PhasmaFOOD: the mini-portable smart system for on-the-spot food-quality sensing & shelf-life prediction at RAFA 2019

PhasmaFOOD showcased its results at the 9th International Symposium on Recent Advances in Food Analysis

November 2019

PhasmaFOOD showcased its results at the 9th International Symposium on Recent Advances in Food Analysis -RAFA 2019 which took place between 5-8 November 2019, in Prague. An international meeting bringing together food scientists from academia and industry, national and international agencies, control authorities and governmental and commercial laboratories.

During the RAFA symposium, **Spyros Evangelatos,** the project coordinator from **INTRASOFT International**, introduced **PhasmaFOOD** project to the audience. His presentation was focused on the project's main goals and objectives targeting the on-the-spot food quality sensing. Apart from the implementation roadmap from the early stages of the project, a brief description of each use-case that has been tested within **PhasmaFOOD's** lifespan was given highlighting the promising results and comparing them with the use of only one spectroscopy technology.

Konstantinos Tsoumanis, from Wings ICT Solutions, presented the hardware part of the **PhasmaFOOD** project placing special focus on the sensing node and the supporting electronics parts of the sensing device. The sensing and lighting components of the sensing node were presented, as well as the electronic board, which controls the operation of the sensing device and was designed and developed from the start tailored to the needs of the project. The technical challenges of developing the embedded software at low and high level were also presented. Along with **Yannick Weesepoel** from **Wageningen Food Safety Research**, they also pointed out the challenge of making various engineering domains to collaborate in order to deliver the final system, as well as the challenging yet interesting part of discussions between ICT partners and food laboratories throughout the project since two generally different "worlds" had to communicate each other.

Our partner **Milenko Tosic from Vizlore Labs Foundation** presented the software side of the **PhasmaFOOD** system from embedded over mobile application to the cloud platform. Milenko together with the other members of our team discussed also the **PhasmaFOOD** solution with RAFA participants who showed interest in the project and our demo.

Our partner **Judith Müller-Maatsch**, presented the results of her team from **Wageningen Food Safety Research** that worked on the detection of food adulteration using the **PhasmaFood** device and outlined their approach of a non-targeted food adulteration detection and gave details on the applied chemometrics.

The demo session attracted a significant number of visitors, who were interested in seeing the **PhasmaFOOD** system scanning milk powders, analyzing sensory data and making real-time decisions on whether the sample was adulterated or not. We discussed with visitors from the food industry and companies/research institutes interested in spectroscopy-based food analysis, accepting their active interest and encouraging comments on the **PhasmaFOOD** solution. Potential stakeholders expressed their interest in the exploitation of the **PhasmaFOOD** system and were eager to know when the commercial system would be ready.