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In Search of Code Ethics Principles for IT Professionals in Indonesia

Carlia Isneniwati
Id-SIRTII/CC, Jakarta, Indonesia
Carliacm@gmail.com

Abstract

A type of standard problem in computer ethics occurs because there is no policy about how computer technology should be used. Computers are provided to us with new capabilities and giving us a choice of use. Frequently, not only a policy that gives direction in this situation, the existence of a policy has the same function. A primary goal of the Computer Ethics is to explain what we should do in these circumstances, for example, to formulate a policy that aims to direct our activities. Of course some ethical situations are suitable for individuals and some for community. Computer ethics includes consideration of both individual and community to user ethics of computer technology. Computer ethics include (1) identification of the cause of the gap in policy; (2) clarification of the concept which is chaotic; (3) formulate policies for users of computer technology; and (4) ethics justification such as policy.

Keywords: Computer Ethics; IT Professionals

1. Introduction

Technology is created to help humans to cope with their physical limitation. Whether we realize it or not, act of violation starts to occur. It starts with, for instance, copying contents of a website illegally to hacking, carding and so on. Regulations to deal with violations need to be established. The regulation will be effective if the community obeys the regulation and is recognized as a type of limitation to regulate someone’s behaviour. Every community has their own definition about what is right and what is wrong and every community has their own way to develop and evolve them among the members. To find out what is the right or wrong doing in a community, every individual has to have ethics to answer the question.

2. Research Problem

The author conducted interview with Mr. Teddy Sukardi and Mr. Djarot Subiantoro, both well-known IT experts in Indonesia. They were asked about IT professionals’ code of ethics. Subsequently, the conclusions from mentioned critical points are:

- There is no code of ethics for IT professionals in Indonesia.
- Violations of IT Ethics by IT professionals have severe consequences that may impact the reputations of individuals as well as the organizations that they belong to.
- There is an urgent need for a code of ethics for IT professionals in Indonesia.
d. It is believed that having an IT professionals’ code of ethics in place would help decrease the problems of IT ethics implementation in Indonesia.

Based on the critical points above, the purpose of this study is to design a basic framework of code of ethics for IT professional in Indonesia.

3. Research Methodology

This study uses a combination of research methodologies, including qualitative and interpretative research. These methodologies are chosen because they are believed to be suitable for studies in ethics. Further explanation about both methodologies and the steps of the research process are explained below.

3.1. Hermeneutics

The data obtained from the interviews of the group discussions is presented in narrative form based on the textual data. Below, pattern similarity is done to form a model.
3.2. Interpretive Process

The Interpretive Process consists of three steps as described figure 3. The first step is the identification process through Focus Group Discussion (FGD) or Interview, and the outcome is the definition of the research problem. Second step is the process to determine the First Draft of ITP Ethics Framework Design through FGD. The final step is the verification process through Expert Judgement resulting the Final Draft of the research.

4. Research Design and Experiment

The research design and experiment conducted by the author used to formulate the framework design of IT Professional Ethics in Indonesia is based on four factors: the theory of ethics, benchmarking to best practices, macro perspectives and conditions in Indonesia. The theory of ethics may not be as dynamic as the other three factors.
4.1. Theory of Ethics

This is the summary of theory of ethics used in this research. Table 1 below shows the details.

Table 1. Summary of Theory

<table>
<thead>
<tr>
<th>Author</th>
<th>Main issue</th>
<th>Field</th>
<th>Implication to this issue</th>
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<tbody>
<tr>
<td>Martin, 1993</td>
<td>Ethics as “the discipline which can act as the performance index or reference for our control system”. Ethics will provide some sort of restriction and standard that will govern human interaction within the social group. In a sense that is specifically associated with the art of human interaction, this ethic then was prepared in the form of rules (code) systematically written deliberately by moral principles that exist. Also ethics is required to function as a tool to judge all sorts of action that deviate from the ethical code of conduct or a reflection of what is called &quot;self-control&quot;.</td>
<td>Ethics definition</td>
<td>As the basic of theory</td>
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<tr>
<td>Wignjosoebroto, 1999</td>
<td>In professional environment, ethics is controlled by a built in mechanism in the form of professional code of conduct. This is assessment from the inside by colleagues</td>
<td>Professional ethic definition</td>
<td>As the basic of theory</td>
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and fellow professionals to protect from all forms of abuse and misuse of expertise. Professionals’ ethics include standard of behavior expected of professionals such as honesty, integrity, transparency, accountability, confidentiality, objectivity, respectfulness, obedience to law, and loyalty. This standard of behavior applies to the personal level as well as the organization level.

