
Pucca House	314 (22.5)	156 (20.9)
Total	1397 (100)	745 (100)

In hilly area higher percentage of 86.7 VPT users (Table II.37) were having electricity at their houses in comparison to plain areas (66.0 %) etc.

Table II.37. Status of Electrification

Electrification status	Plain	Hilly
Electricity not available	475 (34.0)	99 (13.3)
Electricity available	922 (66.0)	646 (86.7)
Total	1397 (100)	745 (100)

TELEPHONE AVAILABILITY

Availability of telephones at their home shows that more VPT users in hilly area were having telephone facility at their home as reflected in Table II.38.

Table II.38. Telephones Availability

Availability	Plain	Hilly
Telephone Not available	915 (65.5)	367 (49.3)
Telephone available	482 (34.5)	378 (50.7)
Total	1397 (100.0)	745 (100.0)

Observations of present study indicates that more number of Landline phones were installed in hilly area (18.8 %) than plain (13.5 %) in the sample. BSNL has the highest coverage in hilly area among VPT users (45.7 %) whereas in plain, Airtel is having highest coverage (39.3 %) amongst VPT users who are owning telephones.

USAGE OF VPT

Usage pattern is described in terms of local and STD calls in last 30 days and 60 days. Observation regarding STD calls as well as local calls shows that there is no difference in hilly and plain areas regarding number of calls made (Tables II.39 & II.40).

Table II.39. Details of Local Calls from VPT

No. of calls	Local 30 days		Local 60 days	
	Plain	Hilly	Plain	Hilly
No calls	135 (11.3)	28 (8.2)	90 (7.5)	37 (10.8)
2 or less	353 (29.5)	53 (15.5)	199 (16.6)	45 (13.1)
3 to 4	329 (27.5)	106 (30.9)	223 (18.6)	55 (16.0)
5 to 6	199 (16.6)	54 (15.7)	220 (18.4)	73 (21.3)
More than 6	181 (15.1)	102 (29.7)	465 (38.8)	133 (38.8)
Total	1197 (100.0)	343 (100.0)	1197 (100.0)	343 (100.0)

Table II.40. Details of STD calls from VPT

No. of calls	Last 30 days		Last 60 days	
	Plain	Hilly	Plain	Hilly
No calls	1264 (90.5)	675 (90.6)	1268 (90.8)	674 (90.5)
2 or less	73 (5.2)	28 (3.8)	48 (3.4)	28 (3.8)
3 to 4	28 (2.0)	20 (2.7)	33 (2.4)	14 (1.9)
5 to 6	20 (1.4)	9 (1.2)	18 (1.3)	11 (1.5)
More than 6	12 (0.9)	13 (1.7)	30 (2.1)	18 (2.4)
Total	1397 (100.0)	745 (100.0)	1397 (100.0)	745 (100.0)

Majority around 90 % have not made any STD calls in last 60 days.

Distance of VPT from the House

In table II.41. shows the average distance of VPT from house in hilly and plain region.

Table II.41. Distance of VPT from house

Distance	Plain	Hilly
Within 200 mts from residence	593 (42.4)	394 (52.9)
200-500 mts from residence	581 (41.6)	261 (35.0)
More than 500 mts	223 (16.0)	90 (12.1)
Total	1397 (100.0)	745 (100.0)

TRANSPARENCY AND AVAILABILITY OF VPT

Decision of VPT Location

Observations regarding involvement of VPT users in the decision of VPT location indicates that trend was more or less same in hilly as well as plan area (Table II.42).

Table II.42. Involvement in VPT Location Decision

Decision	Plain	Hilly
No	946 (67.7)	510 (68.5)
Yes	451 (32.3)	235 (31.5)
Total	1397 (100.0)	745 (100.0)

Availability of VPT Service

It was observed that in hilly area availability of VPT service was less than plain area as indicated in table II.43. In hilly area, proportion of fault was more and availability of VPT service was less. 7.2 % of VPT users in Hilly area expressed that VPT was faulty between 21 – 30 times in last month whereas in Plain it was only 0.7 %.

Table II.43. Availability of VPT Services in Last Month

No. of Fault	Faulty		No. of Fault	Busy	
	Plain	Hilly		Plain	Hilly
0	902 (64.6)	548 (73.6)	0	1160 (83.0)	603 (80.9)
1	200 (14.3)	69 (9.3)	1	74 (5.3)	59 (7.9)
2	173 (12.4)	41 (5.5)	2	78 (5.6)	34 (4.6)
3	53 (3.8)	13 (1.7)	3	46 (3.3)	17 (2.3)
4 – 10	44 (3.1)	19 (2.5)	4 – 10	38 (2.7)	8 (1.1)
11-20	15 (1.1)	1 (0.1)	11-20	1 (0.1)	0
21-30	10 (0.7)	54 (7.2)	21-30	0	24 (3.2)
Total	1397 (100.0)	745 (100.0)	Total	1397 (100.0)	745 (100.0)

Display of Telephone No., Tariff Rates and Availability of Complaint Book

Transparency is also accessed in terms of the above three aspects. Comparison between two areas indicates that transparency in above dimensions in hilly area was lesser than plain area. Name and telephone grievance redressal were not displayed in 90.2 % in hilly area comparative to 72.8 % in plain areas. Display of toll free No. was not observed in 90.2 % cases in hilly area in comparison to 67.4 % in plain area (Table II.44). Same way 93 % VPTs in hilly area had not displayed tariff whereas in plain area it was 79 %. Regarding complaint book a little difference was found in both areas (99 % in hilly area, 93.5 % in plain area).

Table II.44. Display of Telephone Numbers, Tariff rate and availability of Complaint Book

	Toll Free Numbers Displayed		Tariff Displayed		Availability of Complaint Book	
	Plain	Hilly	Plain	Hilly	Plain	Hilly
No	93 (67.4)	92 (90.2)	109 (79.0)	95 (93.1)	128 (94.1)	100 (99.0)
Yes	45 (32.6)	10 (9.8)	29 (21.0)	7 (6.9)	8 (5.9)	1 (1.0)
Total	138 (100.0)	102 (100.0)	138 (100.0)	102 (100.0)	136 (100.0)	101 (100.0)

QUALITY ASPECTS OF VPT

Comparative analysis of quality aspect of VPT is observed in terms of convenience of place of installation, technology used, clarity of voice and connectivity of VPT.

Table II.45. Quality Aspect

Quality Aspects	Not Convenient		Convenient	
	Plain	Hilly	Plain	Hilly
Place of installation	126 (9.0)	23 (3.1)	127 (91.0)	722 (96.9)
Technology used	56 (4.0)	4 (0.5)	1341 (96.0)	741 (99.5)
Voice Clarity	81 (5.8)	100 (13.4)	1316 (94.3)	645 (86.6)
Connectivity	35 (2.5)	134 (18.0)	1362 (97.5)	611 (82.0)

Analysis reflects that level of convenience with reference to place of installation and technology used was not much different in hilly and plain areas. But regarding clarity of voice and connectivity of VPT there was mark difference in hilly and plain areas (Table II.45). In hilly area, convenience level in both the dimension is lesser than plain area. In other words VPT users in hilly areas have expressed problem regarding clarity of voice and connectivity.

Satisfaction level is also observed in terms of accessibility of VPT and repair in maintenance in terms of time and quality (Table II.46). Comparison reflects that more VPT users in hilly area were felt unsatisfied than plain areas respect to accessibility of VPT in terms of time.

Table II.46. Satisfaction level of VPT Users

Satisfaction Aspect	Satisfactory		Not satisfactory	
	Plain	Hilly	Plain	Hilly
VPT Access (Time)	1274 (91.2)	638 (85.7)	123 (8.8)	107 (14.4)
VPT Access (Quality)	1140 (81.6)	624 (83.8)	257 (18.4)	121 (16.2)
Repair & Maintenance (Time)	1209 (86.5)	584 (77.7)	188 (13.5)	161 (21.6)
Repair & Maintenance (Quality)	1200 (85.89)	581 (77.99)	197 (14.1)	164 (22.0)

Satisfaction level with regard to repair and maintenance both in terms of time and quality is found less in hilly area as shown in Table II.46.

TIMELINESS OF VPT

Timeliness comparison in different geographic region reflects that there was no significant difference between hilly and plain areas as far as availability of VPT services were concerned (Table II.47).

Table II.47. Timeliness availability of the service (working hours)

Timings	Plain	Hilly
During day time	219 (15.7)	107 (14.4)
During night	8 (0.6)	19 (2.6)
Always	1013 (72.5)	501 (67.2)
Fixed timings	157 (11.2)	118 (15.8)
Total	1397 (100)	745 (100)

Average Revenue Per Unit (ARPU) of VPT

ARPU that gives picture about the usage of VPTs in the area is shown in the Table II.48.

Table II.48. Average Revenue Per VPT

ARPU (Rs.)	Plain	Hilly
Less than 250	69 (49.3)	27 (26.0)
250-500	49 (35.0)	66 (63.5)
501-750	12 (8.6)	5 (4.8)
751-1000	4 (2.9)	2 (1.9)
More than 1000	6 (4.3)	4 (3.8)
Total	140 (100.0)	104 (100.0)

It shows that lesser proportion in hilly areas falls under the minimal category of usage in terms of ARPU i.e., less than Rs. 250. Higher number of VPTs comes under the category of Rs. 250 – 5000 in hilly area (63.5 %) in comparison to plain area i.e., 35 %. It shows VPT has high usage in hilly area.

Payment by Users

In hilly area lower percentage of VPT users were recorded paying for use of VPT. Only 68.1 % users in hilly area were paying whereas in plain area it was 94.9 % (Table II.49).

Table II.49. Payment by Users

	Plain	Hilly
No	71 (5.1)	238 (31.9)
Yes	1326 (94.9)	507 (68.1)
Total	1397 (100.0)	745 (100.0)

Utility Aspect

It is a firm belief that usage of VPT would help to change in household income of VPT users. Table II.50 indicates that there was not much difference in trend in both geographic region. 88.2 % users in hilly area and 81.1 % users in plain areas are of the opinion that there is no change in their income due to VPT use.

Table II.50. Utility Aspect

Status of Change	Plain	Hilly
No	1133 (81.1)	657 (88.2)
Yes	264 (18.9)	88 (11.8)
Total	1397 (100.0)	745 (100.0)

ACCESS TO INFORMATION

As referred VPT is instrumental for accessing information for various purposes. Table II.51 confirms that there was not much variation in the trend in hilly and plain areas regarding accessing information. In both the region the connectivity preference was such that highest value was placed on an inter-village person to person communication for personal calls. Users shared that the benefit derived was the time or money saved in travel. The second highest value was in village to district level calls. In this case, they shared that money saved was of the order of one day of wages. Long distance calls were not found to be critical for rural people as far as social and business networks were concerned.

