

The semantic structure of a good hearty meal

ΑΜΑΛΘΕΙΑ (AMALTHIA) is an application ontology that models the domain of dishes as they are presented in 112 menus collected from restaurants/taverns/patisseries in East Macedonia and Thrace in Northern Greece. ΑΜΑΛΘΕΙΑ supports a tourist mobile application that offers multilingual translation of menus, dietary and cultural information about the dishes and their ingredients, as well as information about the geographical dispersion of the dishes. This talk will focus on the food/dish dimension that constitutes the ontology's backbone.

ΑΜΑΛΘΕΙΑ draws on the syntactic and semantic analyses of 2,500 dish names. Only a small number of concepts are denoted by the heads of these noun phrases:

- Main Ingredient of a dish, such as '*pork with celeries*'
- Way of preparation, such as '*handmade little pies with pastrami*'
- Part or Cuts (when the main ingredient has an animal as its source), such as '*roasted pork knuckle*'

Seventy percent of the dish names in the studied menus were headed by a noun denoting the main ingredient or the Way of preparation in which case the main ingredient is introduced by a modifier of the head. The study of the concepts occurring in dish names has instructed the structuring of ΑΜΑΛΘΕΙΑ.

ΑΜΑΛΘΕΙΑ has adopted a dish-oriented perspective that differentiates it from other food ontologies and thesauri, such as the LanguaL. Thus, ΑΜΑΛΘΕΙΑ can codify multidimensional information about the dishes served; special attention is paid to the fact that dishes are subject to wide variation due to the inevitable evolution of recipes over time, to geographical and cultural dispersion, and to the chef's creativity. We argue for the adopted design decisions by drawing on semantic information retrieved from the menus, as well as other social and commercial facts, and compare ΑΜΑΛΘΕΙΑ with other important taxonomies in the food field. To the best of our knowledge, ΑΜΑΛΘΕΙΑ is the first ontology modeling dish variation and Greek cuisine, the latter being a component of the Mediterranean diet.

Καλή μας όρεξη!
Bon appetit!