

Multi-agent systems for a cloud-based eHealth application

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Ubiquitous computing for innovative health-care systems, services and applications become more and more connected to Cloud systems and the applications required a scalable, reliable and secure environments, the connected containerized environments representing suitable solutions.

This research deals with the advantage of IoT and multi-agent systems for e-health applications in scalable platforms. The investigation regards how Cloud-based model can be adopted.

The main logic of the periodic analyzer agent is to use a pattern detection mechanism to detect irregularities from the medical sensor data. We will use multiple periodic analyzer agents, each one running on a separate thread and communicating with each other via the “blackboard” mechanism.

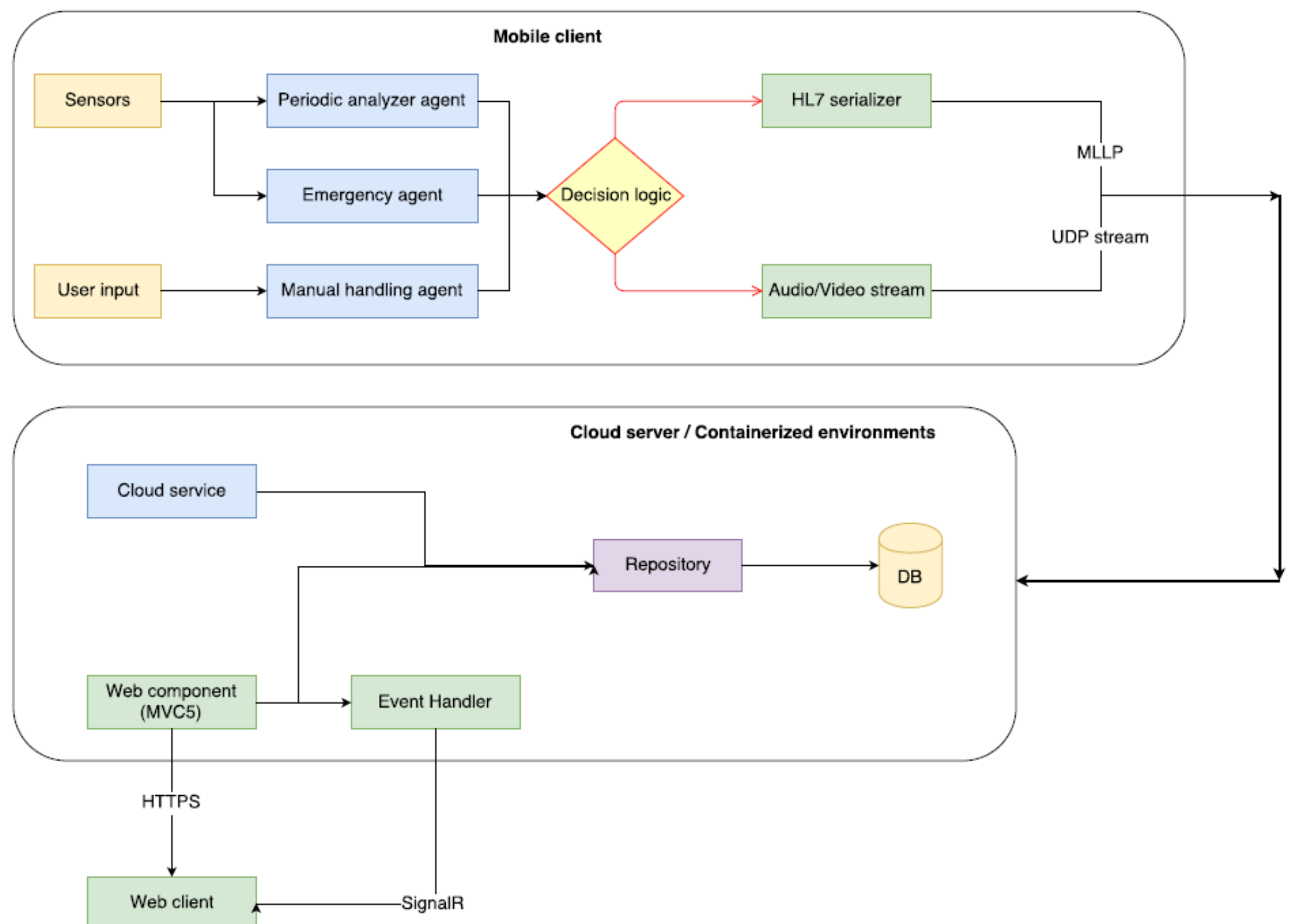


Fig. 1: Schematic architecture of containerized Cloud-based e-health applications.

