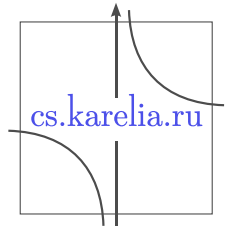
Petrozavodsk State University
Department of Computer Science



Alexander Borodin, Yulia Zavyalova, Alexei Zakharov, Igor Yamushev

Architectural Approach to the Multisource Health Monitoring Application Design

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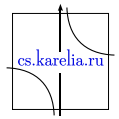
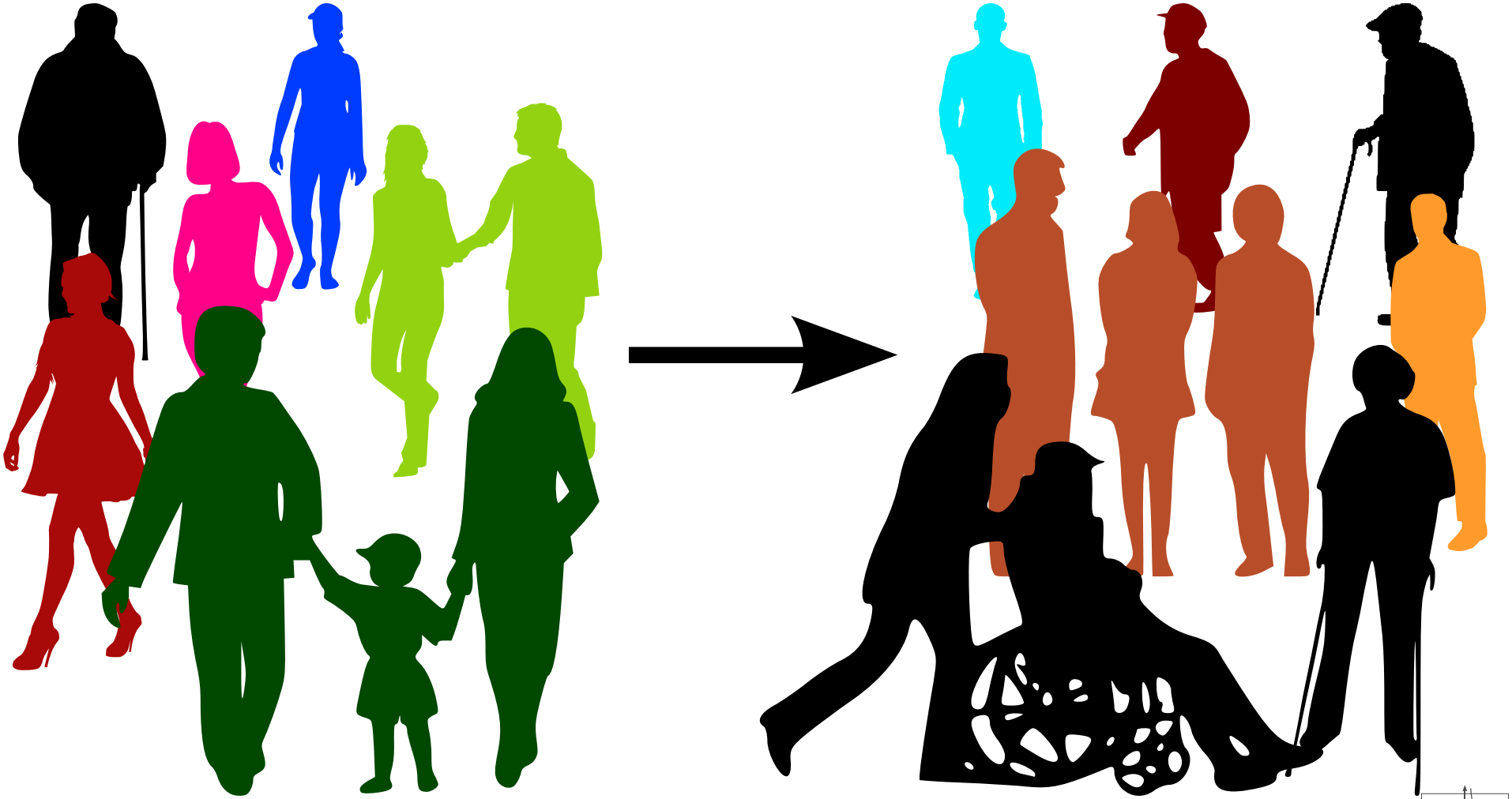


