



CONTEXT-AWARE WORKFLOW MANAGEMENT FOR INTELLIGENT NAVIGATION APPLICATIONS IN PERVASIVE ENVIRONMENTS[♦]

FEILONG TANG^{1,3}, ILSUN YOU², MINYI GUO¹, SONG GUO³

*¹Department of Computer Science and Engineering
Shanghai Jiao Tong University
Shanghai 200240, China*

*²School of Information Science
Korean Bible University
South Korea*

*³School of Computer Science and Engineering
The University of Aizu
Fukushima 965-8580, Japan*

ABSTRACT—Pervasive computing is a user-centric distributed computing paradigm, allowing users to access their preferred services even while moving around. To make this vision a reality, context-aware workflow management is one of key issues because the context of pervasive applications is changing dynamically. In this paper, we propose a context model for intelligent navigation applications and then present a context-aware workflow management algorithm (CAWM) which can adaptively adjust workflow execution behaviours based on current context information. The correctness of the CAWM algorithm has been also verified theoretically by formulating it as a Petri-net model. Furthermore, the proposed context model and workflow management algorithm can apply to other applications by simply revising the corresponding context structures only.