<table>
<thead>
<tr>
<th>Walter Maner, 1976</th>
<th>Computer ethics as a branch of ethics that studies the implementation issues of ethics &quot;aggravation, transfer or creation of computer technology&quot;</th>
<th>Computer ethic definition</th>
<th>As the basic of theory</th>
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</thead>
<tbody>
<tr>
<td>Deborah Johnson, 1985</td>
<td>Computer ethics is a field that examine the computer, &quot;It is a new version of standards moral issues and moral dilemmas, worsening old problems, and focuses us to apply ordinary moral norms in uncharted things&quot;. Unlike Maner, Johnson did not think that the computer created a whole new problem in ethics, but rather</td>
<td>Computer ethic definition</td>
<td>As the basic of theory</td>
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provided a "new thinking" to issues which are well known such as ownership, power, privacy and responsibility.

| Krystyna Gorniak, 1995 | Naturally the computer revolution indicates that ethics in the future will get a global character. It will be globally in a vacuum chamber, since it covers the whole world, it will also become global in the sense of all human relationships. In the future, the rules of computer ethics should be respected by the majority of mankind on this earth. In other words, computer ethics character will become universal; it will become global ethics. The computer revolution will end in a new ethical system; it will become global and naturally will cross cultural boundaries. New ethics in the information age, according to Gorniak, will replace ethical theories which are narrow in nature like Bentham and Kant - the theory is based on the relative relationship which covers cultures in | Computer ethic in the future | As the basic of theory |
Deborah Johnson, 1999

We will be able to say that computer ethics has become ordinary ethics and common ethics has become computer ethics. Johnson often maintains the view that computer ethics focuses on new moral issues, with the assumption that computer ethics is compared with the replacing theories such as Bentham and Kant. Current ethical theories and principles according to Johnson, will remind us to rocky foundation of ethical thought and analysis, and the computer revolution will lead to ethical revolution.

<table>
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<tr>
<th>4.2. Focus Group Discussion</th>
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<tr>
<td>In this study discussion were conducted in order to obtain the opinions from IT experts in Indonesia. The experts were given questions about issues related to regulations, ethics and their implementation. Subsequent to the focus group discussions, the notes were given to the experts for confirmation. The following are the results of the discussions after the confirmation and the text in bold are the keywords.</td>
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</table>

1) What is your opinion about regulations in cyberspace?

| Dr. Rudi Lumanto | In reality regulations are always behind the actual requirements and that is why regulations always need to be adjusted accordingly. Code of ethics in other professions outside IT are normally created by associations and based on certain specifications related to the profession. Some concept for the cyber space already can be found in the books “the digital age” and “the world is flat”. We do not formulate special regulations for cyber space. |

| Deborah Johnson, 1999 | We will be able to say that computer ethics has become ordinary ethics and common ethics has become computer ethics. Johnson often maintains the view that computer ethics focuses on new moral issues, with the assumption that computer ethics is compared with the replacing theories such as Bentham and Kant. Current ethical theories and principles according to Johnson, will remind us to rocky foundation of ethical thought and analysis, and the computer revolution will lead to ethical revolution. | Computer ethic in the future |
but eventually we will finally also come up with regulations for cyber space. One example is of Bit Coin, a digital currency, currently being used on the internet that has been a breakthrough in existing internet and financial norms.

Bisyron Wahyudi  
M.T.I.

It is required because cyber space creates connections for many people. Like in real life, civilization need rules in order for people to respect one another and interact based on certain norms.

Didik R Partono  
M.T.I.

Cyberspace has a few unique characteristics. One of them is the ability of people to interact with one another without actually having to meet face-to-face. In cyberspace people also build communities that represent similar communities in the non-cyber world.

These characteristics enable a lot of improvements in the quality of life. They include socializing, learning, creating, and working in teams to produce products and to conduct activities.

2) Are rules or code necessary? Why?

Dr. Rudi Lumanto

Naturally regulations should be there like in the day-to-day rules of traffic and transportation. Finally we end up following the regulations, even though violations will also be there. The same applies in cyber space. There will be different interests for different people. That’s why perhaps there needs to be regulations for the content of cyber space. Most importantly other people’s interests are not disturbed.

Bisyron Wahyudi  
M.T.I.

It is required because cyber space creates connections for many people, Like in real life, civilization need rules in order for people to respect one another and interact based on certain norms.

Didik R Partono  
M.T.I.

Yes rules and code are necessary. Like in the real world people can be trusted but they can also misuse the trust, especially in cyberspace when we do not know the people in person nor also meet them face-to-face, the potential for abuse and misuse exists. In cyberspace one person activity can easily impact the lives of many people because there is no boundary of space, time, and geography. That is why the potential negative impact of abuse can be quite high, depending on the type of activities and the range or coverage on the particular action. The other reason why rules and code are necessary, because law enforcement in cyberspace, even though important, has many
limitations; law enforcement requires evidence and in cyberspace that would be digital evidence. Obtaining and presenting digital evidence in the court of law can be complicated and very challenging. That is why the other important tools to control the citizen of cyber space beside the laws is ethic, including professionals’ ethics.

