

## ABSTRACT

*One of the frameworks that can be used to audit information systems is COBIT 5 which offers process assessment model (PAM). The process model assessment is usually done by collecting and validating random factual data samples, so that the results of this assessment can not be representative of the overall ongoing process. This research uses process mining by using event log to replace data collection and data validation stage in process assessment model. Process mining aims to describe the ongoing process model of the event log data automatically so that it can be compared with the standard operating procedure process flow in real time. Process mining is applied using a genetic algorithm because the resulting solution is global against event log data that contains noise. The result of this assessment process is the rating point level as a result of the comparison of the SOP process flow with the process model of the process mining and business flow analysis of the event log data. The results of this study show genetic process mining can replace the data collection stage and data validation in the process assessment model for DSS01.01 COBIT 5 domain in describing the current process model using CV Narnia Distribution event log data that containing noise, so it can be concluded that this research able to support corporate information system audit activities.*

**Keywords:** *Audit Information System, genetic process mining, process assessment model*