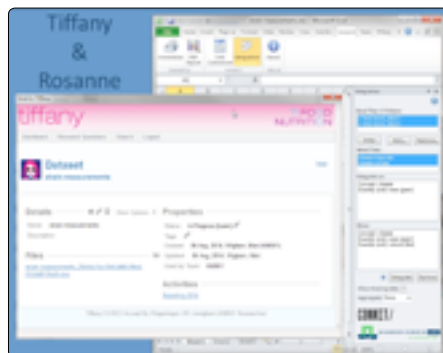


33. How to get more out of food research

Effective food research requires that data and methods are shared. At present, careful data management is considered as a burden rather than a tool for good science. As a result, data can no longer be found or interpreted once time has passed. Furthermore, potential synergies slip through the net and costly duplications and mistakes occur. We have developed two tools for the easy management of food research data. The first tool, Tiffany, helps researchers to document their data in such a way that others can easily trace, understand and reproduce the research process. The researchers can use a second tool, Rosanne, to annotate their data in order to further improve search and reuse. Together, Tiffany and Rosanne increase the chances of successful valorisation of food research.



ICT science question

Computers excel in data processing but do not understand the data. For example, they can find a scientific paper containing some given keywords, but they cannot tell where the conclusions in the paper came from. They can calculate the formulas in a spreadsheet but they cannot find related datasets and combine them.

To support the researcher in these tasks, the computer needs machine readable models of the real world. Challenges include: How can we develop a model that supports information exchange without restricting researchers? How can we embed this support in a user-friendly manner that fits in the everyday research practice?

Application

We work together with the TI Food and Nutrition, a public/private partnership for long-term strategic research to enhance innovation in the food industry. We also cooperate with the member food



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www.wageningenur.nl/nl/Expertises-Dienstverlening/Onderzoeksinstituten/food-biobased-research/Onderzoeksprogrammas/Gezonde-en-smaakvolle-voeding/Informatiemanagement.htm
Watch our video on: <http://youtu.be/cQIdHTwPL1Y>

COMMIT/ project
e-FOOD e-Foodlab

companies of the institute in order to understand their needs. These companies include Unilever, Danone, Nestlé and DSM.

Data management is in its infancy in food research, limited to particular tasks, such as lab management systems, or to generic document systems. These systems have difficulty in exchanging data and don't allow the entire research workflow to be traced. Support for integrating datasets is non-existent.

Alternative Application

Our work is easily extendable to research in other domains, both academic and industrial. Partners could be other research institutes and their industrial partners, research funding bodies or a commercial ICT partner to market the developed tools.

Our experience in developing semantic tools for research support is unique, due to the combination of theoretical research and the development of concrete practical tools. Further development would be required to improve the robustness and user-friendliness of our tools.

Nice to know

Our tools Tiffany and Rosanne were nominated for the 2012 COMMIT/ Valorisation Awards. This is a national award given by the Dutch organisations ICT-Office, Stichting ICT-Milieu and the Centrum Wiskunde & Informatica (CWI).



Tiffany: better food research for the taxpayers money.



Semantic tools for sharing research data will revolutionise how we feed our society.



Taking time to invest in research data management makes the difference between research that looks nice on the shelf and research that changes people's lives.



Properly organising my research process gets the most out of my work.