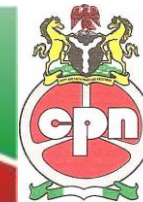




COMPUTER PROFESSIONALS
(REGISTRATION COUNCIL OF NIGERIA)



...SETTING COMPUTING STANDARDS

Code of Professional Practice for IT Practitioners

2011 Induction of New Members

Presenter

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Outline

- Preamble
- Difference between Code of Practice and Code of Ethics
- Obligations of the IT Practitioner
- Key IT Practices
- Conclusion

Code of Professional Practice for IT Practitioners



- **Preamble**

The Computer Professionals (Registration Council of Nigeria) was established by Decree 49 of 1993 (now Act 49) of the Federal Republic of Nigeria. The Council, among other responsibilities, sets and enforces the standards of competencies, conduct and ethical practice for the Information Technology profession in Nigeria.

- **Why Code of Practice ?**

Information Technology is a regulated profession in Nigeria, just as in many other countries. Any regulated profession including Medicine, Law, Accountancy, Pharmacy, Engineering, IT etc should have a code of practice or a code of ethics, which governs the conduct of practitioners while safeguarding the interest and well-being of the receiving public. Information Technology has permeated virtually all aspects of daily life, therefore the consequences of lack of regulation in its practice or lack of professional standards can be disastrous and even life-threatening.

What is the difference between Code of Practice and Code of Ethics ?



- The terms: **Code of Practice**, **Code of Conduct**, **Code of Ethics** are sometimes used interchangeably to describe the **standards of technical capability** which members must satisfy, as well as **the standards of conduct** to which members must either conform or be held accountable for any lapse.
- **Code of Practice**
 - enumerates specifically what the practitioner can or cannot do
 - is enforceable
 - License to practice is contingent upon compliance
- **Code of Ethics**
 - a moral guideline and expectation, centered on honesty, trustworthiness, fairness, and respect for privacy, confidentiality and intellectual property.
 - gives ethical principles and expects the practitioner to regulate own behavior accordingly, without specifically enumerating what he/she can or cannot do.
 - enforceable if embedded in Code of Practice
- **The Code of Professional Standards for IT practitioners in Nigeria is enforceable**, since continued membership of the profession is contingent upon members' strict adherence to it, while non-compliance could lead to prohibition from practice of IT profession in Nigeria.
- One of the hallmarks of a profession is the commitment by its members to high standards of professional conduct.
- Members of the Computer Professionals (Registration Council of Nigeria) should at all times maintain standards of conduct worthy of Information Technology professionals. By doing so, they will enhance their personal stature as IT professionals and help maintain the credibility and prestige of the IT profession. They will also secure the continuing acknowledgment of their professional merits by the community (country) as a whole.

Obligations of the IT Practitioner



- The IT Practitioner has obligations of proper professional conduct towards the following:
 - The Public
 - Employer or Client
 - Fellow members
 - The Profession
 - The Country
- The full and complete code is contained in the CPN publication titled “Code of Ethics and Professional Conduct for the Information Technology profession in Nigeria”

Obligations of the IT Practitioner



- **Obligations to the public**

- Ensure that the products of your effort are used in socially responsible ways and avoid harmful effect on life and property. For example, you will not willfully develop malicious code or other forms of malware, nor promote the acquisition of equipment or components made from banned or toxic materials
- You will give objective, credible, comprehensive and thorough professional evaluations, highlighting possible risks. In your recommendations, you will not take advantage of lack of knowledge and experience of others

- **Obligations to the Employer or Client**

- You will carry out your work with due care and diligence in accordance with the requirements of your employer or client, and endeavour to complete agreed work on time and budget
- You will not reveal data or information entrusted to you without prior consent of the client or employer, except as authorized or required by law
- You will avoid and promptly disclose any conflict of interest situation which may arise from the work you are handling and other third parties associated with the same work

- **Obligations to the country**

- You will ensure that you have knowledge and understanding of existing local, state, national and international laws and regulations relating to the practice of the profession, and obey all such laws
- You will notify the appropriate organ of government when, in your judgment, a policy, project or endeavour, especially in your area of expertise, may be detrimental to the country or harmful to its citizenry.

