Abstract:
An integrated analysis and design method for a real time process control for mobile application systems using MSDF has been introduced. The conversion into an ISOBUS compliant system architecture which allows the scalable implementation of all three system approaches “Mapping approach”, “Real-time approach” and “Real-time approach with map overlay” was pointed out. The approach is not limited to fertilizer application but can be applied to other site-specific application systems for e.g. seeding, spraying and irrigation too. Extensions of the standard as the "In-field Controller", an additional data element "Overlay-Map (OMP)", the data exchange possibility between FMIS and MICS for long-term explicit procedural knowledge and new data dictionary elements for plant, soil and weather attributes are suggested. Furthermore, the definition of two complementary classes of MSDF node processors for on-line sensors would allow the integration of wireless sensor networks.