ABSTRACT

Determining the right university student who deserve to receive the scholarship is the important duty for BKA STT Telkom Institution. The ascription candidates of students who deserve to receive the scholarship formerly is done by using MS. Excel application manually. As the former way the results are unsatisfied, because it still use the True and False Logic Method (1 and 0) in calculation, and need longer time.

Fuzzy logic is implemented for ascription candidates of the adequate students in this final assignment. For deciding the accurate fuzzy memberships are not the easy process, by that case Genetic Algorithm being used.

From Genectic Algorithm testcases are received the fine result which is done in a population with 20 (cromosom) samples, the cross-over probability is 0.8 and mutation is 0.1. The ascription result for candidates of students who deserve to receive the scholarship by using fuzzy logic are better when it compare with manual system (MS.Excel). These results can be accepted by BKA Institution as if be represented by MR. Adiwijaya, Ssi, Msi who said that it will be used as decision support system to determine the adequate students who deserve to receive the scholarship.

Key words : *Genectic Algorithm, cross-over, roulette wheel, Fuzzy logic, Center of Area(COA).*