

A Study of the Effectiveness of the Routing Decision Support Algorithm

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Abstract—Multi criteria decision making (MCDM) methods like analytic hierarchy process, ELECTRE and multi-attribute utility theory are critically studied. They have irregularities in terms of the reliability of ranking of the best alternatives. The Routing Decision Support (RDS) algorithm is trying to improve some of their deficiencies. This paper gives a mathematical verification that the RDS algorithm conforms to the test criteria for an effective MCDM method when a linear preference function is considered.

Keywords—Decision support systems, linear preference function, multi-criteria decision-making algorithm, analytic hierarchy process.