CHAPTER V
CONCLUSION

Despite the grand design for IT development, lack of IT infrastructure is a major issue that the state in reeling under. The Bharat Sanchar Nigam Limited (BSNL), National Informatics Centre (NIC) and Software Technology Parks of India (STPI) are the three main IT service providers in the State. BSNL is a public sector undertaking (PSU) providing the IT infrastructure and services across the State. NIC is the Government of India’s agency with its services restricted within government departments in the state. STPI, which is a society under the Ministry of IT, GOI is another upcoming IT setup which provides services to the private ITSUs especially private business firms and entrepreneurs. Its presence has been felt but apparently has not been able expand its services beyond Imphal city. Hughes Net and Erenet India are some other service providers found to have provided their services to the educational and health institutes of the state. The private service providers like Airtei, Tata Indicom, Reliance and others have not proved institutionally. There are absences of prominent institutional service providers like ‘Sify’, HCL Infinet Ltd etc. in the state. Services offered by BSNL are not well received by the IITSUs as has been discussed in the earlier chapter. The government must take initiative in inviting other service providers for IT infrastructure development and services.
Location is one area that the government authorities and the IT service providers have to keep in mind before installing the IT infrastructures. It must be distributed on the basis of area and the population. Access to IT is limited to fewer section both in the hills and valley as has already been spelt out in the preceding chapter. The total geographical area of the state is 22,327sq km, out of which its (90) ninety percent is covered by hills and the remaining 10 percent i.e. 2,238 sq km constitutes valley area. Interestingly, valley area accounts only one-tenth of the total area of the state. The area covered by unit ITSP is more in the hill, but the population in the hill is dispersed. Therefore one has to afford long distance to avail the IT facilities. Access cost is more for the hill people because of lack of transportation facilities and poor conditions of village approach roads. This however is not only true for the hill districts but also for whole of the state. The number of vehicles plying in the rural internal roads is meager and has not catered the needs of the people.

Population is another indicator, which the government has to take into account while installing the IT infrastructures. A unit ITSP in the valley districts has to cover larger population, which means again less access for the valley people as shown in (Table 4.1). So if IT is to be developed, the government has to give equal emphasis on area, location and the population while considering sites for such establishments. Implementation of SWAN and future IT infrastructures establishment must keep these parameters and issues into consideration.
Apart from providing IT services, dial-up internet connections through phone lines is seen to be an important medium of availing the internet services by the IITSUs. The national status of internet connections and broadband service connections is reported to be 9.21 million and 2.28 million respectively as on March 2007. In Manipur, the Internet service connection as on March 2008 is approximately 9000 in numbers (Field information). There is growing demand of IT services in the state but the services have to be improved from the provider's side. It is learnt that the complaints about the service disruptions are high, especially in the services provided by BSNL as has been revealed in the preceding chapter. The disturbance in telephone line and modem related issues are found to be common from most of the ITSP. So service providers must address these complaints seriously.

Landslide is a cause of concern in the hill districts of the state. There are cases of complaints of OFC and local cable breakdown especially in the hill district of Senapati due to landslide. Major reason for telephone lines and OFCs breakdown is attributed to earthing of these lines along the National Highway No.39 which are also frequently damaged by heavy plying of heavily loaded vehicles along this highway, especially the hill portion of the highway. NH 39 is the main artery of transportation from Dimapur in the state of Nagaland to Moreh, a border town of Manipur along international border. The transport cost on this road is also high due to frequent landslides and poor conditions on the hill tracts along the highway.
Official redtapism is one issue that is hampering the development of IT infrastructure in the state. It is learnt that there is lack of co-ordination between the government departments in handling different development works. Instances like Public Works Department's road constructions on one hand and Public Health Engineering Department and BSNL digging roads on the other and vice versa, for laying pipes and Optical Cable Fibers. These delays the development works in every sphere. The government departments must work in close coordination in providing the development services.