Table II.51. Access of Information

Information on	Plain					Hilly				
	Never	Rarely	As per necessity	Frequently	Total	Never	Rarely	As per necessity	Frequently	Total
a. Employment Opportunity	1180 (84.5)	65 (4.7)	111 (7.9)	41 (2.9)	1397 (100)	580 (77.9)	77 (10.3)	77 (10.3)	11 (1.5)	745 (100)
b. Market	1136 (81.3)	119 (8.5)	119 (8.5)	23 (1.6)	1397 (100)	494 (66.3)	107 (14.4)	114 (15.3)	30 (.0)	745 (100)
c. Development & Welfare scheme of Govt. on										
1. Health	1029 (73.7)	215 (15.4)	145 (10.4)	8 (0.6)	1397 (100)	472 (63.4)	104 (14.0)	155 (20.8)	14 (1.9)	745 (100)
2. Education	1115 (79.8)	152 (10.9)	117 (8.4)	13 (0.9)	1397 (100)	510 (68.5)	95 (12.8)	129 (17.3)	11 (1.5)	745 (100)
3. Related to Agrl.	1205 (86.3)	72 (5.2)	106 (7.6)	14 (1.0)	1397 (100)	518 (69.5)	83 (11.1)	122 (16.4)	22 (3.0)	745 (100)
4. Others	1274 (91.2)	32 (2.3)	77 (5.5)	14 (1.0)	1397 (100)	535 (71.8)	86 (11.5)	110 (14.8)	14 (1.9)	745 (100)

Contd...

Table II.51. Access of Information (Contd ...)

Information on	Plain					Hilly				
	Never	Rarely	As per necessity	Frequently	Total	Never	Rarely	As per necessity	Frequently	Total
d. Natural Calamity / Weather forecasting	1336 (95.6)	46 (3.3)	15 (1.1)	0	1397 (100)	665 (89.3)	33 (4.4)	37 (5.0)	10 (1.3)	745 (100)
e. Rail / Road transport	1108 (79.3)	151 (10.8)	127 (9.1)	11 (0.8)	1397 (100)	641 (86.0)	56 (7.5)	36 (4.8)	12 (1.6)	745 (100)
f. Health Services	894 (64.0)	262 (18.8)	236 (16.9)	5 (0.4)	1397 (100)	456 (61.2)	105 (14.1)	174 (23.4)	10 (1.3)	745 (100)
g. Agrl. related	1182 (84.6)	83 (5.9)	111 (7.9)	21 (1.5)	1397 (100)	488 (65.6)	70 (5.4)	164 (22.0)	23 (3.1)	745 (100)
h. Business related	1209 (86.5)	51 (3.7)	113 (8.1)	24 (1.7)	1397 (100)	523 (70.2)	66 (8.9)	133 (17.9)	23 (3.1)	745 (100)

Comparative analysis of plain and hilly areas indicates that there was higher use of VPT in hilly area for accessing information than plain region. Percentage frequency in 'Never' category is less in all purposes.

Synopsis of Countrywide SWOT Analysis of Rural Telephony

Rural Telephony Programme under BNY has proved to be lifeline of the rural people. In the following section achievements, limitations and challenges are described as a whole in a condensed manner to understand the overall performance of VPTs in India. Future directions are specified as the important recommendations that would help in improvement of the performance of VPTs.

ACHIEVEMENTS

- VPT installation is reported as a landmark in some villages in India where villagers get connected with rest of the world first time after 60 years of independence. VPT was the first phone installed in these villages under Bharat Nirman Yojana. DSPT based VPTs in far reaching locations providing high clarity of voice, maintenance free service to villagers. Remote hilly area like 'Mana' (last village of Indo-China Border) is one of the examples that had this facility after a long wait of more than 35 years. VPT is observed especially useful in the six-month season of snowfall when no other communication network is available. Evaluation team and villagers were extremely thrilled to see those sites and literally wished to salute GOI for the effort.
- When majority of poor villagers do not have personal mobile and landline phones, VPT is very useful. VPT use is seen optimum in many villages. This gives facility to the villages to stay connected with their migrated relatives. It was thus observed to be useful for migrant labour, transporters and tourists.

- VPT is more useful particularly for poor people as local call charges are cheaper in VPT than other service providers. Villagers are highly willing and convinced about the usage of VPT. Poor villagers derive benefits from incoming call facilities as well. Custodians sometimes inform and hold the call to pass the message. This highlights the importance of VPT for personal social connectivity.
- Users expressed that VPT is especially useful in case of crisis – fire in the forest, conflict among tribal group, flood, during medical emergencies and natural disasters.
- VPT is particularly advantageous in rural areas when mobiles do not function due to interruption in power supply leading to discharge of batteries, remain non-functional due to non-availability of network and lack of cash balance in phone.
- VPT is being used predominantly by women as usually mobiles remain with men folk. Women shared that their comfort level increased as with VPT use they could get information about the wellbeing of their family members easily and regularly.
- VPT based on WLL fix technology reported that they are providing better service than land line phone that is difficult to maintain in remote and distant places.
- Mostly VPT users are quite satisfied with the operation and approach of custodian. They were quite friendly and approachable. VPT location was also reported convenient and centralized and always available. Some custodians were found keeping excellent record of VPT.
- Repair and maintenance is undertaken by BSNL free of charge and in many cases it was reported that it was undertaken in short span of time.
- Regarding accessibility and responsiveness, VPT is described mostly accessible to all caste without any discrimination except a few locations. No ethnic discrimination is reported in the majority of the VPTs. ST / Minority custodians also help ensure equity and social justice. In few instances, VPTs reflect high responsiveness- generous and sympathetic lady custodians allowed villagers to call without any charge. Custodians are found cooperative and allow people to call on credit.
- Almost all VPTs are installed as per the guidelines of VPT installation with the consultation of Gram Sabha and Panchayat members in the villages. And in majority cases, villagers were consulted before VPT installation (Collective decision of villagers). Many VPTs were having display boards with tariffs and toll free numbers.
- VPT is expressed as blessing for remote villages, tribal people and villages having no road connectivity. VPT is exceedingly useful where no other network is reachable due to their point of location. It was shared that VPT is being used irrespective of widespread prevalence of mobiles due to signal problem. Extremely useful in the difficult hilly terrain where no other service provider is ready to provide access.

- VPT installed with WLL technology especially revealed reliable and advantageous connectivity in the areas where there is frequent cable fault due to highway construction. VPTs based on DSPT technology were found to be providing 100% connectivity, extreme clarity of voice, maintenance free services to villagers in extremely difficult terrain.
- Economic aspect of VPT revealed that it provides availability of telecom facility to remote villages at affordable price to stay connected with rest of the world. In some cases, increase in economic level through access to information about employment opportunities is also reported. VPT is used by villagers not only for personal communication but also some time for business especially during the peak agricultural season to receive information about the rates of products.
- It was noticed as easier mode of communication for villagers. Poorest of poor are in a position to derive benefit from VPT by collating information for their lives. Barter system was also found exists that facilitates villagers to use telecommunication services with full convenience.
- People of some village using the service of the VPTs optimally. Young generation glad to have connectivity to access information regarding employment. Reported increase in Economic level through getting information about employment opportunities.
- VPT facilitate money saving as communication can be done on phone without traveling to that point.
- VPT has made their lives convenient otherwise earlier they had to walk to the nearby PCO to access telecom service.

LIMITATIONS

- Mostly VPTs were not having display meters and proper billing machine and it was reported in some cases that custodians were charging arbitrarily. Over charge cases were observed charging even Rs. 5 – 6 per minute in Uttaranchal and Arunachal Pradesh.
- Some VPTs that were installed without consensus of villagers were reported inconvenient to many users. Even many villagers are not aware that it is public facility. These VPTs are being used as a personal connection by Sarpanch, NGOs because of ignorance in the villagers.
- In many VPTs display board showing toll free numbers and tariff rates were not found. This encouraged some custodian to charge higher call rates. In some VPTs in Uttaranchal very small board was observed kept inside the room / campus.
- It was communicated in some states that display boards are not issued by BSNL, and this is an on-going process.
- **Repair and Maintenance** is limiting the proper functioning of VPTs in some places. Problem of battery and its maintenance is observed almost every where across the country

except where VPTs are based on Land line technology. It was told that quality of battery is problematic and its recharge capacity is very poor.

- In a number of villages, the power supply is both irregular and available only for few hours. As a result even if battery back up is provided, due to non-availability of electricity for reasonable duration, the batteries are not able to get fully charged. Further due to frequent interruption of power supply the life of these batteries get shortened which in turn increases operational cost to run services in rural areas. Non-availability of reliable power supply in semi-urban, rural and remote areas also increases operational costs.
- In solar battery too, the problem of charging persist in cloudy weather. Battery backup is not enough during long power cuts. Prolonged power cut leads to dysfunctional VPT. Poor battery maintenance and other use of battery like lighting tube lights is stumbling block of VPT performance.
- In few cases they have to travel approximately around 15 Kms., to get the battery recharged. Some cheating cases were also reported.
- Maintenance of VPT is expressed difficult in far flung area where there is no approach road. Shortage of BSNL staff and vehicle for repair is also reported eg. only two linemen in charge of 7 villages spread across various hills. Delay in maintenance is shared due to shortage of staff and also due to delay in communication. Posting of contractual staff also posing problems sometimes in timely maintenance and repair.
- Sometimes custodian has to cover distance of 40-100 KMs (Manipur) to get instruments repaired. Thus, poor road network identified as a major hurdle for maintaining VPT.
- It was noticed that there is a high operational and maintenance cost in remote areas. Cable fault during road widening, bad weather or any other construction work is also observed as the reason for VPT remaining faulty for long intervals.
- In some areas cable theft and breakage are main problems in smooth functioning of VPTs.
 - Some time there is no other phone to lodge the complaint of fault of VPT.
 - Custodian is not aware about maintenance of battery.
 - For delivering **quality** services, in many cases VPTs face network problem in remote area. Poor signals resulting the problem of call drop. Distant tower location is posing problem of weak signals in some of the VPTs leading to frequent disconnection.
- Accessibility to VPT is very difficult in some VPTs as houses are scattered in remote and hilly areas. Difficult access during rainy season due to landslide and in winter due to extreme cold is also reported. VPT access is found limited in few instances where custodians go for work in the forest or in the field during day time.
- Location of VPT is not found free to access in a few places as it is inside the home, in club (Assam). VPT accessibility is difficult especially in winter and rainy season because of muddy, dark hilly, densely planted bamboo trees. Some VPTs' location is so inaccessible during night time that even threat of wild animals exists.

