Preface

The Computer is the most powerful tool the humankind has ever invented. Since the invention of modern digital computer in late 1940s, its applications have affected all areas of the society. The invention of computer was a result of the efforts of various scientists and technologists from diverse disciplines. The earlier applications of computer were made in defense and scientific installations. The hybridisation of computer with telecommunication technology gave rise to many innovative deployments of computers for sharing data across geographical distances quickly. This amalgamation of computer and telecommunication technology is called as Information Technology (IT) or Information and Communication Technology (ICT). Notwithstanding the fact that the government sectors were the earlier users of ICT, but later the business world went ahead in the use of ICT for data processing and in other innovative ways to incorporate ICT strategically to increase the efficiency of business operations.

With the invention of Internet in 1960s onwards and popular WWW application in early 1990s, the last decade of the twentieth century has witnessed a revolutionary impact on human life across the globe through the innovations, deployment and proliferation of advanced microelectronics-based ICT. Hardy there is any country in the world which does not have Internet presence. Internet is breaking the spatial and temporal barriers, and information put on public domain through Internet can be accessed from any where and at any time through a computer and a communication link without visiting the physical site of the information. Thus ICT is impacting all aspects of Society in diverse ways. This phenomenon of proliferation of Internet in particular and ICT in general in Society is giving rise to many catchy phrases to define present society or eon such as E-Society, Knowledge Society, Cyber World, Information Age, Knowledge Age, Digital Age and so on. In fact the computer or ICT which used to be the exclusive field of scientific or technological world has become all pervasive in Society and is affecting all the academic disciplines. At present there is no general consensus among academicians whether computer or ICT is Science, Engineering or Arts. The convergent view is that ICT affects all disciplines and thus giving rise to the interdisciplinary studies of ICT depending upon its areas of applications.
Another major change in the last decade of the twentieth century is that of globalisation and liberalisation. The globalisation is shrinking the political and geographical boundaries of the countries. The business world is extending its operations in distance geographical locations and using ICT as strategic tool to cut the products costs, to reach its consumers in order to survive in competitive world and to make more effective customer relationship management. In the globalised and liberalised era, even the traditional roles of the governments are changing and the traditional means of revenue earning of the governments are slipping into the hands of private businesses. In order to survive and compete in this new scenario, these fund starving and archaic governments are re-inventing themselves in the digital age. As the citizenry is being exposed to the knowledge society and also getting quality products from competitive market, they expect similar kinds of treatment for service delivery from the governments. There is demand on governments from citizens to be more transparent, corruption free, responsive and better treatment in order to live a dignified life on earth.

In fact, there has always been an endeavour going on in the academic world to improve the governance by curbing the vices of bureaucratic structure of governments. Due to the efforts of various thinkers from diverse disciplines, the field of public administration adopted management theories in administration and of late the concept of good governance emerged. According to good governance, the performance of a government is not measured by the financial inputs it allocates to improve its services to the citizens rather the efficiency of any government programme to its citizens should be judged by the real outcomes to its beneficiaries. One may say that the developed world was already better positioned in terms of its services to the citizens, but the governance in developing countries has pathological malaises viz. colonial hangover so far its bureaucracy is concerned and feudal social structure which usurp the tax-payers money by influencing the government decisions. However, the donor multilateral agencies like UNDP, IMF, and ADB realised that the funds extracted from them are not being put to the proper uses; they are enforcing the borrowing countries to provide good governance. Some of the countries on their own are pushing the agenda for good governance and some are being exhorted by donor agencies to re-invent themselves in the digital age to harness ICT for development.
This leveraging or harnessing of the modern technologies for development in general and for governance in particular is called E-governance and the government stimulated with ICT usage is called E-government. The promises of E-governance are immense. It uses ICT to make internal working of the government cost-effective and simultaneously provides means to improve service delivery channels of government to the citizens whereby government is changing its operations from in-line to on-line and thus providing smart governance.

