Socio-technical System

Privacy Standards


This source covers issues of worker privacy and surveillance in the workplace. It studies both the principles & practices bearing on the interaction of computers, other new technologies, & the law.


This is an overview of privacy in contemporary America. It covers legal cases, legislation, individuals, terms and technology among other things. A large range of topics from things like DNA databases, wiretapping, identity theft, and internet/email privacies provide a context for these issues that have gained increasing amounts of attention in recent U.S history. The text highlights the right to privacy as evolving, along with the broader ethical issues surrounding it.


This gives a brief overview of two primary concerns when comparing employee privacy issues in the EU and US: workplace monitoring and background checks. It introduces us to some important policies and helps us direct further research into those topics, especially workplace monitoring.


A new draft on the regulation of data protection is introduced in the European Parliament to be voted on 20 and 21 February by the Committee of Employment and Social Affairs. The proposal exempts most SMEs (Small to Medium Enterprises), specifically companies with less than 250 employees from submitting to requirements.
Unlike the United States, the EU allows its citizens to obtain copies of records held about them by companies and institutions. The proposed new rules to the EU’s old privacy laws from the directive in 1995 would standardize data protection across all EU member states. The proposal would subject companies that violate the rules to penalties of up to 2 percent of their annual global revenue.

**Android**


ZXing (pronounced "zebra crossing") is an open-source, multi-format 1D/2D barcode image processing library implemented in Java. This webpage gives a step by step for downloading it into eclipse and offers some troubleshooting tips. However, I don’t think we will need to use this software if we use an android phone that already has a pre-installed QR code reader or something. On the other hand, if we did use this software to implement a barcode reader it would probably allow us to use a cheaper device which would be more optimal for the customer.

This article gives an overview of RFID technology and its slow adoption since the 80s. It offers three different perspectives relevant to RFID deployment and explores its uses and benefits while also touching on other relevant aspects like security and cost. The paper also focuses on RFID’s impact on groups like the organization, the marketing function, and the customer.

This work describes RFID/NFC, and QR Code technology and the APIs (Application Program Interface) required for implementing them. Additional projects are described demonstrating the usefulness and functionality of easy smartphone-user interactions. It also lists some android phones with pre-installed QR code readers.

Ethical Issues

Privacy

This source gives a basic overview of privacy issues in the socio-technical context.


Essentially everything we would need to know about computers, the internet, and the workplace and how they combine legally. Some reading on this is a must at least to check ourselves in our implementation of a product that will potentially be used all over the nation.

Monitoring

Electronic performance monitoring is critically discussed in conjunction with considerations of organizational rights including privacy, health, property. Distinguishing the different forms of monitoring, surveillance, computer monitoring, and eavesdropping, Ambrose et. al create rules for designing a monitoring system which considers moderation, performance standards, and disclosure.

A critical debate on the ethical issues of electronic performance monitoring on issues including privacy, stress, job satisfaction, and quality of life. A solution is proposed centered around communication in system design and implementation to satisfy both parties.


In order to promote fairness and organizational justice with the implementation of computer performance monitoring, Alder and Ambrose propose an integrated model and procedures based on constructive employee feedback.


Martin and Freeman raise common concerns with employee monitoring relating to economic, legal, and ethical issues for which moral consideration should be taken in managerial positions. The arguments include productivity, security, liability, privacy, creativity, paternalism, and social control. Proposed is a suggested inquiry into these topics.


McNall and Roch research the different types of electronic performance monitoring and control systems (EPMCSs) and how each type addressed fairness and privacy concerns. Computer monitoring may be procedurally just and more intrusive, but direct observation is interpersonally just and less intrusive. The considerations in designing an EPMCO for an organization are discussed.

**Design**

**Prototyping**

This paper by Carr and Verner describes many interesting ideas in prototyping and concept evolution specifically with respect to software design. This should be helpful as an entry point for continued research into effective prototyping.


This source is useful because our client expects a prototype and this source describes prototyping and different prototyping activities, as well as discuss a range of support available for interaction design.

**Employee Centered**


A study into monitoring, feedback, and goal setting and its effect on employee performance. Specifically, do employees perform better when monitored, and how does this relate to workplace stress?


A study into employee reactions to monitoring with feedback by Alder and Ambrose reports on the effects from feedback on performance, fairness, and employee satisfaction. Consideration into feedback control, constructiveness, and medium demonstrated that feedback constructiveness predicts monitoring fairness which correlates to fast performance and satisfaction.

**Performance Improvements**


When implementing a performance management system, Krauss and Snyder describe the relevant issues and challenges of performance management in order to design an automated system that still satisfies its primary activity. Described are practices designed to integrate technology efficiently.

Android Implementation

Some more reading on UI design. This should be helpful in coming up with a way for employees to interface with our program efficiently and safely, so as not to be distracted from their work.


This book, Programming Android, is intended to give us help in programming our demo and perhaps a final project for our client. Although we all have great experience in programming for Android, there are sections on privacy and authentication in this book that will be very helpful when considering a recommendation for employee authentication. In addition, design principles from this book will be particularly helpful in creating a workable user experience, one that will improve workplace productivity, not slow it down.