CHALLENGES

- Affordable, attractive, user friendly and multiple reach of mobile services provided by BSNL and other service providers is one of the major threats that desist the villages to use VPT. Tremendous marketing with lucrative offers and plans is posing tough competition.
- Profuse availability of services by other telecom players with better services in terms of connectivity, bill delivery / payment, repair and maintenance discourage villagers to use VPTs.
- It was viewed that good network maintenance and quick delivery system of private operator keeping them ahead of BSNL in view of customer satisfaction.
- Availability of tariff vouchers attracting customers more towards convenience of mobiles than landline based VPTs.
- Proliferation of coin boxes, STD booth by BSNL and private telecom players are also opined for creating cut throat competition. STD Booth with additional services is reported convenient.
- Custodians also put his half hearted efforts in operation of VPT because of relatively lower margin in VPT.
- Shortage of field staff and working of contractual labour reduce the efficiency and effect overall performance specially repair and maintenance.
- One of the major bottlenecks reported is the maintenance of Battery in the functioning of VPTs. Prolonged power cuts and interrupted supply making difficulties in charging and maintenance of batteries that makes VPT dysfunctional. Remote locations of VPTs from tower create problems in getting signals in some of the villages. Those VPTs are unable to catch proper and regular signals.
- Maintenance and repair is also tough and expensive in remote and non-motorable areas. There is always threat of cable fault with no quick solution in some places where extensive construction and road widening work is going on.
- VPT based on WLL technology has its own limitation. Clarity of voice is an issue in this technology.
- Another major challenge in optimum utilization of VPT is, the ignorance of villagers about its usage that how VPT could change their quality of lives through accessing multiple information only with a call.
- Some villagers shared that misconception about mobiles that its call rates are economical which discourage people to use VPT.

- Minimal use of VPTs is also leading to lack of concentration and encouragement in maintaining VPT well. In some cases attitude of custodian is also not found customer friendly.
- Poor road connectivity leads to difficulties in prompt service delivery especially in rough weather conditions.
- Some instances were also reported regarding prevailing social discrimination in the village that discourages ‘not so privileged people’ to use the VPT. Caste hierarchy was prevalent in subtle way in some parts of India.
- Naxal threat and communal disturbances were also observed as one of the limiting factors for optimum utilization of VPTs in a small number of parts.
- In thinly populated areas where houses are scattered, only one VPT was not felt convenient and easy to access.

FUTURE DIRECTIONS

- In India the discussion on rural telephony has remained confined to technological solutions to the problem of extending coverage to areas with low subscriber density. The utilisation aspect of the problem has been largely ignored. Yet it has been widely observed that mere provision of access does not ensure its use; a whole lot of personal, social and economic factors intervene. Villagers should have proper orientation about the potential use of VPT as most of them using VPT merely for personal communication. In thinking about a community access approach an important consideration would be to ensure free and equal access to different castes, gender and communities. Increase awareness would also facilitate people to reap the benefit of this initiative at the maximum and enhance their quality of lives.
- BSNL should provide some booklet or printed material for updates of villagers and customers about the various sources/links of the information where users could access information.
- Incorporation of extended facilities – Internet, fax, STD and ISD would strengthen VPT for maximum utilization. Younger generation would also be attracted towards this as a profitable venture.
- For most rural areas (which may not provide adequate telecom revenue) there is need to look for opportunities of value addition. Creating Internet kiosks is one such opportunity where a variety of services can be offered. These services can include logging request for service from government, access to public and market information, delivery of news and education and telecom (email, IP telephony) services. Organisations that can provide such services/ content for the benefit of rural populations include NGOs and dairy/agriculture co-

operatives. If such kiosks were to be established, it would be reasonable to expect that all sectors / organisations, which can deliver services through such kiosk, would participate in making the necessary investment for establishing the kiosk.

- Proactive role by BSNL officials for making product VPT attractive and economical viable. Branding exercise to position VPT as the lifeline for rural development needs to be established. Efforts should be made for increasing earning with add on services.
- VPT is still being used as “Callers” of last resort in some places. The service should be made attractive with latest, convenient, transparent and easy to use instrument such as ‘coin box’.
- Extensive marketing of product should be planned to highlight the advantage of VPT such as lower call rate and un-interrupted service.
- Attractive display boards should be provided like other service providers are using to sell this brand (VPT). It should also display details of tariff and toll free numbers for transparency and awareness.
- Important numbers of government departments, agencies, market links, health services, knowledge centers should be made easily available for extensive use by the villagers.
- Increased peoples’ participation in deciding about the location of VPT to ensure ownership and maximum usage of the service.
- Proper billing mechanism should be adopted to ensure accurate and transparent billing.
- BSNL officials and Gram Panchayat should bear the responsibilities so villagers could maximize the use of VPT and economize their resources.
- Separate cabin should be insisted to ensure privacy and clarity in voice.
- Staff allotment should be as per the geographic specific requirement. Hilly, remote areas with no infrastructure availability have high requirement for staff and vehicle in comparison to other areas.
- Timely maintenance and repair should be provided in case of fault.
- Battery quality should be improved so that charging capacity could be increased.
- Battery replacement should be faster and there should be provision of spare battery.
- Considering the difficulties of availability/reliability of the electricity, even though the telecom infrastructure is developed, a need is felt to **Set up of Battery charger unit** to facilitate the charging of battery as this is the prime device for functionality of VPT. It will facilitate the battery charging in the rural vicinity which can work with solar power /little power supply at various public places in the nearby villages of rural tower. Necessary financial support for the same could be provided.
- Bill delivery system should be improved for timely delivery.

- Bill collection mechanism should also be made customer friendly to avoid and minimize DNP cases.
- Most of the stakeholders have commented that non availability of skilled manpower is one of the constraints due to which maintenance costs of the network in rural areas are high as compared to urban areas. There are indications that the telecom growth rate is steadily going to increase in service areas, therefore, considering the future manpower requirement for handling rural telecom projects, local youth needs training. **Therefore, the Evaluation team recommends that fellowship/ training programmes could be facilitated for local rural youth and local people** for managing quick fault repair for better functioning especially in remote geographic location.
- STD facility should be provided with some discount plan. It is high in demand after removal of '95' dialing.
- GSM technology is useful for solving maintenance problem.
- Call subsidy was requested for BPL and senior citizens for inclusion of excluded group in the process of development.
- Optimum performance of VPT may provide employment opportunities to many villagers.
- Corruption problem should also be checked.
- It is realized during discussions with the various stakeholders that VPT scheme is being functional like a typical government programme. The decision making process, criterion for tendering, allocation of projects, its monitoring and evaluation remains usually like government department. The present organizational framework and work norms has not served the goals of rural telephony. Some of the stakeholders have suggested the need of redesigning the scope and management systems for managing implementing departments by putting in place a third party program assessment process. The assessment can be carried out not only at the end of the program, but also at periodic intervals, so that any bottlenecks can be detected and removed out early. It is felt that a total overhauling of the concerned department would improve the performance.
- Convergence of all components of BNY could help in good governance for improved service delivery at village level. Infrastructure availability (power, road network), monitoring and administration may improve with convergence.
- The performance record of VPTs in most villages could be increased sufficiently. Some VPTs are out of order and some are disconnected due to non-payment of bills as villagers often perceive it as a free service provided by the government. In some cases VPTs that function normally operate for limited hours of the day because of their location. One of the solutions perhaps lies in linking existing and successful micro-credit organizations that are trusted at the village level (that play a key role in the village development) to expand VPT coverage in rural areas. Small loans to rural entrepreneurs (perhaps targeted to women and

youth) can enable entrepreneurs to establish VPT for high ARPU providing a range of services including telephone, fax, email and even web, photocopy and computer word-processing services. A franchise programme of this sort would also establish consistency of service across a region that would in turn, support the social and economic development of the region.

- VPT could also be proved as lifeline and significant link for socio-economic development of people and help in bridging the divides.
- **Bharat Nirman, including Rural Telephony, has the potential to transform rural India. Many more initiatives and efforts in this can be implemented in near future, vitalizing India's rural economy and creating a vast rural consumption market. Rural Bharat will be enabled to participate in transforming its own future, ensuring sustainable, inclusive growth for India.**

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List of villages covered under the Study

S. No.	State	District	Town	Village	VPT No.
1	Andhra Pradesh	Chittoor	Pulicharla	Kammapally	08585248913
2	Andhra Pradesh	Chittoor	Vadamelapeta	T.Gollapally	08577202806
3	Andhra Pradesh	Chittoor	Nagari	Ananthappa Naidu Kandriga	08577204826
4	Andhra Pradesh	Chittoor	Nagari	Bugga Agraharam	08577271486
5	Andhra Pradesh	Chittoor	Renigunta	Erragunta	08772285528
6	Andhra Pradesh	Chittoor	K.V.Palle	Kasireddigaripalli	08584200202
7	Andhra Pradesh	Chittoor	K.V.Palle	Yerlampally	08584200201
8	Andhra Pradesh	Chittoor	Pulicharla	Vallivetivaripally	08585200746
9	Andhra Pradesh	Chittoor	Peeler	Merlacheruvu	08584243847
10	Andhra Pradesh	Chittoor	Veduru Kuppam	Marripally	08577279017
11	Andhra Pradesh	Srikakulam	Srikakulam	Kanugulavanipeta	08942282671
12	Andhra Pradesh	Srikakulam	Sarubujjili	Vijayaramapuram	08942246825
13	Andhra Pradesh	Srikakulam	Sarubujjili	Buddivalasa	08942246699
14	Andhra Pradesh	Srikakulam	Nandigam	Kallada	08945210947
15	Andhra Pradesh	Srikakulam	Nandigam	Venkatapuram	08945210901
16	Andhra Pradesh	Srikakulam	Mandasa	Rangedhipuram	08945239985
17	Andhra Pradesh	Srikakulam	Mandasa	Veragunnamapuram	08947237736
18	Andhra Pradesh	Srikakulam	Mandasa	Dabarsingi	08947217823
19	Andhra Pradesh	Srikakulam	Mandasa	Limbugam	08947214989
20	Andhra Pradesh	Srikakulam	Tekkali	Kondabheempuram	08945212915
21	Arunachal Pradesh	Lohit	Namsai	Krishanpur	03806202199
22	Arunachal Pradesh	Lohit	Namsai	Nampong	03806202488

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List of villages covered under the Study (Contd...)