3) What about the value and the sovereignty of a space/place? Is it also necessary? Why?

Dr. Rudi Lumanto  
**Sovereignty is equal to identity.** In cyber space we need to firstly define sovereignty.

Bisyron Wahyudi M.T.I.  
**Sovereignty is required, because it belongs to the nations.** So countries have the ability to implement regulations and sanction those who do not follow the regulations. Actually the regulations can be combined and put together with the regulations of real life, meaning **there need not be separate regulations**, but because cyber space has different characteristics the way the regulations are **executed can be different.**

Didik R Partono M.T.I.  
Value and sovereignty of cyberspace is also necessary because for many people cyberspace is the same as non-cyberspace if almost of your time well day to day activities is conducted in cyberspace, like what is experienced at present than cyberspace will be important and of strategic value.

4) There are some behaviour that can cause an economics aggressive disturbance. Here are the list of some of those behaviour:
- Spamming
- Advertising, Promotion and Demand
- Secondary Use of Data
- Serious Plagiarism
- Abuse of Intellectual Property Rights (Copyright Violation)
- Hacking
- Viruses and Worms
- Security Breach

Is it necessary to have IT ethic for each behaviour? Why? (Describe the reason for each behaviour)

Dr. Rudi Lumanto  
Yes, indeed. In real life it is actually the same where for **criminal conduct it does not come into the dimension of ethic** because these problems already have regulations to handle it.

Bisyron Wahyudi M.T.I.  
Yes, **hacking initially was a positive and creative thing and not damaging.** Like hacking at first viruses was also
not intended to damage, but was later used by bad people. Security breach is clearly an offense to security regulations.

<table>
<thead>
<tr>
<th>Didik R Partono</th>
<th>Spamming creates productivity issues for victims and also can be misuse to distribute malware. Hacking activities can also create many problems in IT infrastructure and can be used by criminals to conduct unlawful activities such as fraud, identity theft, etc.</th>
</tr>
</thead>
</table>

5) By referring to these components: honesty, integrity, transparency, accountability, confidentiality, objectivity, respectfulness, obedience to law, and loyalty, what is your opinion about framework of ethics for IT professional especially in Indonesia, compared to other professional association or other country’s IT professional organization that already have a professional ethics?

<table>
<thead>
<tr>
<th>Dr. Rudi Lumanto</th>
<th>Yes, those are universal norms and morals that must be implemented in daily life, especially for code of IT professional ethics.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisyron Wahyudi</td>
<td>Ethics is about morals that relate to individuals. In developing countries punishment is still required.</td>
</tr>
<tr>
<td>Didik R Partono</td>
<td>Special focus is needed to address the areas of accountability, confidentiality and objectivity. Confidentially is one important area because IT professionals will have access to a lot of software, hardware proprietary of organizations/companies as well as private information that need to be protected.</td>
</tr>
</tbody>
</table>

4.3. Summary

The focus group discussion came up with the following points
a. On Cyber Space:
   Cyber space creates connections for many people, to respect one another and interact based on certain norms, like in real life, civilization needs rules in order for people to respect one another and interact based on certain norms. There needs to be regulations for content of cyber space since regulations already exist outside cyber space
b. On Sovereignty:
   Sovereignty is equal to identity, and is required because sovereignty belongs to the nation, meaning there need not be separate regulations. But because cyber space has different characteristics, the way the regulations are executed can be different.
c. On Economic Disturbance:
   d. Criminal conduct does not come under the dimension of ethics. Nevertheless criminal conduct can also be prevented by implementation of ethics by IT
professionals. Some of the behaviour that creates economic disturbance include hacking, spamming, creating and distributing of malware, and security breach.

e. On Components of IT Ethics:
The typical component of IT ethics are honesty, integrity, transparency, accountability, confidentiality, objectivity, respectfulness, obedience to law, and loyalty. Those are universal norms and morals that must be implemented in daily life likewise for code of IT professional ethics. Emphasize should be given to accountability, confidentiality and objectivity, because these components are important in the field of IT professionals. The specific professional’s ethics should follow the general IT professional’s ethics.

f. Who should formulate the IT professional’s ethics?
As we have learned from other countries, as well as in Indonesia, the ethics should be formulated by the communities of professionals, normally in the form of their respective association. This approach will also be useful for successful promotion, implementation and further development of the ethics.