Obligations of the IT Practitioner



- **Obligations to Fellow Members**

- You will not injure or attempt to maliciously injure the professional reputation and prospects of other members of the profession. Conversely, you have an obligation to report members suspected of engaging in illegal or unprofessional activities to the proper authority, for action.
- You will give proper credit for all intellectual property, and for professional work performed by others

- **Obligations to the Profession**

- You will uphold the reputation of the profession in all your conduct and not promote your own interest at the expense of the dignity and integrity of the profession
- You will exercise care not to misrepresent the Profession, the Council, its policies or its position on any issue of public interest

Key IT Practices - Common



- **Practices common to all IT Disciplines**
 - **Acquire and Maintain professional competence**
 - **Perform services only in areas of your competence**, undertaking only assignments for which you (or your organization) are qualified by education and/or experience.
 - Once you accept an assignment, you must assume responsibility for the entire deliverables which must be signed off and sealed with your professional seal.
 - **Honour property rights including copyrights, patents, trade secrets and terms of licence agreements**
 - Respect the privacy of others by maintaining the integrity and privacy of data which you may have access to, in the course of your professional work.
 - Develop and **deliver documentation**, designs, drawings, operating procedures etc that not only completely describe the 'as built' solution that you have provided, but also facilitate subsequent audit, maintenance, enhancement and operation

Key IT Practices - Specific



- **Project Management**

Definition:

A project is a temporary endeavor, having a defined beginning and end, usually constrained by one or more resources such as time, people or funds, and undertaken to meet unique goals and objectives. **Project management** is the discipline of planning, organizing, and managing resources to bring about the successful completion of a particular project, within a specified time frame.

Obligations:

- The IT Practitioner should ensure that a formal Project Management process or methodology is in place for all projects (may be scaled according to the size of the project).
- Ensures that Project Plans are documented, agreed to by you and client, and progress monitored throughout execution to ensure completion within time and budget.
- Ensures that, upon completion, a formal handover and acceptance is concluded with the client.

- **Relationship Management**

Definition:

- Relationship management is the collection of methodologies, processes and tools used to **manage customer contacts and relationships in an organized way**. For example, an organization may have a database which contains sufficient details about their customers to allow management, the sales team, the service team and even the customer have access to pertinent information to manage and expand the relationship. Such information might include: online orders and tracking, history and pattern of previous purchases, new products and offers that may match customer needs, service reminders etc. There are many Customer Relationship Management (CRM) tools available from SAP, Oracle/Seibel, Salesforce etc

Obligations:

- The IT Practitioner should **determine need for a CRM tool and make objective recommendations**. Recommended tool will then be used to manage and nurture interactions with existing and prospective clients, ensuring effective long-term usage of information technology to increase profitability and reduce operational costs

Key IT Practices - Specific



- **Security**

Definition:

Computer system security is the collective processes and mechanisms by which sensitive and valuable information and services are protected from publication, tampering or collapse by unauthorized activities or untrustworthy individuals and unplanned events. The objective of computer system security includes protection of information and infrastructure (property) from theft, corruption, or natural disaster, while allowing the system and its environment to remain accessible and productive to its intended users.

Obligations:

- The IT Practitioner is expected to identify and evaluate all potential risks in the IT environment, mindful of cost-effectiveness and practicability of the proposed level of security. He /she should propose a mechanism for subsequent, ongoing monitoring of the agreed level of security.
- Recommends and, if applicable, implement actions to be taken to protect life and equipment and recover data in the event of disaster in the IT environment or in one or more component.

- **Safety Engineering**

Definition

Safety management is that function which assists all managers in better performing their responsibilities for operational system design and implementation through either the prediction of management systems deficiencies before errors occur or the identification and correction of such deficiencies by professional analysis of accidental incidents (performance errors).

Obligations:

- The IT Practitioner ensures that systems are designed to capture operational, error and audit logs and provide tools for periodic analysis and reporting for system performance monitoring.
- Determines optimum operating conditions and tolerances for Computing Facilities, environment and equipment and activates appropriate alarms and notifications in the event of significant deviations.