S. No.	State	District	Town	Village	VPT No.
23	Arunachal Pradesh	Lohit	Namsai	Innao	03806202011
24	Arunachal Pradesh	Lohit	Namsai	Wingko	03806202474
25	Arunachal Pradesh	Lohit	Namsai	Nongkhon	03806202547
26	Arunachal Pradesh	Lohit	Tezu	Tingolong	03804208182
27	Arunachal Pradesh	Lohit	Tezu	Duranallah Hydel Plant	03804208146
28	Arunachal Pradesh	Lohit	Tezu	Huchiliang	03804208142
29	Arunachal Pradesh	Lohit	Tezu	Loiliang	0380420208188
30	Arunachal Pradesh	Lohit	Tezu	SSB Camp Civil Area, TR Camp_1	03804208411
31	Arunachal Pradesh	Papumpare	Sagalee	Peech Basti	08993821242
32	Arunachal Pradesh	Papumpare	Sagalee	Taru HQ	08993821244
33	Arunachal Pradesh	Papumpare	Doimukh	Pachin	03602002760
34	Arunachal Pradesh	Papumpare	Doimukh	Nirjuli Complex	03602002095
35	Arunachal Pradesh	Papumpare	Doimukh	Gumto-II	03602002018
36	Arunachal Pradesh	Papumpare	Doimukh	Khairsingsa Abotani Village	03602002716
37	Arunachal Pradesh	Papumpare	Doimukh	Nirjuli-1	03602002069
38	Arunachal Pradesh	Papumpare	Doimukh	Pappu Nalah	03602002717
39	Arunachal Pradesh	Papumpare	Doimukh	Sood	03602001035
40	Arunachal Pradesh	Papumpare	Doimukh	Naharlagun Model Village	03602002715
41	Assam	Bongaigaon	Srijangram	Kemkhabari-I	10703664292073
42	Assam	Bongaigaon	Boitamari	Chalantapana-IV	11903664292121
43	Assam	Bongaigaon	Boitamari	Chalantapana-I	10103664292114
44	Assam	Bongaigaon	Srijangram	Ghowkumsha	03403664292085
45	Assam	Bongaigaon	Bongaigaon	Bokhrapara	03403664293041
46	Assam	Bongaigaon	Sidli(PT)	Bartolowa	06703664242151
47	Assam	Bongaigaon	Bongaigaon	Kharija Dolaigaon-II	00703664293015
48	Assam	Bongaigaon	Sidli	Boikhungaon	06403664294370

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List of villages covered under the Study (Contd...)

S. No.	State	District	Town	Village	VPT No.
49	Assam	Bongaigaon	Bijni	Bhandra No:2	32303664295726
50	Assam	Bongaigaon	Bijni	Balajani, Chechapani	03664295003
51	Assam	Jorhat	Titabar	Borbamchungigaon	00303762934000
52	Assam	Jorhat	Titabar	Chungi	5103762934018
53	Assam	Jorhat	Titabar	Moranigaon	8103771245134
54	Assam	Jorhat	Titabar	Dewgharia Lakhiraj Grant	3603771248334
55	Assam	Jorhat	Majuli	Bhogpur Satra	2003775273332
56	Assam	Jorhat	Majuli	Chamuguri	9003775292021
57	Assam	Jorhat	Majuli	Bhogpur Miki	2103775291016
58	Assam	Jorhat	Mariani	Soykatta Tea Estate	8903771293144
59	Assam	Jorhat	Titabar	Kalhkotiagaon	0003771242198
60	Assam	Jorhat	Teok	Balispori Majgoan	1803762921061
61	Chattisgarh	Bastar	Darbha	Kamanar	07782207865
62	Chattisgarh	Bastar	Darbha	Chhotekadma	07782207885
63	Chattisgarh	Bastar	Darbha	Gadamguda	07782207884
64	Chattisgarh	Bastar	Pharasaon	Korrabadgaon	07784200009
65	Chattisgarh	Bastar	Pharasaon	Patoda	07784200034
66	Chattisgarh	Bastar	Makdi	Arla	07785200026
67	Chattisgarh	Bastar	Makdi	Tedmunda	07785200036
68	Chattisgarh	Bastar	Makdi	Chhote Salena	07785200055
69	Chattisgarh	Bastar	Makdi	Nalajhar	07784200047
70	Chattisgarh	Bastar	Makdi	Bagbeda	07784200039
71	Chattisgarh	Surguja	Lakhanpur	Lahapatra	07774204737
72	Chattisgarh	Surguja	Lakhanpur	Rajpuri	07774204054
73	Chattisgarh	Surguja	Ramanuj Nagar	Madneswarpur	07775299705
74	Chattisgarh	Surguja	Ramanuj Nagar	Parsapara	07775299836
75	Chattisgarh	Surguja	Sankargarh	Parema	07778208531
76	Chattisgarh	Surguja	Sankargarh	Manoharpur	07778208532
77	Chattisgarh	Surguja	Rajpur	Okara	07832200519
78	Chattisgarh	Surguja	Surajpur	Dhaneshpur	07775299770
79	Chattisgarh	Surguja	Baikunthpur	Jaliadand	07836296819
80	Chattisgarh	Surguja	Baikunthpur	Tamjeera	07836282353
81	Himachal Pradesh	Kangra	Kangra	Narwana	0701641892235120
82	Himachal Pradesh	Kangra	Jaisinghpur	Drumman	080166281044
83	Himachal Pradesh	Kangra	Dehra	Kohra Sakwal	120410203031
84	Himachal Pradesh	Kangra	Fatehpur	Sukral	030127282027
85	Himachal Pradesh	Kangra	Nurpur	Aghar	0103077274452

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List of villages covered under the Study (Contd...)

S. No.	State	District	Town	Village	VPT No.
86	Himachal Pradesh	Kangra	Bhatiyat	Nahana	60082200042
87	Himachal Pradesh	Kangra	Saluni	Manjir	030118200373
88	Himachal Pradesh	Kangra	Tissa	Shali	020075209113
89	Himachal Pradesh	Kangra	Bharmour	Sup	080022200018
90	Himachal Pradesh	Kangra	Chamba	Bhujja	040175202433
91	Himachal Pradesh	Shimla	Theog	Darbar Balsan	50416201492
92	Himachal Pradesh	Shimla	Kotkhai	Pohal	110055204401
93	Himachal Pradesh	Shimla	Jubbal	Kuddu	150086256328
94	Himachal Pradesh	Shimla	Rohru	Arhal	090041245647
95	Himachal Pradesh	Shimla	Chirgaon	Sandasu	090109206273
96	Himachal Pradesh	Shimla	Rampur	Gasso	080072209208
97	Himachal Pradesh	Shimla	Kumarsain	Kingal	060093204289
98	Himachal Pradesh	Shimla	Mashobra	Jalel	02048901772002029
99	Himachal Pradesh	Shimla	Mashobra	Lagha	75190001772006089
100	Himachal Pradesh	Shimla	Mashobra	Paijal	0205012002019
101	Himachal Pradesh	Shimla	Mashobra	Jangal Tarab	0204962002150
102	Jharkhand	Dumka	Jama	Jama	06431254831
103	Jharkhand	Dumka	Jama	Sugnibad	06431218001
104	Jharkhand	Dumka	Jama	Rampur	06431254514
105	Jharkhand	Dumka	Jama	Kundadihi	06431254504
106	Jharkhand	Dumka	Jama	Ghatia	06431254470
107	Jharkhand	Dumka	Jarmundi	Daulatpur	06431254507
108	Jharkhand	Dumka	Dumka	Karia Chak Raghunathganj	06434218832
109	Jharkhand	Dumka	Dumka	Karhalbill	06434218583
110	Jharkhand	Dumka	Dumka	Phasia Dangal	06434290506
111	Jharkhand	Dumka	Dumka	Gidhni Pahadi	06434218582
112	Jharkhand	Koderma	Koderma	Salaidihi	06534218045

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List of villages covered under the Study (Contd...)

S. No.	State	District	Town	Village	VPT No.
113	Jharkhand	Koderma	Koderma	Gadidihi	06534218042
114	Jharkhand	Koderma	Koderma	Parho	06534218014
115	Jharkhand	Koderma	Koderma	Nalwa	06534218021
116	Jharkhand	Koderma	Koderma	Jaruadihi	06534218017
117	Jharkhand	Koderma	Koderma	Domchanch	06534255041
118	Jharkhand	Koderma	Koderma	Pasia	06534218019
119	Jharkhand	Koderma	Koderma	Nawadihi	06534218022
120	Jharkhand	Koderma	Koderma	Maliyal	06534218046
121	Jharkhand	Koderma	Jaynagar	Kherobar	06534218559
122	Madhya Pradesh	Mandla	Bichhiya	Madhopur	7642284303
123	Madhya Pradesh	Mandla	Bichhiya	Aurai Ryt	7642290623
124	Madhya Pradesh	Mandla	Mandla	patpara Ryt	7642291242
125	Madhya Pradesh	Mandla	Narayanganj	Bhahmni(Partala)	7643280682
126	Madhya Pradesh	Mandla	Bijaydandi	Pipariya Mal(Bijaypur)	7643280639
127	Madhya Pradesh	Mandla	Ghughuri	Lato	7647280714
128	Madhya Pradesh	Mandla	Nainpur	Atariya	7646280677
129	Madhya Pradesh	Mandla	Nainpur	Samnapur	7646280645
130	Madhya Pradesh	Mandla	Mohgaon	Palehara	7647296143
131	Madhya Pradesh	Mandla	Mohgaon	Khalhe Githauri	7647280606
132	Madhya Pradesh	Rewa	Raipur (K)	Huzur	7660280958
133	Madhya Pradesh	Rewa	Teonthar	Itaura	7661290654
134	Madhya Pradesh	Rewa	Teonthar	Look No:1	7661291800
135	Madhya Pradesh	Rewa	Hanumana	Dugauli	7664291667
136	Madhya Pradesh	Rewa	Manganj	Dubgawan (485)	7663202122
137	Madhya Pradesh	Rewa	Manganj	Hidwar	7663202155
138	Madhya Pradesh	Rewa	Hanumana	Fool Harchand Singh	7663202367

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List of villages covered under the Study (Contd...)

S. No.	State	District	Town	Village	VPT No.
139	Madhya Pradesh	Rewa	Sirmour	Godari (6)	7660297733
140	Madhya Pradesh	Rewa	Sirmour	Bhathawa	7660280704
141	Madhya Pradesh	Rewa	Raipur (K)	Gerui	7662296038
142	Manipur	Senapati	Knagpokpi (Sardar Hills West)	S.Molnom	03880201053
143	Manipur	Senapati	Kangpokpi	Tumuyon Khunou	03880201025
144	Manipur	Senapati	Kangpokpi	Kangpokpi	03880201018
145	Manipur	Senapati	Sadar Hills West(KPI)	Lunghou	03880201011
146	Manipur	Senapati	Sadar Hills West(KPI)	Natheljang	03880201012
147	Manipur	Senapati	Kangpokpi	Keithelmanbi MC	03880201223
148	Manipur	Senapati	Kangpokpi	Haipi	03880201052
149	Manipur	Senapati	Kangpokpi	U.Kalapahar	03880201151
150	Manipur	Senapati	Kangpokpi	Tumnoupokpi	03880201001
151	Manipur	Senapati	Sadar Hills West(KPI)	Kholjang	03880201009
152	Manipur	Ukhrul	Ukhrul	Tora	03870201451
153	Manipur	Ukhrul	Ukhrul	Tanrui(Leisan)	03870201144
154	Manipur	Ukhrul	Ukhrul	Langdang	03870201096
155	Manipur	Ukhrul	Ukhrul	Tuinem	03870201017
156	Manipur	Ukhrul	Ukhrul	Tollol	03870201018
157	Manipur	Ukhrul	Ukhrul	Lunghar	03870201101
158	Manipur	Ukhrul	Chingal	Nungbi Khunou	03870201100
159	Manipur	Ukhrul	Chingal	Nungbi Khullen	03870201140
160	Manipur	Ukhrul	Ukhrul	Hundung	03870201036
161	Manipur	Ukhrul	Ukhrul	Kachal	03870201024
162	Meghalaya	West Garo Hills	Rongram	Aminokgre	03651292064
163	Meghalaya	West Garo Hills	Betasingh	Wakaakongre	03651202496
164	Meghalaya	West Garo Hills	Rongram	Waram Asim	03651292012
165	Meghalaya	West Garo Hills	Rongram	Sanchonggre	03651292055
166	Meghalaya	West Garo Hills	Zizak	Anangpara	03651200364
167	Meghalaya	West Garo Hills	Zizak	Mandalgiri	03651200665
168	Meghalaya	West Garo Hills	Betasingh	Bolsalgri	03651201796
169	Meghalaya	West Garo Hills	Rongram	Chibraagre	03651292060
170	Meghalaya	West Garo Hills	Rongram	Dipogre	03651292011
171	Meghalaya	West Garo Hills	Rongram	Bolmagre	03651292500
172	Meghalaya	West Khasi Hills	Nongstoin	Kynroh	03654296185

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List of villages covered under the Study (Contd...)

