JOB ROLE – Domestic Biometric Data Operator

Sector – Information Technology and Information Technology enabled Services
(Qualification Pack Code: SSC/Q2213)

PSS Central Institute of Vocational Education
Shyamla Hills, Bhopal – 462 013 , Madhya Pradesh, India

www.psscive.ac.in

UNIT 4. COMPUTER NETWORKS, INTERNET AND STANDARDS OF BIO-METRIC DATA

SESSION 4. IT PRACTICES

Content

Session Objectives

The students will be able to:

- Introduction to Need and importance of developing Biometric standards
- Discuss Biometric standards developing organisations
- Explain International Standards Organizations
- Explain Structure of Biometric Standards
- Describe Biometric Data Interchange Formats
- Explain Character encoding schemes
- Classify National Standards of Biometric Data

Introduction

Biometric systems captures and record human biological and behavioral characteristics. Biometric data is the unique way to identify the human, which brings it close to the technology. However, there are serious ethical issues in the use of biometric technology such as personal privacy, protection and use of personal biometric data. The technology should deal with the ethical and legal aspects of usage and protection of personal biometric data.

Information Systems Ethics

Ethics is an important concern in information systems. The term *ethics* is defined as “a set of moral principles” or “the principles of conduct governing an individual or a group. Digital technologies have created new categories of ethical dilemmas. Ethics and moral play an important role where any law is not formulated. Moral are the values such as respect, honesty, fairness accepted by the people on belief. Many organisations set up a code of ethics with some standards and it is expected to follow code of ethics by the every member of the organisation.

A code of ethics is a document that outlines a set of acceptable behaviors. The document details different actions that are considered appropriate and inappropriate.

Information Systems Ethics

Some of the possible considerations of code of ethics for an organization related to information technology can be:

- Do not use other users computer system, software, or data files without permission.
- Take appropriate approval or permission before using system resources, including communication ports, file space, other system peripherals, and computer time.
- Organizations implementing the computer system must consider the personal and professional development, physical safety, and human dignity of all workers.

Information Systems Ethics

- Appropriate human-computer ergonomic standards should be considered in system design and in the workplace.
- Avoid sending mails or borrowing from other's login ID and password.
- Hosting of personal pages on official website and providing access for commercial purposes should not be allowed.
- Sending out unsolicited email to a large group of people should be prohibited.
- Honor copyrights, patent and trademark. Violation of copyright, patents, trademark and terms of license agreement is prohibited by law. Even the pirated software should not be used. Also give the proper credit to others for intellectual property.

Intellectual Property

Intellectual property is an idea, invention, or process that derives from the work of the mind or intellect. One must not take credit for other's idea or work. It is very difficult to protect an idea. Intellectual property laws are written to protect the tangible results of an idea. Protection of intellectual property is important because it gives people an incentive to be creative. While protecting intellectual property is important because of the incentives it provides, it is also necessary to limit the amount of benefit that can be received and allow the results of ideas to become part of the public domain. Three of the best-known intellectual property protections: copyright, patent, and trademark.

Freeware, shareware and public domain software

In software development community the free and open-source software (foss) has few or no copyright restrictions. The software developers publish their code and make their software available for others to use and distribute for free. People can use, copy and modify the freeware in the manner they want. But still its copyright is hold by the developer. Linux operating systems comes under this category.

- Shareware is the software that can be shared with other users with owner's permission provided it should not be copied. Normally these types of software are made available with the magazines.
- The public domain software are waived copyright. Anybody can use them, copy or modify it in any manner they want without taking the permission. But due to this they are not trustworthy. There are various software available on Internet under public domain.

Patent and Trademark

Patent is another important form of intellectual property protection. A patent creates protection for someone who invents a new product or process. The definition of invention is quite broad and covers many different fields. A patent holder has the right to exclude others from making, using, offering the product for sale. Patent protection is valid for a limited period of 20 years before the invention or process enters the public domain. A patent will only be granted if the invention or process being submitted is original, non-obvious and useful.