Apart from these physical and political bottlenecks, the state educational institutions are devoid of IT applications. It is learnt that there are no state run educational institutes with IT facilities as indicated out in the previous chapter. The Government of Manipur IT policy has the vision of IT literacy in schools and colleges, to be implemented jointly by the Education Department and IT Department. The policy has visions to encourage setting up of computer laboratories in collaboration with private sector. The state government encourages all educational institutions to have internet connectivity and to set up internet cafes/clubs for students through private sector. But such development in the educational institutes has not taken place. The government of Manipur through Department of Science and Technology and IT has taken up the initiative to distribute computer literacy excellent awards every year which is a part of the central government scheme. The Education Minister distributed computers in few schools but in reality IT education is not happening. The government has to take into
account this deficiency especially in the state run educational institutes. Educational system in the state would be obsolete, if it does not tune with the changing technology. The government should also look into private IT educational institutes in the state, which looks like business enterprises providing certificates for different grades. Most of them are without registration and their genuineness is questionable.

The extent of IT use in the field of education is very much limited in the state as seen in the previous chapters. In the field of education, IT is used for online courses including IT module in degree and diploma, IT literacy, computer software training, vocational training, collection of educational information through websites, digitization of library etc. but use of IT for distance learning are yet not very popular. The government of Manipur must take stock of the situation. It has to promote distance learning through IT in school, college, vocational training and technical education institutes so that informal education can be availed to those who cannot avail regular courses. The government of Manipur must learn lessons from states like Andhra Pradesh, Kerala and Haryana.

Use of Manipuri language in IT is very minimal as has been related in the preceding chapter. DOEACC has already developed e-learning materials in English, Hindi, Punjabi and Marathi. The same has been under process for Kashmiri, Urdu, Bengali, Assamese, Tamil and Malayalam. It is high time that the government takes initiatives in this direction so that the common people can take the benefits of IT revolution.
In the health sector, use of IT facilities is limited with the state owned health institutes. The state government, however has opened a website for the State Health Department. IT connectivity within Chief Medical Officer (CMO) offices has also been initiated. The private health sector is growing in Manipur and most of those have IT facilities. The health care facilities through IT has to be made advanced by the government owned health institutes at par with the private health institutes. The government of Manipur should come up with IT facilities in the district hospitals, community health centres (CHCs), primary health centres (PHCs) and primary health sub-centre (PHSC).

Government ITUs shows slow progress of IT use. Most of the government offices have not developed their official websites. Likewise, most government departments have not digitized their public domain information (PDI) for delivery. Internet connected LAN system has not been well installed in the government offices. Therefore much is need to be done in the field of general administration.

Computer literacy has remained a concern for government and private organizations. Maximum government departments have not been able to literate their employees on IT and is learnt from the preceding chapter that there is lack of computer literate employee in the offices. So, the government should take special interest in these regard.
CIC is the only IITSU which uses all IT facilities noted for the study. CICs are accessed by people from different walks of life. The students from secondary schools, college going students and the common people do visit the centers. The CIC is one IITSU which has largely been involved in the development of websites for the offices and even for other users on demand. Although it was expected that IT use in health would be maximum in the health institutes, it was not the case. It is the CICs where highest use of IT facilities for health purposes has been evident (Table 4.19 & Figure IV).

It is a welcome sign that CICs are located in the far-flung areas where common populace can visit without much effort. The service provided by CICs is found to be most in disseminating agriculture related information. For a state like Manipur which is suffering from communication bottlenecks and weak infrastructure combined with the insurgency problem, CICs serves disadvantaged farmers to access information on agriculture related activities. Success or failure for integration of CIC system with the upcoming CSC scheme is for the future research to tell.