S. No.	State	District	Town	Village	VPT No.
173	Meghalaya	West Khasi Hills	Mairang	Waalakhaw	03657292001
174	Meghalaya	West Khasi Hills	Nongstoin	Mawliehdein	03654296060
175	Meghalaya	West Khasi Hills	Mainteang	Mawnai	03657292003
176	Meghalaya	West Khasi Hills	Nongstoin	Mawthongkper	03654296037
177	Meghalaya	West Khasi Hills	Mairang	Nongbah Bynthir	03657292002
178	Meghalaya	West Khasi Hills	Nongstoin	Pungsior Mawrusyiar	03654296088
179	Meghalaya	West Khasi Hills	Nongstoin	Steplanglur	03654296049
180	Meghalaya	West Khasi Hills	Nongstoin	Upper Umsaw Urkali	03654296067
181	Meghalaya	West Khasi Hills	Nongstoin	Mawdau	03654200015
182	Orissa	Kandhamal	Khajuripada	Gadiapada	06842212456
183	Orissa	Kandhamal	Khajuripada	Bilabadi	06842212469
184	Orissa	Kandhamal	Tikabali	Ghodagaon	06847212161
185	Orissa	Kandhamal	Tikabali	Budagudari	06847212166
186	Orissa	Kandhamal	Chakapada	Rangamatia	06847213159
187	Orissa	Kandhamal	Raikia	Penamal	06847211124
188	Orissa	Kandhamal	Daringbadi	Chhadakia	06849236117
189	Orissa	Kandhamal	Daringbadi	Badangi	06849236118
190	Orissa	Kandhamal	Tumudibandha	Atabadi	06840211123
191	Orissa	Kandhamal	Tumudibandha	Sakripadar	06840211133
192	Orissa	Koraput	Patangi	Sipaiput	06852211005
193	Orissa	Koraput	Semiliguda	Malipungar	06852211147
194	Orissa	Koraput	Nandapur	Gauri Nayakput	06868212102
195	Orissa	Koraput	Nandapur	Khataraba	06868212142
196	Orissa	Koraput	Boriguma	Khandiguda	9438428396
197	Orissa	Koraput	Kotpad	Kusumi	06860294307
198	Orissa	Koraput	Baripariguda	Jamlabada	06854211140
199	Orissa	Koraput	Kundura	Katariput	06854211118
200	Orissa	Koraput	Jeypore	Jabakanadi	06854211157
201	Orissa	Koraput	Jeypore	K.Malliguda	06854211234
202	Rajasthan	Sri Ganga Nagar	Sri Ganga Nagar	Hindumalkota	01542778355
203	Rajasthan	Sri Ganga Nagar	Srikaranpur	60B	01507280214
204	Rajasthan	Sri Ganga Nagar	Srikaranpur	50	01501210968
205	Rajasthan	Sri Ganga Nagar	Raisingh Nagar	5 LC	01507210006
206	Rajasthan	Sri Ganga Nagar	Suratgard	9 SD	01509277196

Contd ...

List of villages covered under the Study (Contd...)

S. No.	State	District	Town	Village	VPT No.
207	Rajasthan	Hanumangarh	Goluwala	3 HDP	01508221179
208	Rajasthan	Sri Ganga Nagar	Padampur	18 BB	01505210971
209	Rajasthan	Hanumangarh	Tibbi	14 NGC	01539211859
210	Rajasthan	Hanumangarh	Sangaria	12 MJD	01499210853
211	Rajasthan	Hanumangarh	Nohar	22 NWD	01537207253
212	Rajasthan	Udaipur	Gogunda	Karech	08991428505
213	Rajasthan	Udaipur	Ridhabdev	Rayna	02907292195
214	Rajasthan	Udaipur	Girva	Baleecha	02942801950
215	Rajasthan	Udaipur	Gogunda	Naiyon Ka Guda	02956280937
216	Rajasthan	Udaipur	Gogunda	Peepla	02958296926
217	Rajasthan	Udaipur	Sarada	Maoodi	02905280940
218	Rajasthan	Udaipur	Salumber	Isharwas Dangiyana	02906280960
219	Rajasthan	Udaipur	Girva	Dangiyon Ki Hundar	0294299907
220	Rajasthan	Udaipur	Naw	Rapcha	02953280903
221	Rajasthan	Udaipur	Badgaon	Amberi	02942803918
222	Uttarakhand	Almora	Tarikhhet	Thakulari	05966215016
223	Uttarakhand	Almora	Hawalbagh	Hawalbagh	05966241033
224	Uttarakhand	Almora	Shihakhet	Sarka	05962244106
225	Uttarakhand	Almora	Tadikhen	Inar	05966215235
226	Uttarakhand	Almora	Tarikhhet	Kotar	05966215183
227	Uttarakhand	Almora	Bhikiyasain	Dadholi	05966264868
228	Uttarakhand	Almora	Bhikiyasain	Dumdoli	05966264868
229	Uttarakhand	Almora	Dwarahat	Nanisar	05966217106
230	Uttarakhand	Almora	Tadikhet	Jaya	05966215105
231	Uttarakhand	Almora	Hawalbagh	Khagmara	05962254426
232	Uttarakhand	Chamoli	Dev Prayag	Malabasani	01378268036
233	Uttarakhand	Chamoli	Karn Prayag	Heluri	01363244470
234	Uttarakhand	Chamoli	Biroli	Langasu	01363241191
235	Uttarakhand	Chamoli	Joshimath	Lambarh	08991322253
236	Uttarakhand	Chamoli	Joshimath	Mana	08991322003
237	Uttarakhand	Chamoli	Joshimath	Khiron	08991322013
238	Uttarakhand	Chamoli	Agastyamuni	Chhaloda	01346259250
239	Uttarakhand	Chamoli	Agastyamuni	Suni	01346259237
240	Uttarakhand	Chamoli	Agastyamuni	Sarinthi	01346259125
241	Uttarakhand	Chamoli	Dasholi	Devaldhar	01372254445



PROGRAMME EVALUATION ORGANISATION

EVALUATION STUDY ON RURAL TELEPHONY

SCHEDULE FOR THE BENEFICIARY

Note: Please only interview people who are 18 or more years old, regardless of Sex (M/F), so long as they are responsible for making decisions for the households.

I. GENERAL DETAILS

1. VPT Code and Number							
2. State:				3. District:			
4. Block / Taluka:				5. Town/ village:			
6. Name of the Head of the household: _____							
7 a. Social Group (√ the relevant)	Gen	OBC	SC	ST	7 b. Are you differently able?		
	1	2	3	4	No	Yes	2
8. Name of the Respondent: _____							
8. Relationship with the Head of the household:							
Self		Spouse		Children		Relative	
1		2		3		4	

9.

Sl. No.	Particulars of the family						Shifts in Economic Opportunities		
	Name of the family member	Relation with the Head of Household Code 1	Age	Sex Code 2	Marital Status Code 3	Educational Qualification Code 4	Primary Occupation Code 5	Secondary Occupation Code 5	Annual Income (Rs.)
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

Code 1: (1) Self (2) Spouse (3) Parent (4) Married child (5) Unmarried child (6) Spouse of the married child (7) Grand child (8) Grandparents brother/sister (10) Relatives (11) Others, specify _____ (9)

Code 2: (1) Female (2) Male

Code 3: (1) Unmarried (2) Married (3) Widow/Widower (4) Divorced / Separated

Code 4: (1) Not literate (2), Functional Literate (3), Primary (4) Upper Primary (5) High School (6) Intermediate (7) Graduate (8) Above Graduation

Code 5: (1) Cultivator (2) Agriculture casual labour (3) Own business (4) Self employed in household industry (5) Self employed in services (other than business) (6) Non-agriculture casual labour (7) Salaried work (8) Homemaker (9) Livestock management (10) Pensioners / Retired, (11) Non-working adults (12) Non-working children (13) Student (14) Dependent (15) Others specify: _____

II. PARTICULARS OF HOME

1. a. Type of House

Kucha	1
-------	---

Semi-pucca	2
------------	---

Pucca	3
-------	---
- b. Electrification:

No	1
----	---

Yes	2
-----	---
- c. Distance from the pucca road (in kms.): _____
- d. Distance from State Highway (in kms.): _____

2. Details of Telephone Connection

- a. Do you have telephone at home?

No	1
----	---

Yes	2
-----	---
- b. If yes, furnish the following details –

S. No	Type of Telephone Code-1	Service Providers Code-2	No. of Connections	Services available Code 3	Since when
1					
2					
3					
4					

Code1: (1) Landline (2) Mobile (3) Others, specify

Code 2: (1) BSNL (2) Airtel (3) Vodafone (4) Idea (5) Reliance (6) Others, specify

Code 3: (1) STD (2) Local (3) ISD (4) Internet (5) Others, specify

III. USAGE OF VPT SERVICES

- a) Do you use services of VPT?

No	1
----	---

Yes	2
-----	---
- If Yes,

Usage Pattern	No of calls	30 days	60 days
Local			
Local 95 (intra circle)			
STD (inter circle)			
ISD			

- b) Distance from your house to VPT (in kms):

Within 200 mts.	1	200 to 500 mts.	2	More than 500 mts.	3
-----------------	---	-----------------	---	--------------------	---

- c) Were you involved in deciding the location of VPT?

No	1
----	---

Yes	2
-----	---

- d) Who is the official custodian of the VPT?