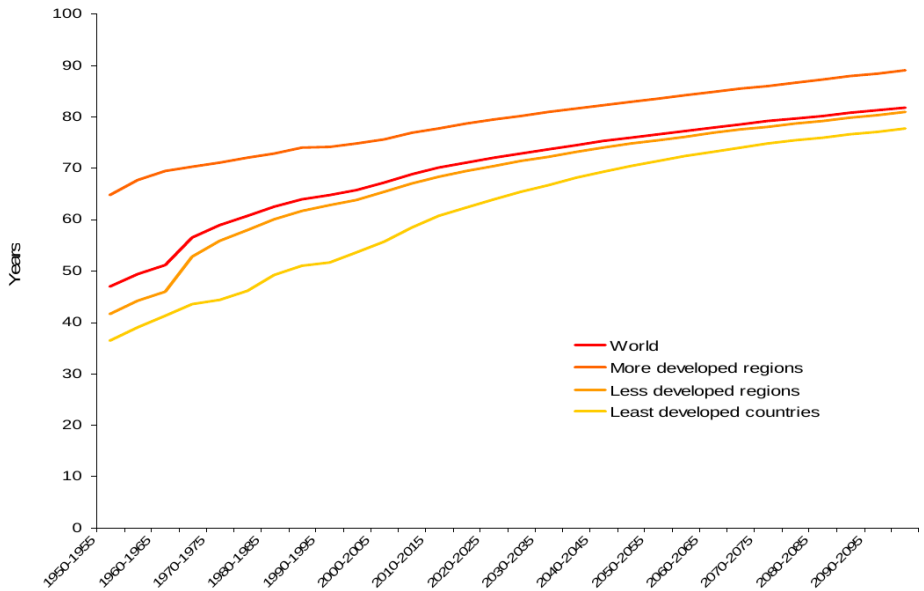
17th FRUCT conference

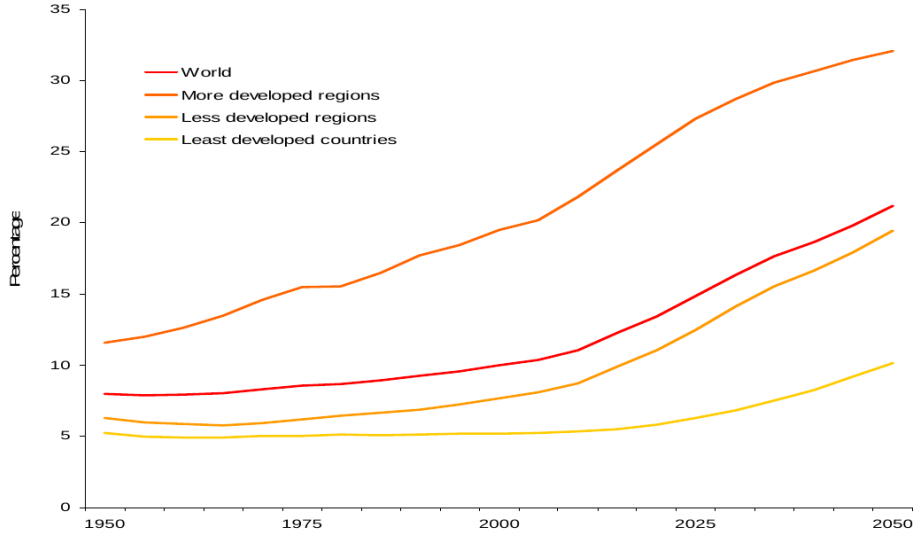
April 20–24, Yaroslavl, Russia

