

# Preface

Control and audit of information systems are becoming increasingly important due to the competitive impact of information technology. In fact, Information Systems are critical for the general functioning of our society and information is confirmed as the organization's most valuable asset. Another important aspect to be taken into account is the amount of resources expended by information technology departments. The continuously increasing budgets of these departments preoccupy executive managers who generally cannot even understand what money is being spent on.

In fact, until the 1980s, some organizations considered it possible to audit computers without specialized technical knowledge ("auditing around the computer"). But nowadays, after various resounding cases of fraud, a new speciality inside auditing is becoming necessary in order to control the correct, efficient and effective operation of computerized information systems, that is, "auditing of the computer".

Information Systems (and the technology that supports them) must be audited in order to improve their benefits and allow organizations to manage the risks attached to them.

The main objective of this book is to give a global vision of information systems audit and control, exposing the main techniques and methods, and analyzing several aspects (legislative, deontological, etc) related to IT audit and control. This book also provides guidelines to audit some critical areas of IT (security, maintenance, datawarehouses, etc.) The chapters in this book are intended to be useful to a wide audience: IS/IT managers, IT auditors, executives, CIOs, internal auditors, consultants, management accountants, EDP professionals, information security specialists, and also students, as IS Audit has been recently introduced in different universities as a subject.

Chapter 1, by Rafael Rodríguez, introduces the main concepts of

information system auditing: control objective, audit plan, and risk, using the guidelines defined by the ISACA (Information System and Audit Control Association). Jane Fedorowicz and Ulric Gelinas Jr. summarize in Chapter 2 the adoption and usage patterns of the COBIT (Control Objectives for Information and related Technology) proposed by the ISACA.

One of the most important areas for IT auditing is security. This issue is addressed in Chapter 3, by Arturo Ribagorda and José María Sierra who analyze the different security risks which threaten IT elements.

Software maintenance is one of the biggest concerns in information technology organizations. It can consume up to 80% of the total software budget. This figure has grown dramatically by some recent events as Y2K (Year 2000) “effect” and the introduction of Euro. In Chapter 4, Francisco Ruiz, Mario Piattini, Macario Polo and Coral Calero give some practical advice in order to perform the audit of the software maintenance process.

Data warehouses have become the key trend in corporate computing in the 1990s since they provide managers with the most accurate and relevant information to improve strategic decisions. A specific control system should be established in order to protect this important asset. Basing on ISACA’s COBIT, José Antonio Roderó and Mario Piattini present a framework for auditing datawarehouse life-cycle and components.

Miguel Angel Davara describes in Chapter 6 the legal aspects related to IT audit. The IT auditor must know the legal considerations of the use of IT and its audit.

The database is now the underlying technology of the information system and has impacted the way most of the organizations operate. Juan Garbajosa and Pedro Pablo Alarcón’s chapter assesses the risks of the database technology and proposes some practical guidelines for its audit.

In Chapter 8 Bart Van Lodensteijn examines the auditing of the IT quality and the quality of the IT auditing. Quality is gaining importance

in every aspect of our lives, and especially in IT related issues due to its vital role for the development of our society.

Software size measurement is being more and more employed in the software used as a counting element for other metrics like productivity or cost, so it is very important that size estimates are accurate. José Luis Lucero proposes a method for auditing Function Points in the last chapter of the book.

In summary, these chapters constitute evidence of the importance of information systems audit and control, representing important ideas in different IT fundamental areas.

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