



FOOD ONTOLOGY: A COMPLETE CULINARY KNOWLEDGE MANAGEMENT FRAMEWORK

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ABSTRACT

Culture is the foundation for Knowledge. All aspects of cultures could in a way be rooted on to respective food culture of concerned society. However, some minority cultures are been diminishing or even disappearing as they were been overran by major and popular cultures. As a result numerous forms of social values and traditional knowledge are becoming unavailable and inaccessible. There are two prominent ways in preserving (Food) Cultures; firstly at operational levels and secondly at knowledge levels. In this work, latter to be addressed with the special focus on to (traditional) local food cultures.

Ontology is a promising foundation in order to understand any discourse with sound and complete philosophical basis. Besides the epistemological discussions and some conceptual analysis, for actual applications, scarcity of development and utilization Ontologies is evident in literature. However in advancing Information and Communication Technology and in resulting emerging disciplines, varieties of Ontologies have heavily being developed and being utilized on different (technological) platforms. In this research work we have attempted not only to formalize empirical as well as chronicle know-hows and culinary related knowledge with objectives; but to represent, capture, preserve and then to workout possible innovations.

In order to handle inherited complexity with development of such scale complete food ontology, a three folded A³ subdivision has been proposed for Actor, Activity and Article as related to culinary discourses. Representation of possible inter-relationships and intra-relationships among constituents of the resulting sub-ontologies is achieved by extending the global standard Unified Modeling Language's Meta-Model (UML) Profile.

Contributions resulted from this research work leads to sound and complete Food Ontology related knowledge management framework. This Knowledge Management Framework is flexible and extensible while ensuring non-technical expert comprehension and usages.

Keywords: Ontology, Knowledge Management, Food Ontology, UML