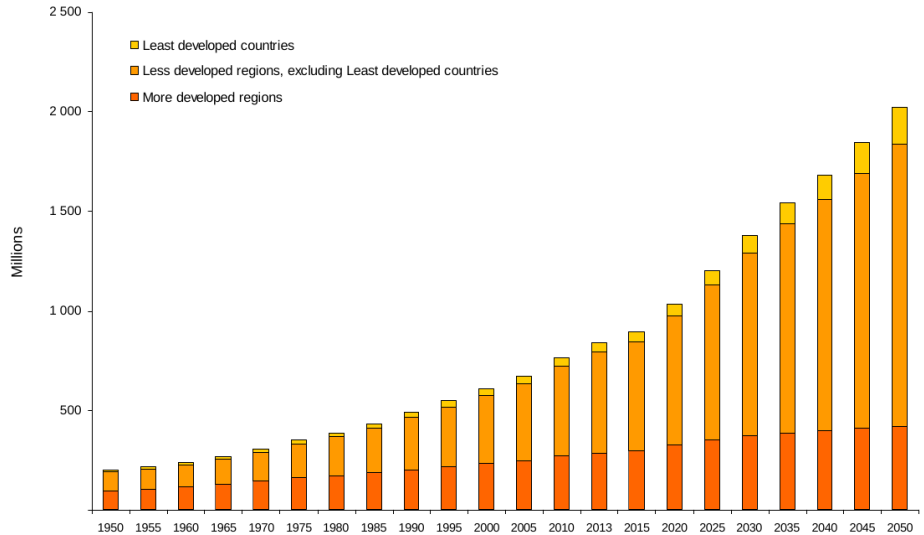
World population ageing

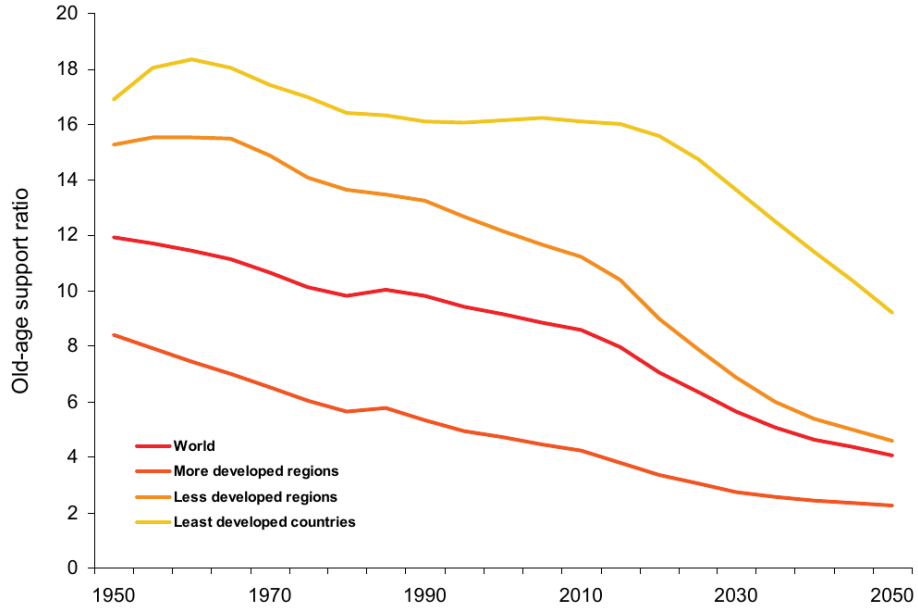


World population ageing (from UN report, 2013)

