A Semantic Model for E-Participation

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Abstract: The rapid development of e-Participation research in the last decade has resulted in fragmented, loosely related e-Participation models. In our previous work we established a comprehensive Integrative Framework combining existing models. In this paper we move further and conceptualize the elements strictly related to socio-technical aspects of e-Participation by constructing a formal ontology for e-Participation. The innovative model proposed addresses the duality of e-Participation by considering simultaneous government-led, top-down e-Participation, together with citizen-led, social media based e-Participation. Following the Thalheim's Construction Workflow we develop a semantic model to support citizens-led, social media-based e-Participation

1 Motivation

The availability of theoretically grounded, formal models for online political deliberation occurring on social media is a necessary step towards harnessing the duality of e-Participation[MCS09].

2 Approach

Our Semantic model for e-Participation is based on the Integrative e-Participation Framework presented in [PB13]. Our approach for developing the ontology follows the Conceptual Model Construction Workflow with Quality Assurance by Thalheim [Th11]. We started with derivation of application domain fundamental goals and objectives based on the Integrative Framework. From the questions we elicited application domain entities and derive relevant properties. We define quality criteria and developed a model in an iterative way with proper evaluation and analysis. Following the derivation of implementation objectives stage we extended the SIOC[1] ontology with a dedicated Argumentation Module as a base for the semantic e-Participation model on which we have mapped the principal entities derived from the Integrative e-Participation Framework. The resulting implementation of the semantic model for e-Participation

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[1] http://www.w3.org/Submission/sioc-spec/

includes and extends the SIOC Argumentation Module [LB+08] with essential classes and properties referring in particular to deliberation objectives, communication types and e-Participation process discrete metrics. The model is being deployed on an e-Participation platform to investigate its adequacy[2].

3 The model
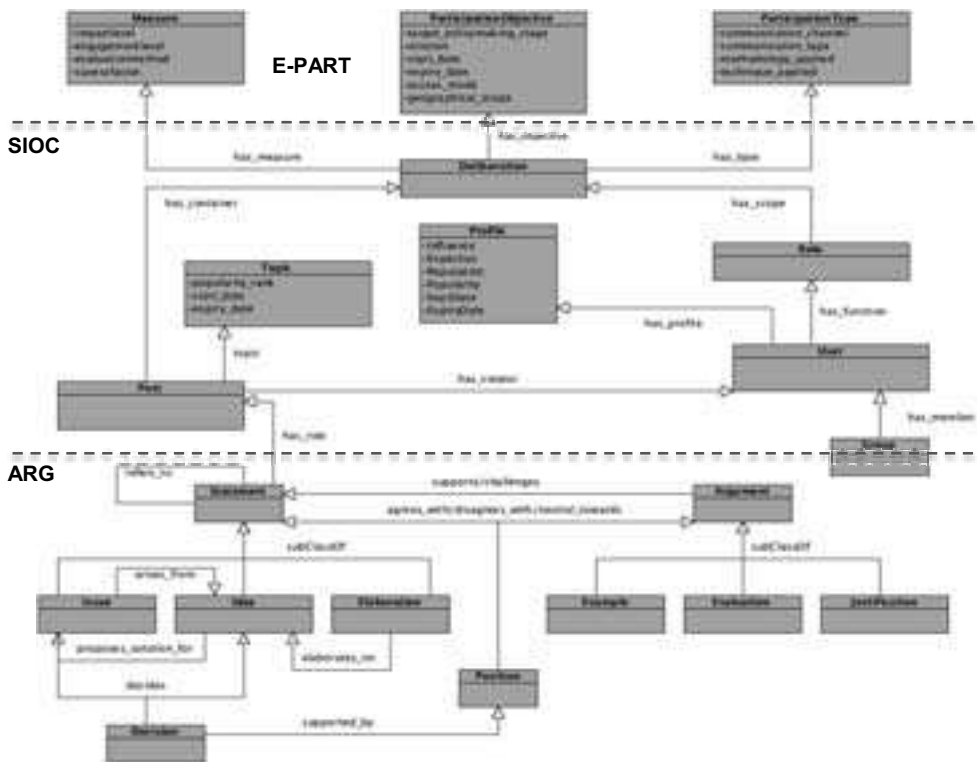

Figure 1: Semantic model for e-Participation

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