The overall computerized transactions with IITSUs are low in the state of Manipur. The location wise distribution of IITSUs with computerized transactions is high in the valley than the hill districts as is evident in Table 4.22. It is the IITSUs in the Imphal West district which has larger number of computerized and partially computerized transactions. Centrally owned IITSUs have performed better in terms of computerized
transactions, followed by the private and state government establishments. It means the state government IITSUs are lagging behind in use of computers in transactions.

Manipur State Remote Sensing Application Centre (MARSAC) is running GIS service for the state government. IBSD, Manipur University which are centrally owned IITSUs have started using GIS for integrating, analysing and visualising different types of data for spatial planning, research, environmental protection, utility management etc. The government of Manipur also needs to extend the opportunity of GIS to all the districts of Manipur.

Budget is a constraint for almost all the IITSUs except for the centrally owned ones. For the state government owned IITSUs, it has been stated in the IT policy of the state that each department, corporation etc. should earmark 3% of its budget for IT applications. This budget shall be spent for complete transition to e-Governance on procurement of hardware, system software, establishing IT centers, networking, web technology, development of application software, training and technical consultancy, etc. But less is happening.

In case of privately owned IITSUs, there are always financial constraints. The government must intervene into these issues and help development of IT. Lack of staff is one problem that the ITSPs are facing presently. It is learnt that due to lack of staff, the ITSPs are unable to function efficiently. Suggestions were made by the ITSPs to
make new recruits as early as possible. While BSNL suffer from lack of staff, one major complaint is that there is no proper distribution of employees in their different hierarchies. Therefore, BSNL authority wants that their recruitment policy should take care of proper distribution of staff in its different units located in different places.

On the other hand, Manipur suffers from highly educated unemployment. A lot of students move outside the state for higher education but back home they are not compensated by suitable jobs. The consolidated live register of all Employment Exchanges stood at 6,05840 during the year 2007-08 and the number of persons recruited for different offices during the year is meager 2 (Table 3.21). This employment gap may be the root cause of insurgency and other related unrest in the state.

Repeatedly found case during the course of interviewing the (IITSUs) is that Manipur requires highly trained staff for implementation of IT in all spheres of development. While the state suffers from high unemployment, IT enabled services have large potential for job creation in the state.

Irregular power supply is one cause of concerns for both ITSPs and IITSUs. Although the state government in its IT policy has envisaged providing continuous and uninterrupted power supply for IT industries, the state government has not been able to fulfill its promises. There has been increasing shortfall of power supply from 63 MW
(40 percent) in 2001-2002 to 64 MW (37 percent) in 2002-03 and in 2007-08. The demand during the period was 145 MW. So, mere promises and half-hearted implementation of national IT schemes by the state government would not ensure the actual benefit of IT without adequate power supply is in place.

General awareness of government IT policy is very low in the state. Much remains to be done to publicize the IT policy of Manipur for wide propagation of IT in the state. There is also a need for awareness building among the youths so that they can take the best advantage of IT.

To sum up, the state is suffering from lack of IT infrastructure and services. The distribution and location of IT infrastructure are seen to be incoherent as per the area and the population. Concentration is higher in the valley areas and more specifically in the urban valley.

The state is fraught with system failure having its effect upon IT sector as well. There seems to be no coordination with the implementing departments while taking up the development works, whether telecom, road or water supply, resulting in duplication and triplication of the same work. Nature also plays havoc in the cause of infrastructure development for IT services. There are reports of frequent landslides in the hill districts leading to damage of the OFC and disrupting the entire process.
Use of IT in the field of education is very much limited in the State. The government run educational institutions do not have IT facilities. The state has minimal use of Manipuri language for IT applications which would not cater to the needs of larger section of the society. In the health sector, IT facilities have not come down the grassroots level. The district hospitals, CHCs and PHCs have not availed IT facilities. In the general administration sector, the government offices are not well equipped with the IT infrastructures. As number of employees with IT literacy is low the government is unable to deliver e-governance to the public.

Never the less, development and use of IT can help the state of Manipur withstanding many other difficulties arising out of poor governance and difficult terrain.