PROCEEDING
International Industrial Informatics Seminar 2009
Book 2

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Saturday, August 15, 2009
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Alamat Redaksi: Program Studi Teknik Informatika, Fak.Sains & Teknologi UIN Sunan Kalijaga Jl. Laksda Adisucipto, No.1 Yogyakarta Telp: (0274) 519739, Faks. (0274) 540971; Website: www.iis09.com, E-mail: anshari@yahoo.com/secretariat@iis09.com

Penerbit: SUKA Press, UIN Sunan Kalijaga, Jl. Laksda Adisucipto No.1 Yogyakarta. Telp.: (0274) 7174843. Fax.: (0274) 7174843. e-mail: aroel_ezain@yahoo.co.id
Foreword

Assalamu'alaikum Wr. Wb.

On behalf of the Organizing Committee of the 1st International Industrial Informatics Seminar (IIS09), it is a great pleasure for me to welcome you to visit our uniquely designed campus State Islamic University Yogyakarta for attending this seminar. Around 130 selected papers will be presented throughout the seminar. I am sure you will find this seminar as an excellent forum for fruitful discussion that will provide us with interesting program and enjoyable activities.

The IIS09 will include one plenary session and a number of theme-based tracks. The seminar will be divided into 2 sessions. We wish you can find the one that most suit to your interest. We also hope that participants from overseas and Indonesia can have a good atmosphere for information sharing to foster a better research network among others.

The seminar would have not been possible without the contributions and hard works from all of you, especially our keynote and invited speakers, the authors, reviewers, chair persons, advisory committee, as well as our Technical Program and Organizing Committee. May I take this opportunity to express my sincere appreciation to all of them.

I do hope that all of you would find this seminar interesting, stimulating, beneficial and enjoyable. Although it will only be a one day seminar, I wish you could spend some times to explore and enjoy our historical city of Yogyakarta, the education and tourism destination city in Indonesia.

Wa alaikum Wr. Wb.

Yogyakarta, August 15, 2009

Prof. Dr. H. M. Amin Abdullah
Rector of Sunan Kalijaga State Islamic University
SELLING INFORMATION SYSTEM EVALUATION

Hj. Henny Hendarti, S.Kom., Dr., Ernawati
henny@binus.edu

Abstract - The company which became the object of research was a computer selling agent in providing accessories, hardware, software, and services for computer. The aims of the research are to identify the problems linked to selling information system in the company and find out the solution problem solving being faced by the company; the research methodologies conducted were book review, field studies and interviews, check list, and documentation reviews. From the evaluation, found out the advantages and the disadvantages of the company which affect the security of asset, data integrity, and selling information system performance.

To sum up, the company must improve the selling information system in order to support the company's selling activities.

Keywords: Information System Audit, Evaluation, Accounting Information System, Selling.

Background
Data processing ability transition from manual to electronic system enables the company to process the data and produce qualified information in which the information is the main key in decision making process and the company's development.

To produce information for the company, it needs a reliable information system and all persons work in the company therefore, the information system is a need that must be fulfilled by the company in the framework to support business process to the company's achievable target:

The company which becomes the object of research is a selling computer agent which providing accessories, hardware, software and service for computer. To support the company's activities, it needs information system and sufficient internal control structure so that the selling of goods is satisfied by the company.

Coverage
The research coverage's which will be audited are as follows:
1. To evaluate Cash Selling Information System in the company including:
   - Selling department
     - Beginning from the customer's goods acceptance to making invoice and trip letter.
   - Warehousing department
     - Beginning from packing process to forwarding.
   - Delivery department.
   - Beginning from goods delivery to the customer to the process of payment to departments of selling and finance based on the goods are delivered.
2. Finance department
   - Making records related to selling transactions
3. Evaluations method used is Audit Around the Computer; that is, evaluation towards the quality and match between input document and output record of application system.
4. General control which is going to be discussed is Security Management Control.
5. Application control which is going to be discussed includes
   - Input Controls
   - Boundary Controls
   - Output Controls

The Aim of the Research
1. The research is aimed at:
   1. Evaluating the process lines of Selling Information System process beginning from the customer's order, input document to output record.
   2. Identifying problems related to the company's Selling Information System to produce the company's auditing report of Selling Information System.

Utilities from the research
The utilities from the research are:
1. To know the weaknesses available in the Selling Information System being performed in the company.
2. To know the amount of risk (low-medium-high) in the auditing finding by using a risk measurement table to measure the risk.