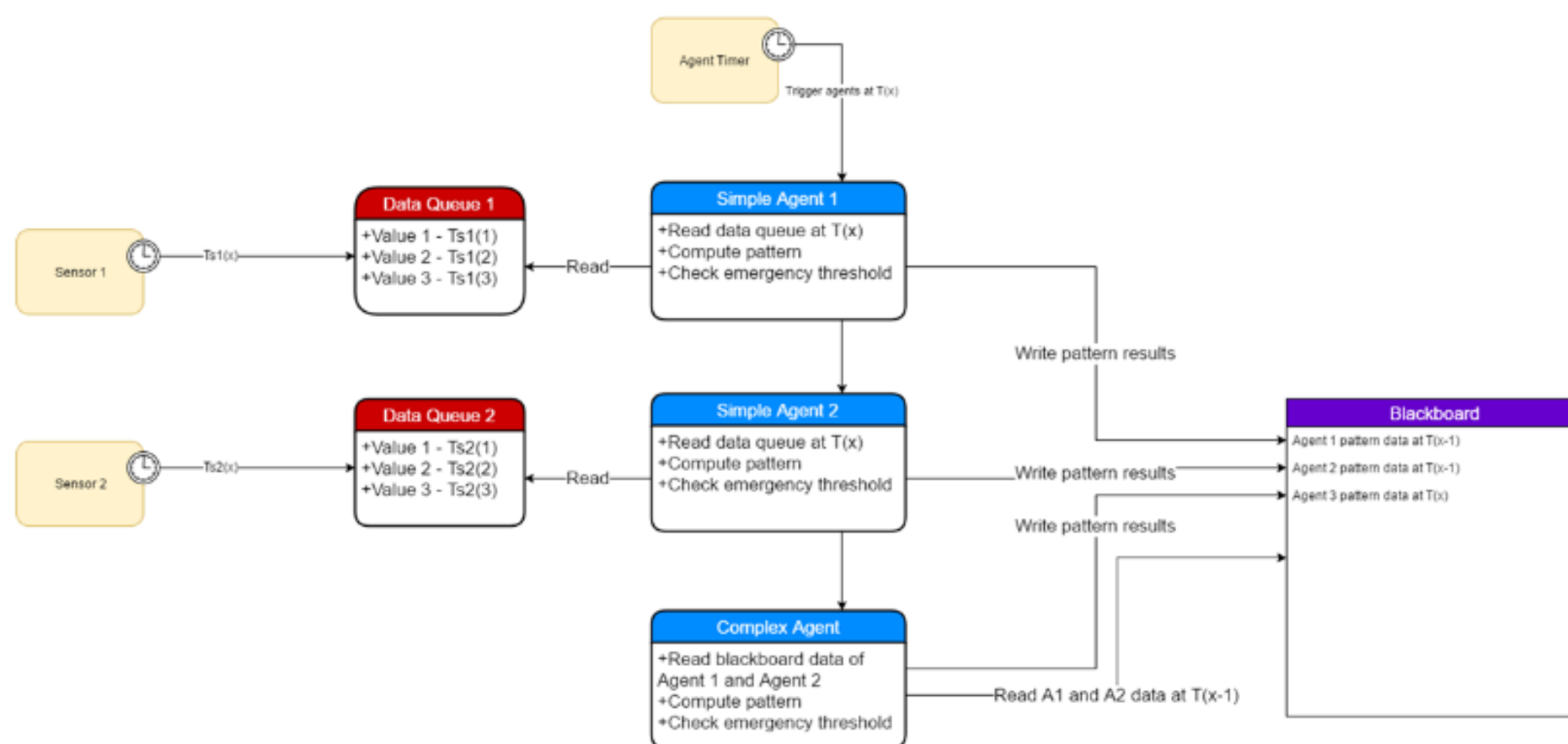


Fig. 2. Complex periodic agent architecture

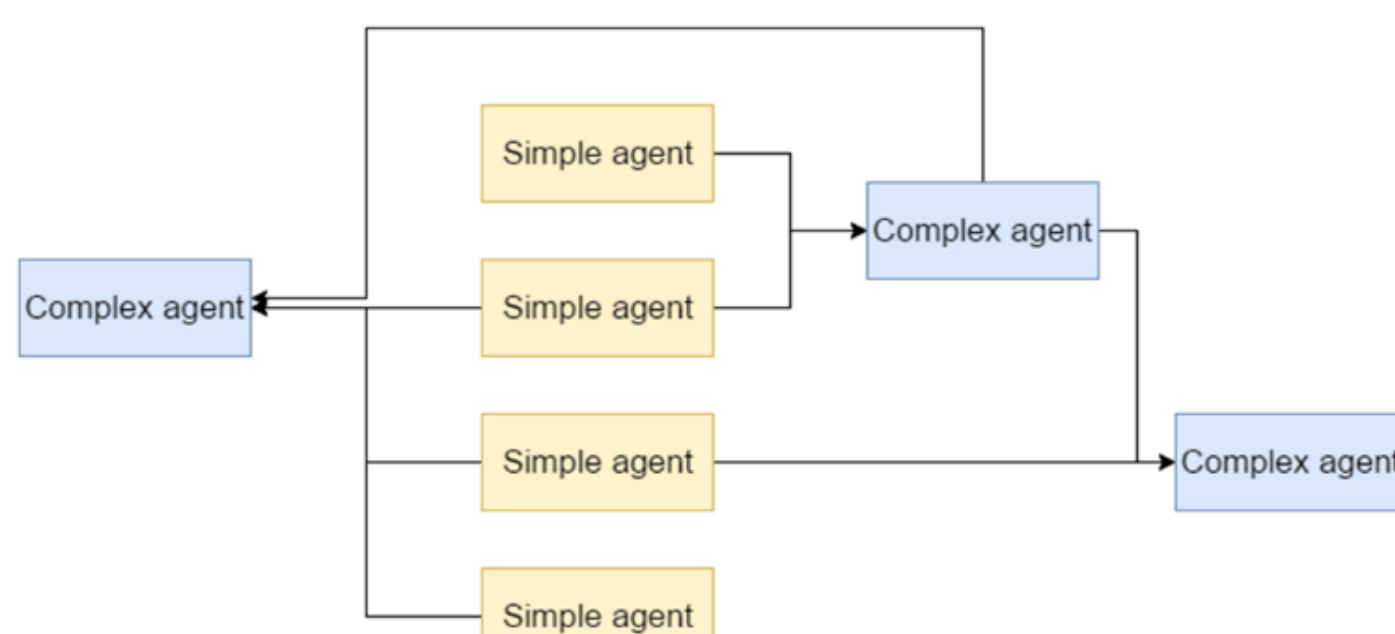


