

OBJECT ACTIVITY MODEL APPROACH TO GEOINFORMATION PROCESS

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ABSTRACT

Geo-processes might have been divided into several phases and detailed processes in governments and concerned authorities. These multi-level steps have carefully controlled map-making processes and checked its accuracies. A great number of national mapping centers are striving to rationalize geo-business processes through certain methodologies or business modeling.

Two different research concerns and methodologies between geo-process and business process would lead to less mutual research and cooperation. In addition, many process models and workflow data models are based on concept of business and manufacturing process that could not fully expound geo-activities and their changes coming from humans, natural factors, machines, physical features, etc.

We focus on geo-activity that can be characterized as a set of subclass of process by introducing salient six dimensions of who (the individual and collective actor) are doing what (activity objective), where (activity place), when (temporal validity of activity), why (activity reasons) and how (the process and effect of putting activity into actions).

The principal idea of the mapping of activity model onto object-oriented analysis is the representation of the activity associated with actor, time and space, and all components of the context of six dimensions. In this paper, the Hexad model is proposed to describe incidence of geo-activity and event. The Hexad matrix enables to portray different variants of activity and depict actor's behavior through action, time and the history in the context of the Hexad object activity model.

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