Trademark : A trademark is a word, phrase, logo, shape or sound that identifies a source of goods or services. A common-law trademark is designated by placing “TM” next to the trademark. A registered trademark is one that has been examined, approved, and registered with the trademark office. A registered trademark has the circle-R (®) placed next to the trademark.

Protection of Intellectual Property in Biometric Systems

In biometric system it is important to protect intellectual property. The *privacy* is the ability to control information about oneself. In the digital age of information technology everybody is scared to maintain the privacy of their data. During the biometric enrollment process the information about a person that can be used to uniquely establish that person's identify called as personally identifiable information (PII), is collected by the organisation. The organizations that collect PII are responsible to protect it. The PII may consist of the following information of the employee:

- name;
- date of birth;
- father's name;
- biometric records (fingerprint, face, etc.);
- medical records;
- educational records;
- financial information; and
- employment information.

The Information Technology Act of India (IT Act 2000)

IT Act, 2000 focuses on three main highlights:

- Providing legal recognition to the transactions which are carried out through electronic means or use of Internet.
- Allow the government departments to accept filing, creating and retention of official documents in the digital format and
- To amend outdated laws and provide ways to deal with cyber crimes.

Objectives of IT Act 2000: The following are the objectives of IT Act 2000

- To give legal recognition to electronic transaction done by electronic way or use of internet.
- To give legal recognition to digital signature for accepting any agreement.
- To provide facility of online filling documents relating to school admission or registration in employment exchange.
- According to I.T. Act 2000, any company can store their data in electronic storage.
- To stop computer crime and protect privacy of internet users.
- To give more power to IPO, RBI and Indian Evidence act for restricting electronic crime.
- To give legal recognition for keeping books of accounts by bankers and other companies in electronic form.

Importance of the Information Technology Act

In the perspective of e-commerce in India, the IT Act 2000 is important milestone in the following aspects.

- The email is now a valid and legal form of communication in our country that can be duly produced and approved in a court of law.
- Digital signatures have been given legal validity and sanction in the Act.
- Companies are now able to carry out electronic commerce using the legal infrastructure provided by the Act.
- The Act allows Government to issue notification on the web under e-governance.
- The Act enables the companies to file any form, application or any other document with any office, authority, body or agency owned or controlled by the appropriate

Importance of the Information Technology Act

- Government in electronic form by means of such electronic form as may be prescribed by the appropriate Government.
- The IT Act also addresses the important issues of security, which are critical to the success of electronic transactions. The Act has given a legal definition to the concept of secure digital signatures that would be required to be passed through a system of a security procedure, as stipulated by the Government at a later date.
- Under the IT Act, 2000, it is possible for corporate to have a statutory remedy in case if anyone breaks into their computer systems or network and causes damages or copies data. The remedy provided by the Act is in the form of monetary damages, not exceeding Rs. 5 crores.

Amendments to the Information Technology Act

IT Act Amendment 2008 has broadly covered the following aspects.

- Liability of Body Corporate towards sensitive personal data,
- Identity Theft,
- Spamming and Phishing,
- Introduction of virus, manipulating accounts, denial of services etc, made punishable,
- Cheating and Stealing of computer resource or communication device
- Cyber Terrorism,
- Child pornography,
- Intermediary's liability,
- Surveillance, Interception and Monitoring,
- Cognizance of cases and investigation of offenses,
- Security procedures and Practices.

Summary

In this session, you have learnt about the IT Practices.

Project Coordinator : Dr. Dipak D. Shudhalwar

Assistance

Mr. Jayant Mishra

Joint Director
PSS Central Institute of Vocational Education
Shyamla Hills, Bhopal – 462013 , Madhya Pradesh, India

E-mail: jdpsscive@gmail.com
Tel. +91 755 2660691, 2704100, 2660391, 2660564
Fax +91 755 2660481
Website: www.psscive.ac.in