Technical Guide on
Information System Audit

Celebrating the 60th Year of Excellence

Committee on Information Technology
The Institute of Chartered Accountants of India
(Set up by an Act of Parliament)
New Delhi

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FOREWORD TO SECOND EDITION

The Committee on Information Technology (CIT) has been constituted by the Institute of Chartered Accountants of India to identify the emerging professional opportunities in the Information Technology sector for members and prepare them to face the threats and challenges ahead through suitable courses/ seminars/ workshops and professional guides. Since its inception, the Committee has proactively considered the contemporary requirements and initiated steps to suitably equip the members in terms of knowledge and skills to face the challenges ahead and convert them into professional opportunities.

Information Technology, in the emerging economic scenario, has risen from a humble role of business enabler to business driver. Enterprises and governments are making increasing use of IT to better manage their activities, manage their core business functionality and offer value added services to their clients. The IT responsiveness and efficiency within the process flow, within the enterprise and with its customers/ vendors are the deciding factors for an organisation to compete and survive in the global village. It is often found that typical IT implementations leave a lot to be desired with respect to necessary checks and balances (controls), efficiency and effectiveness and last, but not the least, disaster recovery planning/ business continuity planning.

Sarbanes Oxley Act and its Indian counterpart – Clause 49 of the Listing Agreement to the Indian Stock Exchange require the directors to certify the existence and operation of sufficient internal controls. As the Internal Controls are now increasingly implemented through computer systems, the need for Information System Audit is on the increase apart from heightened business risks considering emerging business scenario and increasing deployment of IT to manage business. The Committee introduced the Post Qualification Course on Information Systems Audit in the year 2000 to suitably equip the profession to offer value added services in the area of Information System Audit.

I am pleased with the ardent efforts put in by the Committee on Information Technology for coming out with this informative *Technical Guide on Information System Audit,* second edition. I am sure that the members will be immensely benefited by this timely publication that aims to contribute to a better

understanding and dissemination of information in this vibrant business field and provide a framework to undertake Information System Audits.

I appreciate the efforts put in by Shri Atul C. Bheda, Chairman, Committee on Information Technology, members of the Committee and Committee Secretariat towards this challenging responsibility.

New Delhi

CA. Ved Jain

December 22, 2008

President

PREFACE TO SECOND EDITION

The Committee on Information Technology introduced the post qualification course on Information Systems Audit in the year 2000 to provide the necessary training and development to the members to offer value added services in this emerging field. The need for Information System Audits by enterprises is on the increase considering the emerging requirements of Sarbanes Oxley Act and Clause 49 of the listing Agreement to the Indian Stock Exchange, which require certification by the directors for existence and operation of sufficient Internal Controls. As the Internal Controls today are implemented through the Information Systems to manage the business activities, there is an increasing need for Information System Audits in the country and abroad. The Committee is indeed very grateful to the members in coming forward in unprecedented large numbers to develop competencies in this emerging field.

The Committee on IT has endeavored to further equip members to provide value added services to their clients in the area of Information System Audit by providing this revised edition of *Technical Guide on Information System Audit* such that they have a framework and requisite support. This guide aims to enhance the knowledge of ISA qualified members to perform Information Systems Assurance/ Systems and Process Assurance Services. In addition to providing an introduction to the processes and procedures to be followed, this guide provides illustrative checklists for conducting Information System Audits.

I would like to add a word of caution on use of this technical guide, including checklists. This guide is a generic document that has to be suitably adapted to the specific requirements of a particular assignment.

I am grateful to CA. Ravi Pandit, for having, contributed the basic draft of this technical guide. I express my gratitude to CA. Ved Jain, President and CA. Uttam Prakash Aggarwal, Vice President for their whole hearted support and guidance in coming out with this guide and endeavors of the Committee. I also acknowledge the guidance, support and contribution of the members of the Committee on Information Technology in finalising this guide. I also thank Smt. Indu Arora, Secretary to the Committee, Shri Ravi K. Arora, Jt. Director and committee secretariat for working hard to release this very useful publication for the ISA Members.

I am confident that members will be immensely benefited by this timely and sincere effort of the Committee. This revised publication would contribute to better understanding and dissemination of information in this crucial domain and members will feel assured and better equipped to offer value added services in this emerging field.

Shri Atul C. Bheda

December 19, 2008

Chairman

New Delhi

Committee on Information Technology

FOREWARD TO FIRST EDITION

In the emerging scenario of global village and technological revolution, it is a challenging task for the Institute members to keep abreast with developments and convert threats into challenges and survive/ grow in the globalised world.

The Committee on Information Technology (CIT) has been established to identify the emerging professional opportunities in the Information Technology sector for members and prepare them to face the threats and challenges ahead. Since its inception, the Committee has proactively considered the modern day requirements and initiated steps to suitably equip the members in terms of knowledge and skills to face the challenges ahead.

There is increasing need for the *Information System Assurance Services* as businesses are increasingly using information technology to service their core business functionality without having sufficient checks and balances leading to increasing business risks. Hence the need for Information System Audit by Chartered Accountants with DISA post qualification.

There has been an increasing need for a framework for Information System Audit. Indeed, it is a pleasure for me to know that the CIT has come out with this informative *Information Systems Audit - Technical Guide*. I am confident that members will be benefited by this timely and sincere effort of the Committee. This publication would contribute to better understanding and dissemination of information in this critical area and members will feel more confident and better equipped to carry out their jobs.

I would like to place on record my deep appreciation for the efforts put in by Shri Harinderjit Singh, Chairman, Committe~ on Information Technology, members of the Committee and Secretary of the Committee for this commendable job.

Sunil Goyal
President

New Delhi
January 24, 2005

PREFACE TO FIRST EDITION

In today's age, there is a seamless integration of business process, internal controls, accounting, systems and IT. In this scenario, our members have to provide assurance and their value add services to clients. With this background, the Committee on Information Technology (CIT) of The Institute of Chartered Accountants of India was established in the year 2000 to identify the emerging professional opportunities in the Information Technology sector for members and prepare them to face the related challenges ahead. This technical guide is one of the initiatives of the CIT to equip our members to perform the assignments relating to Information Assurance audits and other related value add services The guide contains subjects like an introduction to the Information System Audit, Information System Audit mandate, defining auditee's requirements, planning for Information System Audit, audit risk assessment, documentation, conduct of Information System Audit, use and documentation of CAAT. The highlight of the guide is the sample checklists for practical guidance Also included in is a copy ofthe RBI Checklists for Computer Audit, in the formation of which the ICAI was a member.

I would like to add a word of caution on use of this technical guide, including checklists. This guide is a generic document that has to be suitably adapted! tailored to the specific requirements of a particular assignment.

I am grateful to Shri V. Jawahar, Co-opted Member to the Committee on Information Technology, to have contributed the basic draft of this technical guide. In this regard, I also acknowledge the guidance and contribution of our President, Shri Sunil Goyal, FCA, Vice President, Shri Kamlesh S. Vikamsey, FCA, all the members of the Committee on Information Technology and Shri RaviArora, Secretary, CIT.

I am sure that this Technical Guide on Information Technology would be of immense help to the members in providing the Information Assurance Services, a value added service, whose demand is on the increase by the day and as usual I look forward to your feedback and suggestions to improve the same.

Harinderjit Singh
Chairman
Committee on Information Technology

New Delhi
January 24, 2005

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