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ABSTRAK

PENGEMBANGAN SISTEM KODEFIKASI MODEL-MODEL TOPOLOGI JARINGAN
DISKONEKTIF DENGAN TEKNIK SUPER EDGE ANTIMAGIC TOTAL LABELING
(SEATL) (The Development of Coding System of Disconnected Network Topology Models by
Super Edge Antimagic Total Labeling (SEATL) Technique)

Oleh: Prof. Drs. Dafik, M.Sc., Ph.D. NIDN. 0001016827

Arika Indah Kristiana, S.Si., M.Pd. NIDN. 0002057606

FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN

CGANT RESEARCH GROUP

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PENGEMBANGAN SISTEM KODEFIKASI MODEL-MODEL TOPOLOGI JARINGAN DISKONEKTIF DENGAN TEKNIK SEATL

Dafik1), Arika Indah Kristiana1) 1 Fakultas Keguruan dan Ilmu Pendidikan, Universitas Negeri
Jember email: d.dafik@gmail.com, arikakristiana@gmail.com

Abstract In the advance of computer networks, communication and transportation, the scalability of networks was hampered by the high latency and the lack of bandwidth as well as a security issue. Therefore, the study of the design of large interconnection networks is significantly useful. In the communication network design, the problem of a security issue can be resolved by assigning a label of network. Thus, the graph labeling is important to study. Let G be a simple graph of order $|V|$ and size $|E|$. An (a,d) -edge-antimagic total labeling of G is a one-to-one mapping f taking the vertices and edges onto $\{1, 2, \dots, |V| + |E|\}$ such that the edge-weights $w(uv) = f(u) + f(v) + f(uv)$, $uv \in E(G)$ form an arithmetic sequence $\{a, a + d, \dots, a + (|E| - 1)d\}$, where the first term $a > 0$ and the common difference $d \geq 0$. Such a labeling is called super if the smallest possible labels appear on the vertices.

Keywords: Graph labelings, network topology