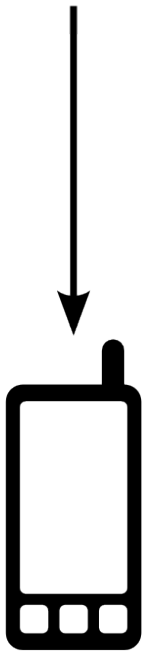








Motivation



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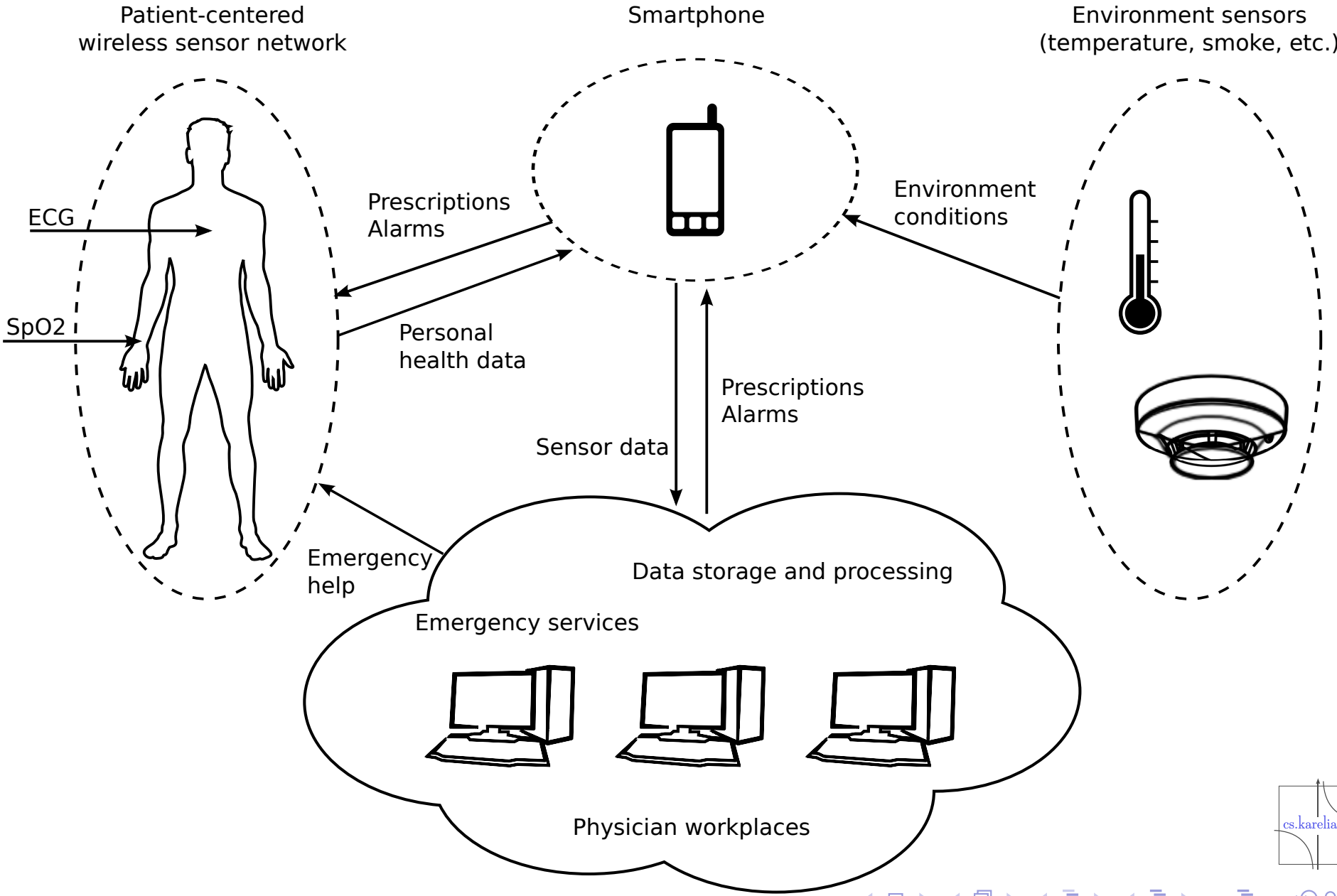
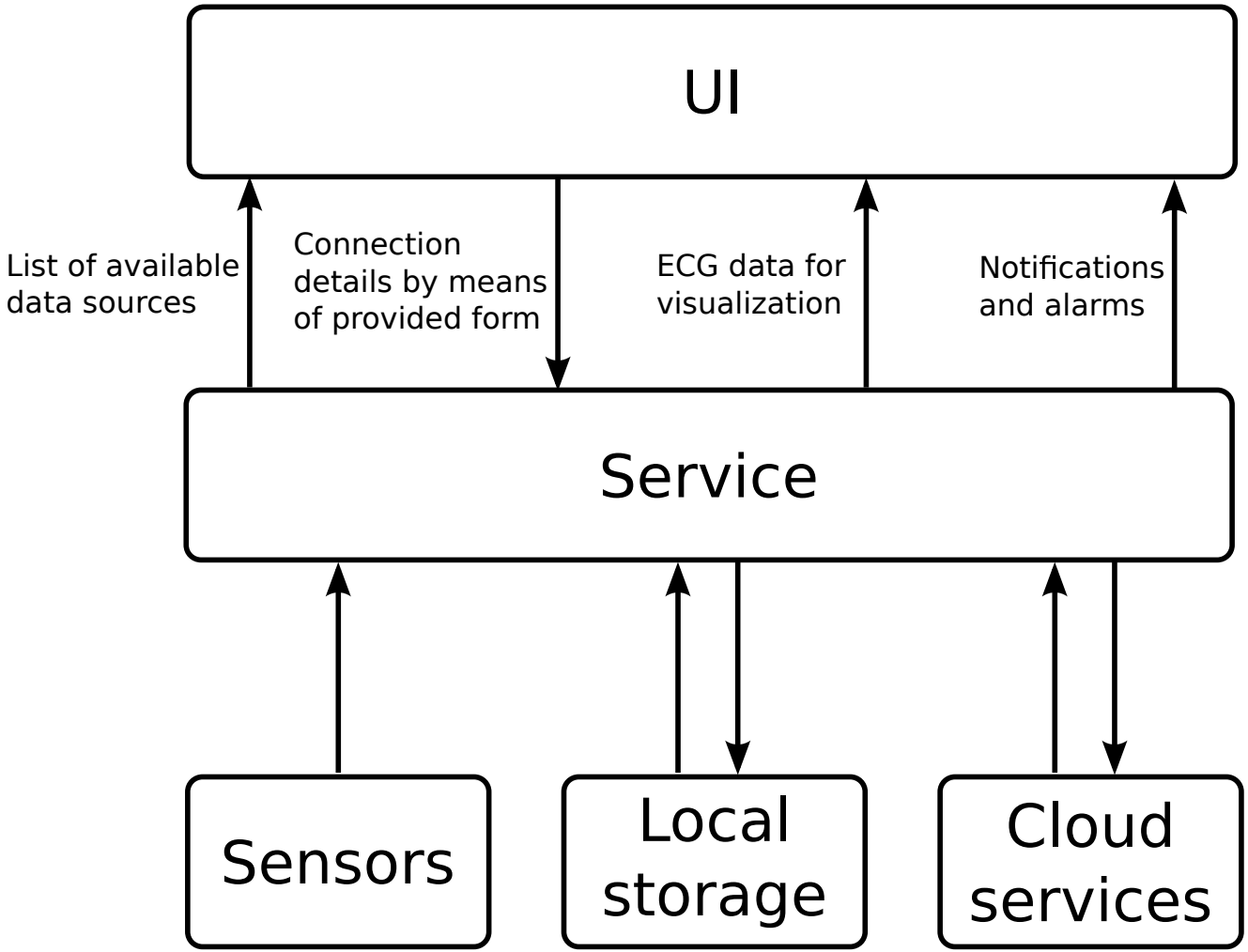
