

A Closeness Centrality Analysis Algorithm for Workflow-supported Social Networks

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Abstract—The purpose of this paper is to build a theoretical approach for numerically analyzing closeness centrality measures among workflow-actors of workflow-supported social network models to be formed through BPM(workflow)-driven organizational operations. The essential part of the proposed approach is a closeness centrality analysis equation to calculate each performer's closeness centrality measure on a workflowsupported social network model. In this paper, we try to develop an algorithm that is able to efficiently compute the closeness centrality analysis equation suggested from the conventional social network analysis literature, and eventually the developed algorithm will be applied to analyzing the degree of workintimacy among those workflow-actors who are allocated to perform the corresponding workflow model.

Keyword—workflow-supported social networking knowledge, ICN-based workflow model, closeness centrality analysis, organizational knowledge discovery



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