The Indian government in this regard has taken various proactive steps to use modern ICT tools. The real beginning of ICT related reforms in India started in late 1980s and since then Indian has come a long way. At present India can boast of a highest number of software professions in the world and these software professionals are working across various countries. However the use of ICT in the development of the country or in E-governance is under scanner! The various State governments have started E-governance projects, but there is not much sharing of information across the country about the functioning of these projects.

The present study is about E-governance initiatives in the Indian State of Himachal Pradesh. E-governance is not simply putting ICT in government sector rather ICT interacts with existing mode of governance. Thus, in the study of E-governance, we expect scientific challenges not only on ICT front but other challenges in the areas of governance where ICT will have impacts. Broadly, we have taken only technology and management issues to check the unwieldiness of the study. The study has been reported in seven chapters as under:

Chapter 1 is a general overview of ICT and E-governance. It discusses the characteristics of ICT, rationale why business sectors are deploying ICT applications and why ICT should be used in governments. The chapter builds up the concept of good governance as evolved from the old paradigms of governance in public administration discipline. The definitions of E-governance are explored and ways to deploy E-governance are discussed. Various general technology and management issues arising during the implementation of E-governance are highlighted and finally, the chapter discusses briefly E-governance models and phases of E-governance adoption.
Chapter 2 gives rationale for the present study and provides the agenda to read the thesis. In this chapter review of literature has been done and research design of the present study has been formulated i.e. need, scope, objectives and research methodology of the study are discussed. The chapter also discusses the sources of information for the study, the problems which were faced during field investigations and highlights the limitations and future scope of the study.

Chapter 3 describes the various computerisation activities and E-governance initiatives in the HP State against the backdrop of government structure, IT infrastructure, and IT Policy and E-governance guidelines. The chapter lists various computerised applications implemented in the State and makes observations about the status of computerisations and the State Website. The interviews of the State Informatics Officer and of the Principal Secretary for IT of the State are appended to the chapter.

Chapter 4 explores the context for implementing E-governance applications at a district level in the State. Hamirpur district has been chosen as the unit of study. The chapter discusses: socio-economic profile of the masses, needs of governmental information for the public, the existing service delivery channels through which general public avail government services and overview of the interactions of citizens and government offices. The status of Electricity and Telecom infrastructures in the district is also described.

Chapter 5 is descriptive study of the telecentres based citizen-centric E-governance initiative started on pilot basis in district Hamirpur of the H P State. The initiative is named LokMitra. An exploration has been done on the technology and management issues involved in the implementation and operations of LokMitra. The observations are based upon the census study of the LokMitra telecentres. The interview comments of some officials of and interview of the former DC- the executive promoter of LokMitra have been appended to the chapter.

Chapter 6 is brief description of the E-governance Centre opened at headquarters of district Hamirpur in December, 2003, and the status of various computerisation applications in the district is given.

Chapter 7 is the last chapter of the thesis, which summarises the observations made in the preceding chapters. The summary is supplemented with critical discussion on the technology and management issues involved in
deploying E-governance applications in the State. Finally, a suggestive E-
governance framework has been given for the State.

A list of annotated bibliography, Websites accessed during the study and
annexures mentioned in the text of the study are attached towards the end of the thesis. Since the printout of the study is taken in 'Black-White' and some diagrams in the report depict coloured effects, therefore a CD containing the thesis text has been affixed in the end of the thesis.

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The idea of the field of the present study took shape during my Bhutan assignment. Prof. G M Joshi of Pune who was my colleague there and who has a long research experience on working on micro-electronics in Purdue University helped me in the beginning to shape the study area. The down-to-earth suggestions of Dr. Joshi, particularly his repetitive comment that "Any governance whether E-governance should serve the poorest of the poor." Thanks are to Dr. Rajsheer Khare, Mr. Reetesh Kumar Singh, Dr. Neeta Singh, Mr. Needup Dorji, Mr. Karma Drupka, Mr. Graem Foster, Mr. Pankaj Thapa, Dr. Raman Kumar and many other colleagues in Bhutan who were very helpful during the conception of the study area.

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Finally, since I have done all typing myself, therefore I own the responsibility for any syntactical and semantics mistakes in the thesis. Thanks my lovely computer, you did not trouble me much!

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