Research Methodology
1. Book Reviews
   The research was conducted by studying some scientific books and various literatures related to the Selling Information Selling Audit.
2. Field Studies
   Field studies were conducted by:
   a. Interviews
      By making interviews to the related persons to obtain general views about the company and the problems related to the writing.
   b. Check list
      By making question list for being answered by the company's management, especially, to those who were related to the Selling dept.
   c. Observation

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By making direct observation to the items being researched in the company.

d. Documentation Review
   By inspecting the company’s transaction documents related to the selling as the finding or auditing evidence.

The Meaning of Evaluation
According to Kamus Besar Bahasa Indonesia (2002), “evaluation is a process of systematic evaluation including determining the value, attribution, appreciation, introduction to the problem and solution to the problems over the problems found.”

Information Characteristics
According to COBIT (Control Objective for Information and Related Technology) (4.0, p11) in accordance with the organizational business target, COBIT determines seven qualifications for information criteria which must absolutely be owned by every output from the information technology. The seven information qualifications are:

1. Effectiveness: Information relevance towards business process by punctual, correct, and consistent delivery.
2. Efficiency: Qualified Information Supply by using optimal resources both economical and productive.
3. Secretary: Sensitive Information Protection towards unauthorized access.
4. Integrity: Information accuracy and originality when it is needed.
5. Availability: Information availability when it is needed.
6. Match and Loyalty: Loyal to the law, rule and agreement related to business.
7. Reliability: Accurate Information for the management for the record.

The Meaning of Information System
According to Turban, Rainer, Potter (2003, p.15) that Information is collecting, processing, keeping, researching, and spreading information for specific purposes which processes and produces output delivered to the users or its own system.

The Meaning of COBIT
COBIT is a framework and a set of tools which can help management auditor and user is bridging gap between business risk, control, and IT technical problems and communicating it to the stakeholder.

COBIT Framework
The Information System Audit and Control System Foundation (ISACA) are developed for COBIT framework. COBIT is a framework which can be applied generally for information system security and control used for IT control.

The Framework Include:
1. Managing security and control standardization used in the IT environment.

2. Ensuring the users for the security and controls available are reliable and qualified.
3. Proving by the auditors that their opinions for internal security and advising in IT security and control.

The Meaning of Auditing
According to Mulyadi (1998, p.7) “Auditing is a systematic process to obtain and evaluate objective evidence about statement of activities and economic events which is aimed at determining match level between or among the statements by approved criteria, and presenting the results to the authorized users”.

Auditing Instrument
According to Weber, R (1999, p.789-801), Auditing instruments used in collecting data are as follows:

a. Interviews
   - In auditing, the auditor uses interview technique or interviews with some reasons.
   - System analyst and programmer who design and implement the application system can be interviewed that the auditor can understand better for the system functions and controls.
   - Users can be interviewed to explain the system quality they use.
   - Organizational controls can be interviewed to identify the system which is critical found in the organization.

b. Check List
   Check List is making question list for the related persons in the company, especially selling department to know the real condition.

c. Observation
   Observation is the way to examine by using the five senses, specially the eyes which is performed many times for a certain time to prove a condition or a problem.

The Meaning of Information System Auditing
According to Weber, R.(1999,p.10), Information system auditing is the process of collecting and evaluating evidence to determine whether a computer system safeguards assets, maintains data integrity, allows organizational goals to be achieved effectively, and users resources of efficiently.

The Aims of Information System Auditing
According to Weber, R.(1999,pp.11-13), Information Auditing System is aimed at

1. Improving the company’s asset security objectives such as hardware, software, human resources, and data files must have a good internal control system in order to prevent abuse of the company’s asset.
2. To improve data integrity objectives.
   Data integrity is a basic concept of information system. Data have certain attributes such as completeness, correctness, and accuracy. If data integrity is not maintained well, the company will not have the right records and it will lose of profit.
3. To improve system effectiveness objectives
The company’s Information System Effectiveness have an important role in making decision. An information system can be called effective if it is based on the user’s need.

4. To improve System Audit Categories
   A system can be called efficient if the information system can meet the user’s need by minimal information resources.

Information System Auditing Methods
According to Weber, R.(1999,pp.56-57), Information System Auditing consists of
1. Auditing Around the computer
   Auditing around the computer involves the acceptance of auditing opinions during examination and management control evaluation; then input and output are only apply method to obtain or reach the cheapest cost for auditing.

2. Auditing Through the computer
   For many department or parts, auditor involves in the method of auditing through the computer must be used in the logical processing cases and the presence of control in the system.

3. Auditing with the computer
   Auditing with the computer is an auditing approach by using assistance in various forms such as report typing, scheduling, auditing working plan preparation, examination paper work preparation, and many other.