Key IT Practices - Specific



• **Change Management**

Definition:

Change management is a structured approach to transitioning a system or organization from a current state to a desired future state. Change management (or change control) is the process during which the changes to a system are implemented in a controlled manner by following a pre-defined framework or methodology.

Obligations:

- The IT Practitioner should employ standardized methods and procedures for efficient and prompt handling of all changes to a controlled IT system – hardware, communication system, software and documentation/procedures.
- Ensures that all change requests are properly raised, recorded, assessed in terms of impact, costs, benefits and risks, business justified, approved, managed, monitored and closed.

• **Quality Management**

Definition:

IT Quality Management helps in ensuring and managing quality throughout the system lifecycle from requirements analysis, to system build/development to test scenarios, actual testing as well as error and defect handling.

Obligations:

- The IT Practitioner should utilize automated (software) functional, integration and regression testing tools (if cost effective).
- Includes performance and load testing in IT Quality Management. Tools exist for run-time analysis, memory leak detection, performance profiling, and component unit testing of embedded systems.
- Utilizes Web site security and compliance solutions to help identify vulnerabilities and assess compliance requirements to improve the accuracy and reliability of online systems.

Key IT Practices - Specific



• Education and Research

Obligations in Education - The Practitioner in IT Education should:

- take reasonable precautions to distinguish between his/her personal views and those of the educational institution which he/she is affiliated with;
- not deliberately distort or suppress, or deny access to educational materials or information in order to promote his/her personal views or interests
- keep in confidence information that has been obtained in the course of providing professional service, unless disclosure serves a compelling professional purpose or is required by law;
- safeguard and maintain the confidentiality of test materials and information
- not use or allow the use of the institution's resources (including computers, internet etc) for private or commercial purposes
- accord just and equitable treatment to all students as they exercise their educational rights and responsibilities.
- make reasonable effort to protect students from conditions harmful to learning or to health and safety;
- not engage in physical or emotional abuse of students or sexual conduct with a student
- not exploit their professional relationship with students for private gain

Obligations in Research - The Practitioner in IT Research should ensure that:

- his/her research does no harm to the community.
- the design, implementation, analysis, interpretation, reporting, publication and distribution of the research are culturally relevant to the community and in agreement with the standards of competent research.
- The research will contribute something of value to the community in which the research is being conducted.
- must be prepared to address any issues that are raised as a result of research.
- must promote academic diffusion of knowledge through written publications and oral presentations. This includes adequate documentation of the research work as well as the results.

Key IT Practices - Specific



- **System Lifecycle**

Definition:

A complete system lifecycle includes: Requirements Analysis and specification, system development, installation, testing, training, operations and ongoing support/maintenance.

Obligations - The IT Practitioner should ensure that:

- Specifications and requirements definition are thorough and agreed with the client before qualified vendors/service providers are invited.
- Vendor proposals are evaluated against previously agreed system specification.
- Sufficient time is allocated for meetings, clarifications etc and be fair to all invited vendors.
- One Vendor's proposal are not leaked to or discussed with other vendors.
- Avoid undue involvement with the staff of a particular vendor.
- Ensure that a consistent and objective scoring mechanism is applied across board to all proposals. It is courteous and professional to notify unsuccessful bidders and inform them of reasons why they failed.
- Critical systems are designed and implemented with redundancy in mind.
- All systems are tested and accepted by the client in line with agreed comprehensive testing plan and acceptance criteria.
- Adequate provision is made for training end users, management and support/operation staff.
- After installation, ongoing operations are efficient, reliable and at a reasonable cost.
- Operating procedures and user desk guides are available to ensure that the system continues to produce expected results.
- A support structure (e.g. Helpdesk) is put in place to maintain formal and informal contact with the end user for problem resolution, ongoing support and routine maintenance.

CONCLUSION



- Information Technology is a regulated profession, just like the older professions such as Engineering, Medicine, Law etc.
- The IT Practitioner in Nigeria is expected to abide by the Code of Ethics and Professional Conduct as published by the Registration Council.
- **You are therefore enjoined to go forth and be good ambassadors of The Computer Professionals (Registration Council) of Nigeria.**