Sarpanch	1	Anganwadi / School Teacher	2	Postman	3
----------	---	----------------------------	---	---------	---

e) What other added services are available at VPT Booth:

IV. AVAILABILITY OF VPT

While visiting the VPT to make call how many times you find the VPT -

Sl. No	Status	Last month	2 nd last month
A	Faulty		
B	Busy		
C	Closed		
D	Not getting connectivity (engaged)		
E	Any other, specify		

V. QUALITY ASPECTS OF VPT

Quality Variables	Level of Convenience (1) Not at all convenient (2) Convenient (3) Very convenient
a. Place of Installation () (1) Gram Panchayat Office (2) In Anganwadi (3) In Sarpanch's house (4) Open space (5) School (6) Post Office (7) Telephone Exchange (8) shop (9) Others specify	()
b.1 Technology Used () (1) Landline (2) Mobile	()
b.2 (a) WLL FX, (b) WLL FWT (c) DSPT (d) Cor DECT (e) GSM (f) CDMA-PMP (g) Others, specify	()
c. Type of Instrument () (1) Dial Keyboard (2) Single Touch Key board (3) Cordless (4) Others, specify	()
d. Clarity of Voice () Clear : (1) Never (2) Rarely (3) Often (4) Always	()
e. Connectivity of VPT Service Provider () (1) Not Reliable (2) Reliable (3) Highly Reliable	

VI. Timeliness Aspects of VPT

a. Availability of Service	()			
(1) During day time (2) During night (3) Always (4) If there are fixed timings, specify				
b. Is it closed on holidays?	No	1	Yes	2

VII. Other Aspects of VPT

a. Do you pay for use of VPT	No	1	Yes	2	
b. If yes, are you getting bill for making payments					
c. Mode of payment for the use of VPT <small>(1) Cash (2) Credit (3) Partly cash, Partly credit (4) Others</small>					
d. Regularity in Payment Regular : (1) Never (2) Rarely (3) Sometimes (4) Often (5) Always					
e. Are there any restrictions in the use of VPT in terms of social factors such as religion, Caste, gender, differently abled?					
		No	1	Yes	2
f. If yes, specify					

VIII. ECONOMIC ASPECTS OF VPT

1. UTILITY ASPECT

a) Has the availability and usage of VPT impacted any change in your family income?

No	1	Yes	2
----	---	-----	---

b) If yes, family income per annum before the use of VPT Rs. _____.

c) After the use of VPT Rs. _____

d) Reasons in brief for the difference

2. HOW THE AVAILABILITY OF VPT HAS IMPROVED YOUR CONNECTIVITY

Variable	Code (1) No improvement (2) Marginal improvement (3) Significant improvement
a. Personal Communications	
b. Business networking	
c. Emergency Management 1. Medical 2. Fire 3. Police 4. Natural Calamities	
d. Official purposes	

3. ACCESS TO INFORMATION ON -

Information on	Code: (1) Never (2) Rarely (3) As per necessity (4) Frequently
a. Employment Opportunities	
b. Market	
c. Developmental and Welfare schemes of Government on 1. Health 2. Education 3. Related to Agriculture 4. Others	
d. Natural Calamity / Weather Forecasting	
e. Rail / Road Transport	
f. Health Services	
g. Agriculture related	
h. Business related	
i. Others (Specify)	

IX. IMPEDIMENTS IN THE USE OF VPT

Variable	Level of Satisfaction (1) Not Satisfactory (2) Satisfactory (3) Highly Satisfactory	Constraints faced (as reported by users)
a. Convenience about the Location	()	
b. Accessibility of VPT in terms of - (i) Time (ii) Quality	() ()	
c. Repair and Maintenance (i) Time (ii) Quality	() ()	
d. Cooperativeness & behaviour of custodians	()	
e. Other alternate service providers	()	

X. SOLUTION

Variable	How is it resolved? Mode: (1) Internally (2) Externally (3) Not resolved (4) Not aware	Describe in detail
a. Convenience about the Location of VPT		
b. Accessibility of VPT in terms of - (i) Time (ii) Quality		
c. Repair and Maintenance (i) Time (ii) Quality		
d. Payments to the custodians		
e. Other alternate service providers		

XI. Investigators Remarks:

XII. Name of the Investigator:

Date:

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PROGRAMME EVALUATION ORGANISATION

EVALUATION STUDY ON RURAL TELEPHONY

SCHEDULE FOR NON-BENEFICIARY

Note: Please only interview people who are 18 or more years old, regardless of Sex (M/F), so long as they are responsible for making decisions for the households.

I. GENERAL DETAILS

1. VPT Code and Number							
2.State:				3. District:			
4.Block / Taluka:				5. Town / village			
6. Name of the Head of the household :							
7. Social Group (√ the relevant)	Gen	OBC	SC	ST	7 b. Are you Differently able ?		
	1	2	3	4	No	Yes	
						2	1
8. Name of the Respondent:							
8. Relationship with the Head of the household:				Self	Spouse	Children	Relative
				1	2	3	4

9.

Sl. No.	Particulars of the family					Shifts in economic opportunities		Annual Income (Rs.)
	Name of the family member	Relation with the Head of Household Code 1	Age	Sex Code 2	Marital Status Code 3	Educational Qualification Code 4	Primary Occupation Code 5	
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								

Code 1: (1) Self (2) Spouse (3) Parent (4) Married child (5) Unmarried child (6) Spouse of the married child (7) Grand child (8) Grandparents (9) brother/sister (10) Relatives (11), Others, specify _____

Code 2: (1) Female (2) Male

Code 3: (1) Unmarried (2), Married (3) Widow/Widower (4) Divorced / Separated

Code 4: (1) Not literate (2), Functional Literate (3), Primary (4) Upper Primary (5) High School (6) Intermediate (7) Graduate (8) Above Graduation

Code 5: (1) Cultivator (2) Agriculture casual labour (3) Own business (4) Self employed in household industry (5) Self employed in services (other than business) (6) Non-agriculture casual labour (7) Salaried work (8) Homemaker (9) Livestock management (10) Pensioners / Retired (11) Non-working adults (12) Non-working children (13) Student (14) Dependent (15) Others specify: _____)

II. PARTICULARS OF HOME

1. a. Type of House

Kucha	1
-------	---

Semi-pucca	2
------------	---

Pucca	3
-------	---
- b. Electrification:

No	1
----	---

Yes	2
-----	---
- c. Distance from the pucca road (in kms.): _____
- d. Distance from State Highway(in kms.): _____

2. Details of Telephone Connection

- a. Do you have telephone at home?

No	1
----	---

Yes	2
-----	---

b. If yes, furnish the following details –

S. No	Type of Telephone Code-1	Service Providers Code-2	No. of Connections	Services available Code 3	Since when
1					
2					
3					
4					

Code1: (1) Landline (2) Mobile (3) Others, specify

Code 2: (1) BSNL (2) Airtel (3) Vodafone (4) Idea (5) Reliance (6) Others, specify

Code 3: (1) STD (2) Local (3) ISD (4) Internet (5) Others, specify

III. USAGE OF VPT SERVICES

- a) Are you aware of VPT installation in your village?

No	1
----	---

Yes	2
-----	---

b) Distance from your house to VPT (in kms.):

<table border="1" style="display: inline-table;"><tr><td>Within 200 mts.</td><td>1</td></tr></table>	Within 200 mts.	1	<table border="1" style="display: inline-table;"><tr><td>200 to 500 mts.</td><td>2</td></tr></table>	200 to 500 mts.	2	<table border="1" style="display: inline-table;"><tr><td>More than 500 mts.</td><td>3</td></tr></table>	More than 500 mts.	3
Within 200 mts.	1							
200 to 500 mts.	2							
More than 500 mts.	3							

c) If yes, reasons for not using VPT?

IV. IMPEDIMENTS IN THE USE OF VPT

Variable	Level of Satisfaction (1) Not Satisfactory (2) Satisfactory (3) Highly Satisfactory	Constraints faced (as reported by users)
a. Convenience about the Location	()	
b. Accessibility of VPT in terms of - (i) Time (ii) Quality	() ()	
c. Repair and Maintenance (i) Time (ii) Quality	() ()	
d. Cooperativeness & behaviour of custodians	()	
e. Other alternate service providers	()	
f. Clarity of Voice () Clear : (1) Never (2) Rarely (3) Often (4) Always		
g. Connectivity of VPT Service Provider () (1) Not Reliable (2) Reliable (3) Highly Reliable		

V. TIMELINESS ASPECTS OF VPT

a. Availability of Service () 1) During day time (2) During night (3) Always (4) If there are fixed timings, specify					
b. Is it closed on holidays ?	<table border="1"> <tr> <td>No</td> <td>1</td> <td>Yes</td> <td>2</td> </tr> </table>	No	1	Yes	2
No	1	Yes	2		

VI. PERCEPTION ABOUT VPT

1. In your opinion, is VPT necessary in your village?

2. If no, give reasons

3. If yes,

a) Give reasons

b) Which service provider would you prefer?

BSN	1
-----	---

Others (Specify)	2
------------------	---

c) Give reasons for your choice

4. Do you think availability of VPT will lead to overall growth of the village?

No	1
----	---

Yes	2
-----	---

5. If yes, how in your opinion will this be achieved?

6. Briefly suggest the measures to be adopted to make VPT services used by non-beneficiaries

- 1.
- 2.
- 3.
- 4.
- 5.

VII. Investigators Remarks :

VIII. Name of the Investigator :

Date :

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PROGRAMME EVALUATION ORGANISATION

EVALUATION STUDY ON RURAL TELEPHONY

VPT LEVEL: SCHEDULE FOR THE CUSTODIAN

I. GENERAL DETAILS

1.1 VPT Code and Number											
1.2 State:					1.3 District:						
1.4 Block/Taluka:											
1.5 Town/ village:											
1.6 Name of the Custodian as per records :											
1.7 Age :					1.8 Sex: Female 1 Male 2						
1.9. a Social Group (√ the relevant)		Gen 1		OBC 2		SC 3		ST 4		1.9 b. Are you Differently able? No 2 Yes 1	
1.10 Status		Unmarried 1		Married 2		Widow / Widower 3		Divorced / Separated 4			
1.11 Qualification () (1) Not literate (2) Functional Literate (3) Primary (4) Upper Primary (5) High School (6) Intermediate (7) Graduate (8) Above Graduation					1.12 Occupation a. Primary () b. Secondary () (1) Cultivator (2) Agriculture casual labour, (3) Own business, (4) Self employed in household industry, (5) Self employed in services (other than business) (6) Non-agriculture casual labour, (7) Salaried work (8) Homemaker (9) Livestock management (10) Pensioners / Retired (11) Non- working adults (12) Non-working children (13) Student (14) Dependent (15) Others (specify:_____)						
1.13 Name of the Respondent: _____											

1.14. Relationship with the household:	Self	Spouse	Children	Relative
	1	2	3	4

2. Installation details

2.1. Year, Month and Date of Installation of VPT _____

2.2. Agreement validity in years ()

2.3. Place of installation: ()

(1) Gram Panchayat Office (2) Anganwadi (3) Sarpanch's house (4) Open space (5) School
(6) Post Office (7) Telephone Exchange (8) Shop (9) others specify

2.4. Distance of VPT from village / Habitations

(1) Within the village (2) 200mts away from the village (3) 200-500mts away from the village (4) More than 500mts from the village

2.5(a) Technology used: ()

(1) Landline (2) Mobile

(a) WLL FX (b) WLL FWT (c) DSPT (d) Cor DECT (e) GSM (f) CDMA (g) Others, specify

2.6. Type of instrument: ()

(1) Dial Keyboard (2) Single Touch Key board (3) Cordless (4) Others, specify

2.7. Narrate in brief the criteria and procedure for making you the custodian of VPT

3. (a) Are you regular in paying VPT bills ?