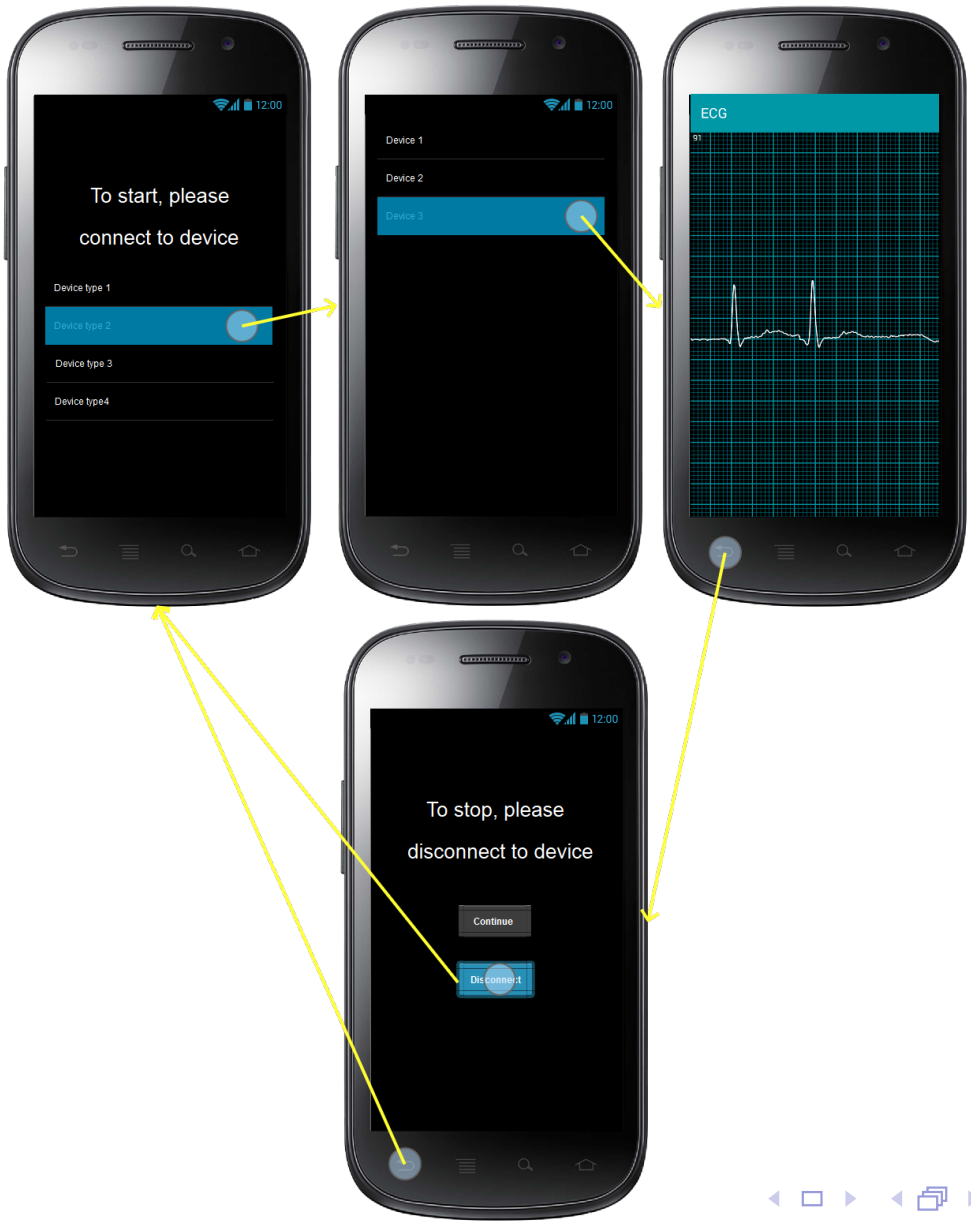
Continuous health monitoring system operation