The Meaning of Internal Control System
According to Weber,R. (1999,p.35), Control is a system to prevent, detect, and correct the events appeared in the transaction from series of unauthorized processes, inaccurate, redundant, inefficient, ineffective.

Based on the understanding above, the control can be classified into three parts.
1. Preventive Control
   The control is used to prevent the problem before it appears.

2. Detective Control
   The control is used to find problem related to the control as soon as the problem appears.

3. Corrective Control
   The control is used to improve problem found in the detective control. It involves procedures to determine the causes of the problem appears, modify processing system. Therefore, it can prevent the same events or incidents in the feature.

Application Control
The application controls consist of
1. Boundary Control
   Weber,R.(1999,pp.370-405), stated that boundary subsystem builds relationship between the computer system user candidates and the computer system itself. The control in the boundary subsystem has three purpose:
   a. To ensure that the computer users have authority.

b. To ensure that the identities given by the users are right.

c. To limit actions which can be made by the users to use computer when they make authorization.

2. Input Control
   According to Weber,R(1999,pp.420-456) component in input subsystem are responsible to carry data and instructions into information system. Data can be inputted into information system by various ways.

3. Output Control
   According to Weber,R(1999,pp.615-646), output subsystem provides functions which determine the data content which will be supplied by the users the method as data can be formatted and presented for the users, and the method as data can be improved and produced by the users.

Security Management Control
Weber,R.(1999, pp.244-274) thinks that the administrator of Security Information System is responsible to ensure that the information system assets is secured. The asset is secured if the possibility of losing is in the accepted level.

- The Physical Assets are personnel, hardware, facilities, documents and suppliers.
- The Logical Assets are data or information and software (system and application)

Finding matrix in the Security, Management control

<table>
<thead>
<tr>
<th>No</th>
<th>Finding</th>
<th>Impact</th>
<th>Recommendation</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No regular training</td>
<td>If there regular training for the employees about security awareness, it will affect the company’s asset be threatened.</td>
<td>the need of regular or periodical trainings about the important of the company’s asset both physical and logical is then responsibility of all members in the company</td>
<td>Low</td>
</tr>
<tr>
<td>2</td>
<td>There is no question about whether the alarm is in function</td>
<td>The company does not know well about the fire alarm function that if there is fire, the building cannot send message to the company which Will or can make the company lose.</td>
<td>The company is suggested to ask about the function of the fire alarm whether is functions well or badly.</td>
<td>High</td>
</tr>
</tbody>
</table>
### Finding Matrix Limit Controls

<table>
<thead>
<tr>
<th>No</th>
<th>Finding</th>
<th>Impact</th>
<th>Recommendation</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The absence if limitation how many times the users input the passwords.</td>
<td>If there is no limitation in inputting passwords, it can be easily guessed by trying many times till it is right.</td>
<td>the company is suggested to provide limitation how many times the users may input wrong password for there times</td>
<td>Medium</td>
</tr>
<tr>
<td>2.</td>
<td>the same passwords from times to time</td>
<td>Passwords is not changed regularly. It has a high risk to be guessed because the other persons know easily and they can enter the company's system</td>
<td>It is suggested that the company change the passwords regularly so that it cannot be abused by unauthorized persons.</td>
<td>High</td>
</tr>
</tbody>
</table>

### Finding Matrix in Output Controls

<table>
<thead>
<tr>
<th>No</th>
<th>Finding</th>
<th>Impact</th>
<th>Recommendation</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>No page numbers in the reporting plan</td>
<td>The absence of page numbers will make difficult to find the report to be examined</td>
<td>The writing of page numbers is needed for the report for accuracy</td>
<td>High</td>
</tr>
<tr>
<td>2.</td>
<td>No personnel's name who releases the report</td>
<td>Without the personnel's name who write releases the report will be difficult to find who is responsible if there is a mistake</td>
<td>The writing of the personnel's name who releases the report is needed</td>
<td>Medium</td>
</tr>
</tbody>
</table>

### Conclusion

- **Security Management Controls**
  
  There are risks such as the absence of regular of periodical trainings about security awareness and the company has not asked clearly to the building owner about fire alarm, and no UPS use and camera which is very important in securing the in company.

- **Limit Controls**
  
  There are risks of the absence of password limitation, and the password is the same from time to time.

- **Limit Controls**
  
  Input control is applied in the company but there is no procedure if there is a mistake in inputting, and no alert function if data have not been kept and no help facility in the selling application system.

- **Output Controls**
  
  Output controls in the company have weaknesses beginning from reporting plan which has not been completed in which there is no page number in the report produced, no help desk towards the report if there is a mistake.

### References


