

Future Internet: Challenges and Opportunities from a European Perspective

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Abstract

As is common understanding, the food sector and especially food chains and networks are facing major problems. While food security asks for the food sector to meet the challenge, deficiencies in transparency, in food safety or quality guarantees, in food waste, or in environmental concerns put pressure on the sector towards a re-organization of its process and management activities. Developments in the Future Internet may provide a major contribution in improving efficiency, communication along the chain and in the development of trust in business relationships and towards consumers as the final customer in the chain.

Some years ago, a European research program around the utilization of the Future Internet in major sectors of the economy selected the food system as one of its major development thrusts. In a three level approach reaching from research (level 1), to experimental designs (level 2), and towards commercialization (level 3), the program intends to have a major impact on the food sector's development. The program is presently at level 2 and is preparing for level 3 where larger numbers of focused development groups could build on the generic developments in phase 2 for facilitating the development of applications based on decentralized approaches that utilize Apps similar in principle to those known from present smartphone and tablet software developments.

For its experimental activities, the phase 2 project level has selected different trials where industry cooperates with major system development groups supported by research initiatives, and standardization groups such as GS1. The trials are comprised of

- a) a meat chain trial,
- b) a fresh fruits and vegetable chain trial,
- c) a flowers and plant chain trial,
- d) a fish chain trial,
- e) an agricultural production trial,
- f) a greenhouse trial,
- g) various retail based consumer communication trials, and a
- h) general consumer goods trial.

The presentation will introduce into the program and the trials, discuss challenges, report on first results in phase 2 and on expected developments in phase 3 which is due to start in 2014.