Fig.3 Agent combination example

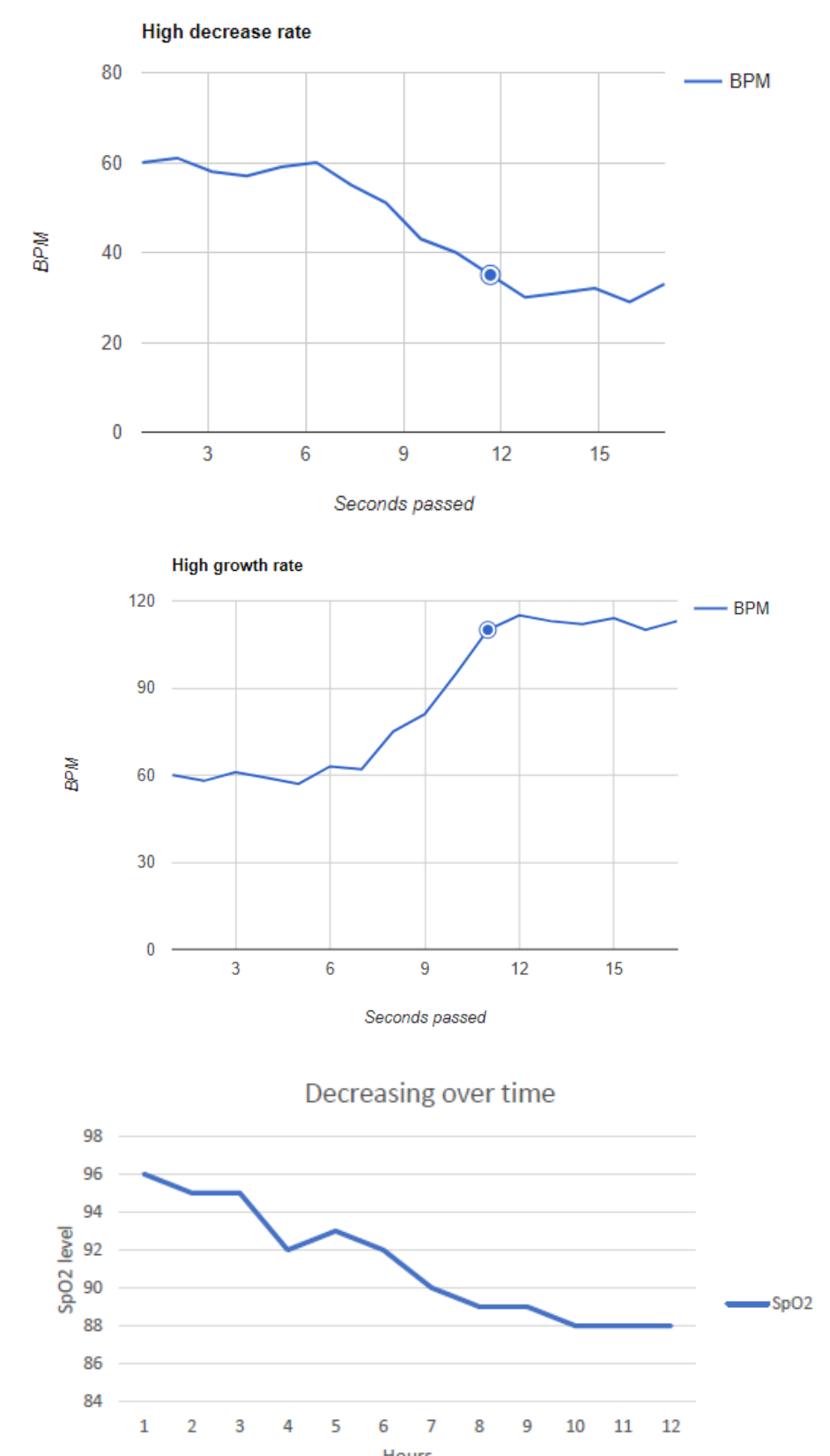


Fig.4. Heart rate and SpO2 detection