No	1
----	---

Yes	2
-----	---

(b) What is the mode of payment? ()

(1) By cash (2) By Cheque / Draft (3) Online (4) Others, specify

(c) What is the bill cycle? ()

(1) Monthly (2) Bi-Monthly (3) Others, specify

4. (a) Is VPT in working condition currently ?

No	1
----	---

Yes	2
-----	---

(b) If Yes, furnish the following

No. of days VPT remain faulty in last quarter

(1) Less than 7 days (2) 7 to 15 days (3) 15 to 21 days (4) 21 to 30 days

5. Quality of VPT service
- a) Connectivity ()
Reliable: (1) Never (2) Rarely (3) Sometimes (4) Often (5) Always
- b) Quality of voice ()
Clear: (1) Never (2) Rarely (3) Sometimes (4) Often (5) Always
- c) Repair in time ()
Regular: (1) Never (2) Rarely (3) Sometimes (4) Often (5) Always
- d) Quality of repair ()
 (1) Very Good (2) Good (3) Average (4) Bad (5) Very Bad

6. Reliability and Responsiveness Aspects of VPT

- (a) Do you know who is responsible for the repair / maintenance?

No	1
----	---

Yes	2
-----	---
- (b) If, yes, (1) Service Provider (2) Self (3) Others, Specify _____)
- (c) Quality of Repair & Maintenance ()
 (1) Very Bad (2) Bad (3) Average (4) Good (5) Very Good
- (d) Level of satisfaction of Repair & Maintenance ()
 (1) Not Satisfactory (2) Satisfactory (3) Highly Satisfactory
- (e) Frequency of line testing ()
 (1) Everyday (2) Once in a week (3) Once in a fortnight (4) Once in a month
- (f) How much average time has been taken for repairs (_____ hrs.)
- (g) How many times (No. of frequency) repairs undertaken during
- (i) Last 30 days ()
- (ii) Last 60 days ()
- (h) Whether the followings are displayed at VPT
- a) Name and Telephone No. of persons for Grievance redressal

No	1
----	---

Yes	2
-----	---
- b) Toll free utility numbers – Fire, Police etc.,

No	1
----	---

Yes	2
-----	---
- c) Tariff

No	1
----	---

Yes	2
-----	---
- (i) Do you have record of fault in the VPT

No	1
----	---

Yes	2
-----	---

(j) Is a complaint book available in the VPT

No	1	Yes	2
----	---	-----	---

1) If yes, whether complaint book checked by any inspecting authority

No	1	Yes	2
----	---	-----	---

2) Give designation of inspecting officer _____

(k) Do you face any connectivity problem in the VPT

No	1	Yes	2
----	---	-----	---

(l) Have you ever shifted the VPTs because of connectivity problem

No	1	Yes	2
----	---	-----	---

(m) Average cost per Month for repair (Rs. _____)

II. FIXED COSTS

Cost details	Cost in Rupees
a) Fixed payment towards deposit to service provider (if any)	
b) cost of instrument	
c) Cost of installation	
d) Cost of furniture if any	
e) Other fixed cost to the custodian (If any) (specify)	
Total :	
Subsidy received	

III. VARIABLE COST

Cost details	Cost in Rupees (Last month)
a) Market rent of the place of installation (if owned)	
b) Rent paid for the place if not owned	
c) Electricity charges	
d) Wages paid to hired labour if any (like boys / girl in-charge of VPT other than the custodian)	
e) Any other miscellaneous expenditure	
Total :	

IV. INCOME AND EXPENDITURE DETAILS

Sl. No	Income and Expenditure (in Rs.)	Last month	2 nd last month	3 rd last month
1	Source of Income in Rs.			
A	Telephone calls income (Rs.)			
B	Any other (related to VPT only) please specify			
C	Total			
2	Expenditure in Rs.			
A	Towards Telephone Bill Payments to BSNL			
B	Towards Variable expenditures (like wage, rent, etc)			
C	Towards repairs and Maintenance			
D	Any other (related to VPT only) please specify			
E	Total			
F	Profit / Loss (1 – 2)			

V. REVENUE

1. Revenue per unit in last three months (ARPU)			
	Last Month	2 nd Last Month	3 rd Last month
(i) No. of calls			
a. LOCAL			
b. LOCAL 95			
c. STD			
d. ISD			
(ii) Charges per unit of call			
a. LOCAL			
b. LOCAL 95			
c. STD			
d. ISD			
(iii) Total Revenue			

2. Days of maximum revenue ()

(1) Marriage time (2) Festivals (3) Holidays / Weekends (4) Others, specify

VI. COMPETITION FOR VPT

1. Are here any VPTs available by other service providers in the village ?

No	1
----	---

Yes	2
-----	---

2. If yes, furnish the following

Name of the Service Provider	Number of Connections

3. Do you face any competition from other service providers

No	1
----	---

Yes	2
-----	---

4. If yes, distance of that booth (in kms.) from your VPT?

5. If yes,

On which aspects

- a) Less charges per call
- b) Better accessibility
- c) Better connectivity
- d) Better maintenance
- e) Prompt repairs
- f) Any other (specify)

No	1	Yes	2
No	1	Yes	2
No	1	Yes	2
No	1	Yes	2
No	1	Yes	2
No	1	Yes	2

6. What measures need to be taken to with stand the competition from other service providers

VII. PROBLEMS FACED IN VPT

a) Quality -

(i) Connectivity _____

(ii) Voice _____

b) Maintenance -

(i) Time

(ii) Quality

c) Payment

d) Cost of installation

e) Cost of running

f) Other reasons

VIII. SUGGESTIONS FOR IMPROVEMENT IN VPT SERVICE

a) Quality -

(i) Connectivity

(ii) Voice

b) Maintenance -

(i) Time

(ii) Quality

c) Payment _____

d) Cost of installation _____

e) Cost of running _____

f) Other reasons _____

IX. INVESTIGATORS REMARKS:

X. NAME OF THE INVESTIGATOR:

DATE

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PROGRAMME EVALUATION ORGANISATION

EVALUATION STUDY ON RURAL TELEPHONY

FGD FOR VILLAGE

This FGD will consist of at least 8 members from the village such as Sarpanch, Ward Member, knowledgeable person, School Teacher, Village Postmaster, Housewives and Individuals from SC/ST community. Moreover, this FGD will take place in the absence of the Custodian of the VPT.

Date:

1. VPT Code and Number
2. State:
3. District:
4. Block / Taluka:
5. Town / Village:
6. Details of the participants

Sl. No.	Name	Designation	Occupation	Qualification	Contact No. (if any)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Occupation code: 1-cultivator, 2-agriculture casual labour, 3-own business, 4-self employed in household industry, 5-self employed in services (other than business), 6-non-agriculture casual labour, 7-salaried work, 8-Homemaker, 9-livestock management, 10-pensioners/retired, 11-non working adults, 12-non-working children, 13-student, 14-Dependent, 15-Others (specify: _____)

Qualification code: 1-Not literate, 2-Functional Literate, 3-Primary, 4-Upper Primary, 5- High School, 6-Intermediate, 7-Graduate, 8-Above Graduation

7. Perception about VPT (√ the relevant)

S. No	Perceptions	Yes	No
1	Are you aware of VPT in your village		
2	Were you a part of the decision making regarding the location of VPT?		

8. Current Use of VPT (√ the relevant)

S. No	Aspects of VPT	Good	Average	Poor
1	Quality of Services			
2	Convenience of Services (Accessibility in terms of): a Location b Comfort c Used by all			
3	Timeliness			
4	Utility of services for different purposes: a Personal b Official c Emergency d Business			

9. Expected Use of VPT (√ the relevant)

S. No	Use of VPT	Yes	No
1	Utility of services for different purposes: a Personal b Official c Emergency d Business		

10. Narrate in detail the impediments in the use of VPT in terms of:

S. No	Impediments in the use of VPT	
1	Quality of Services	
2	Convenience of Services (Accessibility in terms of): a Location b Comfort c Used by all	
3	Availability	
4	Utility of services for different purposes: a Personal b Official c Emergency d Business	
5	Repair and Maintenance	

11. Suggestions for improvement

S. No	Suggestions for Improvement
a	
b	
c	
d	
e	

12. Do you think that the other telecom service providers have impacted upon the use of VPT

No	1	Yes	2
----	---	-----	---

12.1 If yes, give reasons?

S. No	Reasons
1	
2	
3	

13. Suggestions to improve the viability of VPT

- 1
- 2
- 3
- 4
- 5

14. Did the installation of VPT contribute to the overall economic development of village? (✓ the relevant)

Sl. No	Reasons	Yes	No
1	Increase in income		
2	Access to information on employment		
3	Access to information of Market		
4	Access to information of developmental and welfare schemes		
5	Access to information of weather		
6	Rail/road transport		
7	Health services		
8	Agriculture development		
9	Business or other		

15. Investigators Remarks:

16. Name of the Investigator:

Date:

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PROGRAMME EVALUATION ORGANISATION

EVALUATION STUDY ON RURAL TELEPHONY

DISTRICT LEVEL SCHEDULE

I. PROFILE

1. Name of the State:
2. Name of the District:
3. Contact Address of the Implementing Dept at the District Level:
4. Institutional Arrangements:
 - 4.1. Name and Designation of the Head of the Implementing Dept:
 - 4.2. Name and Designation of the in-charge officer for VPT at District level:

II. BACKGROUND INFORMATION OF THE SCHEME

1. Year in which the scheme is implemented:
2. No. of villages covered in the district under VPT:
3. No. of VPT booths in the district installed:
4. Criteria for identifying and selecting villages & VPTs
5. Objectives and Guidelines for VPT Scheme at the District level:

6. Do you prepare any Action Plan:

No	1
----	---

Yes	2
-----	---

- 6.1. If yes, brief details of Action Plan for the year 2008-09
(Please furnish copies of action plan for the year 2007-08 & 08-09).

III. PERFORMANCE OF THE SCHEME

1. (a) Details of physical targets & achievements (No. of newly connected villages/ VPTs) for the last 5 years.

Years	Physical Performance ((Newly connected villages/VPTs)					
	Target		Achievement		Reasons for shortfall, if any (not more than three)	Action taken up to overcome the shortfalls (not more than three)
	No. of Villages	No. of VPTs	No. of Villages	No. of VPTs		
1	2	3	4	5	6	7
2003-04						
2004-05						
2005-06						
2006-07						
2007-08						
2008-09						
Total						

- (b) Extended services (providing urban multimedia communication amenities (i.e./CDMA cellular phones, broadband connection as well as Internet) in existing VPTs of rural areas.