5. Framework of Ethics for IT Professionals in Indonesia

IT Professional Ethics is formulated or developed from values, norms and culture existing in a community. As professional ethics has to do with a certain area or profession, IT professional ethics also need input from information technology characteristics and developments. The formulation and development is normally done by associations related to the profession. IT professional ethics will be used firstly by the professionals within the IT community itself. Secondly the stakeholders will also benefit from the IT professionals ethics implemented. The stakeholders will be the IT users, consumers, organizations that rely on IT to perform their day-to-day business including the government that provides public services. The government as a regulator will also influence and use IT professional ethics as a reference to formulate law and regulations.
6. Expert Judgement

This study uses expert judgment as a method to verify findings and make final conclusions.

This was done by forming a panel discussion of that consists of:

1. Ir. Aswin Wirjadi, Chairman of CIO Forum of the Indonesian Bank Association (Perbanas).
2. Prof. Dr. Richardus Eko Indrajit, Chairman of Indonesia IT Computer Higher Education (APTIKOM).
3. Dr. Eko Budiardjo, Chairman of Indonesian IT Professional Association (IPKIN).

The opinions, comments and suggestion from these experts are described below:

<table>
<thead>
<tr>
<th>Expert</th>
<th>Opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aswin Wirjadi</td>
<td>IT Professional Ethics is important to have and to be used as a reference for IT professionals. He is surprised that the Indonesian IT communities do not have any professional ethics to refer to. He believes that <strong>when norms, values and the culture is already formed to support IT Professional Ethics, then the market and IT users will immediately benefit from the IT Professional Ethics.</strong> The influence of culture Professional ethics is not easy to define.</td>
</tr>
<tr>
<td>Eko Indrajit</td>
<td>IT Professional Ethics are <strong>influenced by two major types of external factors, which are tangible and intangible external factors.</strong> The tangible external factor includes government regulations, technology changes and the global market. The intangible external factors are value, norms and culture. This will make IT Professional Ethics be dynamic due to the many factors that influence them.</td>
</tr>
<tr>
<td>Eko Budiardjo</td>
<td>The feedback and claim process from IT beneficiaries/users will need to go through a body or organization and also require some formal process. The body in the professional communities, including professional associations, <strong>may be a form of “Board of Ethics”</strong> that monitors professional conduct, and where applicable give protection, judgment and sanctions. <strong>The IT Beneficiaries can be represented by consumer protection organization that can address claims and feedback to the board of ethics of the respective professional community.</strong></td>
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Based on the panel conducted, it can be concluded that IT professional ethics is important. The experts’ panel also provided insight suggestions on how to develop ethics, factors that influence ethics, how ethics will benefit IT professionals as well as IT users/beneficiaries. More details are described in figure 8 below.
7. Conclusion

The conclusion of the study on Ethics for Information Technology Professionals: The Framework Design within Indonesian Context is as follows:

1. The Need to Have IT Professional Ethics in Indonesia
   The IT profession, as other professions, requires ethics to be used as reference for day to day practices. This is important considering how role of strategic information technology takes part in almost every aspect of our lives and the role that IT professionals play in this respective area.

2. The Existing Condition on IT Professional Ethics in Indonesia
   Implementation of IT ethics in Indonesia is not where it should be. Many challenges exist in making IT ethics part of IT practice especially by IT professionals. One particular challenge is that there are no existing documents or write up that describes IT ethics for Indonesian professionals.

3. Major Components of Ethics Framework for IT Professional in Indonesia
   The major components of ethics framework design for IT professionals in Indonesia will be:
   a. IT Professional Associations in Indonesia
      IT professional ethics is more suitable to be developed by IPKIN. Subsequently the IT professionals’ ethics can be used by other specific associations, such as IKTII, as a reference for more specialized ethics.
b. Ethics Formulation and Updates
   Since IT ethics is dynamic due to the factors that influence it, respective associations need to periodically review it and make necessary updates accordingly.

c. IT Professional Ethics Implementation by IT Professionals
   The ethics will be binding to the conduct of IT Professionals and will be used as reference for ethical conduct measurement. The ethics can be further promoted and endorsed in day-to-day life by all stakeholders. IT Professional’s Ethics Implementation by the IT Users/Beneficiaries.

8. Recommendation

- IT professional association defines the ethics in their respective areas and forms it in a readable document to be further used as a reference by their members.
- One association in IT, namely IKTII, already has an organization structure to handle ethical issues. This body can be activated to formulate, promote and uphold IT ethics.
- Subsequently this IT ethics formulation and implementation can be used as a reference by other IT associations to implement IT ethics.
- IT ethics can also be formulated for all IT association in general format as a guideline for further detailed or specific ethics development. For this IT associations will have to sit down and work out an agreement on what should be the general IT ethics for Indonesia.
- The government may facilitate this initiative and also take part in the promotion of it. It is recommended that the association consider the following components to be part of the IT ethics formulation, which are honesty, integrity, transparency, accountability, confidentiality, objectivity, respectfulness, obedience to law, and loyalty. Each component will have to be described considering specific law, regulation, values, conditions, culture, as found in the respective professional environment in Indonesia.

References