

ABSTRACT

COBIT 5 as an IT governance framework provides a Process Assessment Model (PAM) that is part of the information system audit process to assess the capabilities of the IT governance process. In the assessment process COBIT 5 there are two important steps namely data collection and data validation. But both steps are still done by taking samples from factual data randomly to be analyzed. It can not yet represent the whole business process because there may be important data that the auditor does not take because it is not a sample data. As a result, the quality of the results of the assessment process becomes less good because it does not use the overall data of business processes in real time. Already the auditor should be able to use the entire data, as in the present era the important data of all business processes is stored in the event log. In this research, process mining with Flexible Heuristics Miner algorithm utilizes event log to get business process model which will be implemented to support the assessment process. The result of research by using event log CV. Narnia Distribution obtained a process model that has fitness = 0.983 with threshold parameters $DT = 0.6$, $LIL = 0.98$ and $L2L = 0.95$. After the process model is implemented in the assessment process obtained result of a rating level point of 63.6% (Large Achieved) and the results of potential bottleneck analysis of the results of enhancement process that can be used for the purposes of audit information system. Thus, the existence of process mining can be applied to support the information system audit process.

Keywords: *Information Systems Audit, event log, process assessment, process mining, Flexible Heuristics Miner*