Years	Physical performance (services extended in existing VPTs)					
	Target		Achievement		Reasons for shortfall, if any (not more than three)	Action taken up to overcome the shortfalls (not more than three)
	No. of Villages	No. of VPTs	No. of Villages	No. of VPTs		
1	2	3	4	5	6	7
2003-04						
2004-05						
2005-06						
2006-07						
2007-08						
2008-09						
Total						

IV. FLOW OF FUNDS

1. Is the VPT Scheme 100% financed by BSNL ?

No	1
----	---

Yes	2
-----	---

2. If No, details of the agency / institution and share of their contribution in percentages (%)

3. Details of flow of funds

Year	Sanctions		allotments		Releases		Expenditure		Reasons for delay in Sanctions to Allotment, if any (not more than three)	Reasons for gap between Releases and Expenditure, if any (not more than three)
	Date	Amount	Date	Amount	Date	Amount	Date	Amount		
2003-04										
2004-05										
2005-06										
2006-07										
2007-08										
2008-09										

4. Revenue details:

4.1. Details of revenue by VPT for the last 5 years

Revenue (in Rs.)

Year	Income from billing	Income from repairs and maintenance
2003-04		
2004-05		
2005-06		
2006-07		
2007-08		
2008-09		

5. Expenditure details :

5.1. Details of expenditure for the last 5 years

Year	Purchase of instruments	Installation expenses	Transportation expenses	TA/DA of staff	Any other (specify)	Total
2003-04						
2004-05						
2005-06						
2006-07						
2007-08						
2008-09						

V. DETAILS OF AVAILABILITY OF STAFF (AS ON 31-3-09)

1. Details

Staff		Sanctioned	On rolls	Shortfall (Col.2-3)
Technical	Officers			
	Supporting staff			
	Total			
Administration	Officers			
	Supporting staff			
	Total			
Grand Total				

2. Reasons for shortfall in the staff (if any)

3. Action taken for the management of shortfall

VI. MONITORING AND SUPERVISION

1. Is there any mechanism available for monitoring and supervision of VPTs ?

No	1
----	---

Yes	2
-----	---

2. If yes, is it by

BSNL	1
------	---

Outsourced	2
------------	---

a) If BSNL, do you have any format and guidelines for monitoring and supervision?

b) If yes, furnish a copy of the same

No	1
----	---

Yes	2
-----	---

c) If outsourced details of agency and guidelines enshrined for monitoring and supervision?

4. Availability of staff for monitoring and supervision

	No. of staff available	Frequency of visit per month
Mandal / block level		
Village level		
Booth level		

5. Is a complaint book provided to VPT

No	1
----	---

Yes	2
-----	---

VII REPAIRS AND MAINTENANCE OF VPTS

1. Is repairs and maintenance of VPTs done by

BSNL	1
------	---

Outsourced	2
------------	---

2. If outsourced, give details of the agency ?

3. Is there any special technical staff available with BSNL for repair of VPTs?

No	1
----	---

Yes	2
-----	---

4. If No, give reasons?

5. If yes, no. of technical staff available: _____

6. Is the work distribution to the technical staff is based on : _____

(1) No. of villages (2) No. of VPTs (3) Both (4) Any other (specify)

7. If 1, 2, 3, for the above, No. of villages / VPTs per technical person: _____

8. Details (Number) of repair and maintenance of VPTs undertaken at the district level for the last 3 months.

Type of repairs & Maintenance	Last month	2 nd last month	3 rd last month
Total			

9. Do you charge for undertaking repairs & maintenance?

No	1
----	---

Yes	2
-----	---

9.1 If yes, details of charges

9.1(a) Rate of charges for maintenance per VPT _____

(b) Period of Charges for maintenance: (1) Monthly (2) Quarterly (3) Half yearly (4) Annually

(c) Mode of payment: (1) Fixed amount included in monthly bill
(2) Cash collected by staff (3) Others

(d) Rate of repairs (in Rs.) _____

(e) Type of Fault _____

(f) Mode of payment: (1) Amount included in monthly bill (2) Cash collected by staff
(3) Others (specify)

10. Are there any training programmes conducted for training and up gradation of skills for the technical staff? If so, give details of training programmes i.e. nature, period of training and No. of persons trained for the last 3 years ?
11. Do you perceive any competition to VPTs from other service providers? If so, briefly provide details of competitors and measures adopted/to be adopted to with stand a competition.

VIII. STRENGTHS & WEAKNESSES OF VPTs

1. Strengths of VPTs.

2. Weaknesses of VPTs.

3. Constraints in implementation of VPTs with regard to,

a. Guidelines of the scheme

b. Availability and utilization of funds

c. Staff constraints

d. Monitoring and Supervision

e. Repairs and maintenance

f. Any Other

4. Is telecom service become commercially viable in rural areas of your district:

No	1	Yes	2
----	---	-----	---

4.1 (a) If yes, how _____

(b) If No, reasons for un-viability (Not more than three): _____

IX. SUGGESTIONS FOR IMPROVEMENT

Overall opinion of GM on VPT scheme
(Regarding technology, competition, coverage, efficiency etc.)

Name :

Signature of GM

Date :



PROGRAMME EVALUATION ORGANISATION

EVALUATION STUDY ON RURAL TELEPHONY

STATE LEVEL SCHEDULE

I. PROFILE

1. Name of the State:

2. Contact Address of the Implementing Dept at the State Level:

3. Institutional Arrangements:
 - 3.1. Name and Designation of the Head of the Implementing Dept:

 - 3.2. Name and Designation of the in-charge officer for VPT at state level:

 - 3.3. Details of the Organizational Setup ____ (flow chart)
(From State to District level):

II. BACKGROUND INFORMATION OF THE SCHEME:

1. Year in which the scheme is implemented in the State:
2. Total no. of villages in the state :
3. No. of villages covered under VPT:
4. No. of VPT booths installed :
5. Criteria for identifying and selecting villages & VPTs

6. Objectives and Guidelines for VPT Scheme:

No	1	Yes	2
----	---	-----	---

7. Do you prepare any Action Plan:

8. If yes, brief details of Action Plan for the year 2008-09
(Please furnish copies of action plan for the year 2007-08 & 08-09)

III. PERFORMANCE OF THE SCHEME

1. (a) Details of physical targets & achievements (No. of newly connected villages/ VPTs) for the last 5 years.

Years	Physical Performance ((Newly connected villages/VPTs)					
	Target		Achievement		Reasons for shortfall, if any (not more than three)	Action taken up to overcome the shortfalls (not more than three)
	No. of Villages	No. of VPTs	No. of Villages	No. of VPTs		
1	2	3	4	5	6	7
2003-04						
2004-05						
2005-06						
2006-07						
2007-08						
Total						

(b) Extended services (providing urban multimedia communication amenities(i.e./CDMA cellular phones, broadband connection as well as Internet) in existing VPTs of rural areas.

Years	Physical performance (services extended in existing VPTs)					
	Target		Achievement		Reasons for shortfall, if any (not more than three)	Action taken up to overcome the shortfalls (not more than three)
	No. of Villages	No. of VPTs	No. of Villages	No. of VPTs		
1	2	3	4	5	6	7
2003-04						
2004-05						
2005-06						
2006-07						
2007-08						
Total						

IV. FLOW OF FUNDS

1. Is the VPT Scheme 100% financed by BSNL ? No 1 Yes 2
2. If No, details of the agency/institution and share of their contribution in percentages (%)

3. Details of flow of funds

Year	Sanctions		allotments		Releases		Expenditure		Reasons for delay in Sanctions to Allotment, if any (not more than three)	Reasons for gap between Releases and Expenditure, if any (not more than three)
	Date	Amount	Date	Amount	Date	Amount	Date	Amount		
2003-04										
2004-05										
2005-06										
2006-07										
2007-08										

4. Revenue details :

Details of revenue and expenditure for the last 5 years

(Revenue in Rs.)

Year	Income from billing	Income from repairs and maintenance
2003-04		
2004-05		
2005-06		
2006-07		
2007-08		
Total		

5. Expenditure details:

Details of expenditure for the last 5 years

Year	Purchase of Instruments	Installation Expenses	Transportation Expenses	TA/DA of staff	Any other (Specify)	Total
2003-04						
2004-05						
2005-06						
2006-07						
2007-08						
Total						

V. AVAILABILITY OF STAFF FOR VPT (AS ON 31-03-2009).

1. Details

Staff		Sanctioned	On rolls	Shortfall (Col.2-3)
Technical	Officers			
	Supporting staff			
	Total			
Administration	Officers			
	Supporting staff			
	Total			
Grand Total				

2. Reasons for shortfall in the staff (if any)

3. Action taken for the management of shortfall

VI. MONITORING AND SUPERVISION

1. Is there any mechanism available for monitoring and supervision of VPTs at the State level ?

No	1
----	---

Yes	2
-----	---

2. If Yes, is it by BSNL Staff/out sourced or both ?

3. Do you have any format and guidelines for monitoring and supervision?

No	1
----	---

Yes	2
-----	---

3.1. If yes, furnish a copy of the same

4. If outsourced details of agency and guidelines enshrined for monitoring and supervision?

5. Availability of staff for monitoring and supervision

Districts	No. of staff available	Frequency of visit per month

VII. REPAIRS AND MAINTENANCE OF VPTs

1. Is repairs and maintenance of VPTs done by

BSNL	1
------	---

Outsourced	2
------------	---

2. If outsourced, give details of the districts and agency and modalities of outsourced by BSNL? Details of the districts to be furnished ?

3. Is there any special technical staff available with BSNL for repair of VPTs.

No	1
----	---

Yes	2
-----	---

4. If No, give reasons?

5. If yes, no. of technical staff available District wise and total in the State.

6. Is the work distribution to the technical staff is based on ()

(1) No. of villages (2) No. of VPTs (3) Both (4) Any other (specify)

7. Are there any training programmes conducted for training and up gradation of skills for the technical staff ? If so, give details of training programmes i.e. nature, period of training and No. of persons trained for the last 3 years.

8. Do you perceive any competition to VPTs from other private service providers? If so, briefly provide details of competitors and measures adopted/to be adopted to with stand a competition.

9. Details of future plans regarding,
 1. Expansion of coverage of VPTs
 2. Functional efficiency of VPTs
 3. VPT technology
 4. Providing additional services through VPT
 5. Overall review and reorganization of VPT structure
 6. Future plans for the upgrading the skills of the officers and technical staff.

VIII. STRENGTHS & WEAKNESSES OF VPTS.

1. Strengths of VPTS.

2. Weaknesses of VPTS.

3. Constraints in implementation of VPTs with regard to -
 - a. Guidelines of the scheme
 - b. Availability and utilization of funds
 - c. Staff constraints
 - d. Monitoring and Supervision
 - e. Repairs and maintenance
 - f. Any Other

4. Is Telecom Services becomes commercially viable in rural areas of the state Yes/No
- 4.1 If Yes how:

- 4.2 If No, reasons for un-viability (not more than three)

IX. SUGGESTIONS FOR IMPROVEMENT

Overall opinion of CGM on VPT scheme
(Regarding technology, competition, coverage, efficiency etc.)

Signature of CGM

Name & Date