A top level app architecture



Basic UI screens of the app



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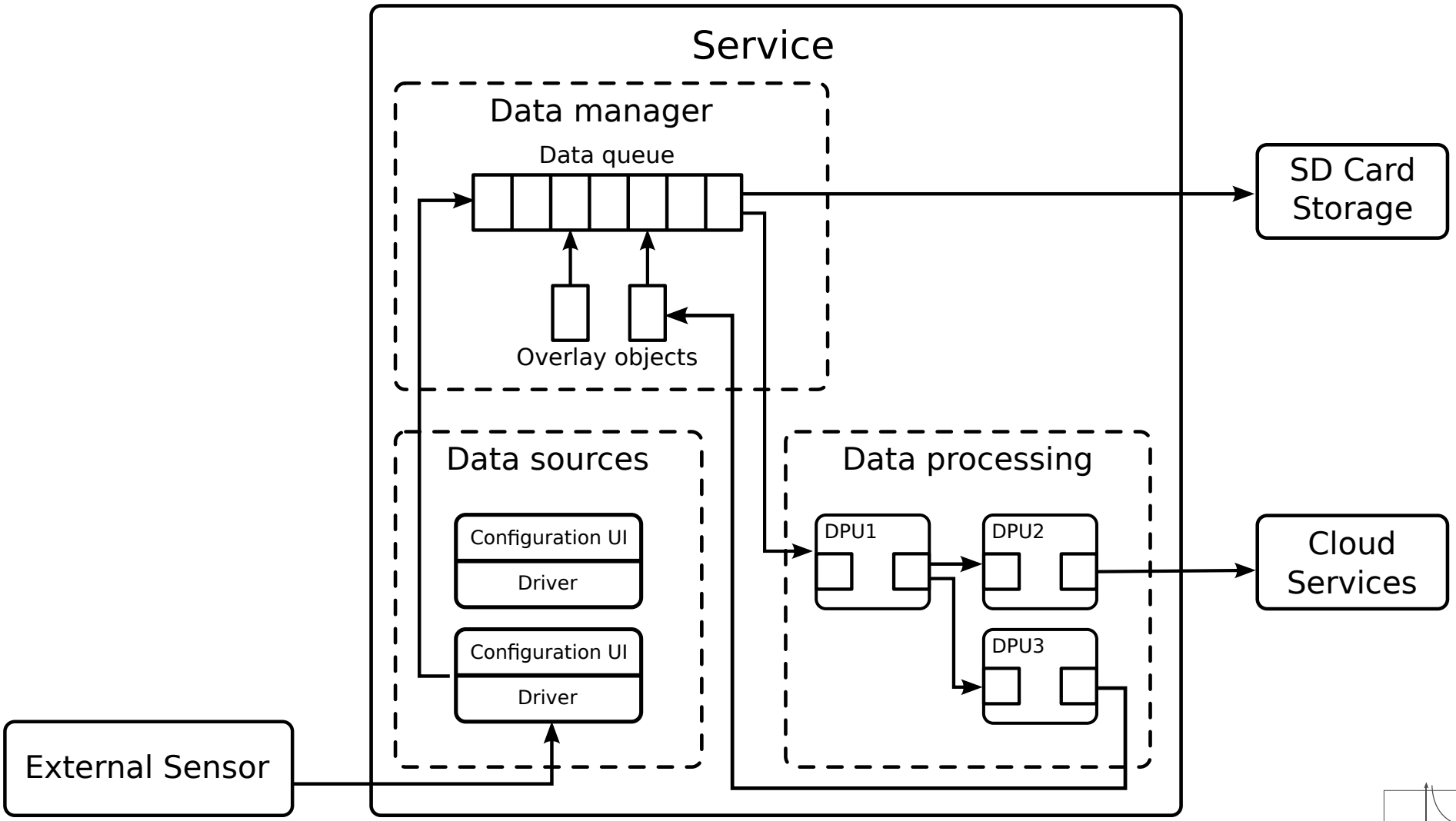
Detailed background service architecture



Conclusion

- On the base of market analysis a list of devices with wireless connectivity and open API was obtained
- Use cases of integrating a CardiaCare app into the health monitoring service were evaluated
- The architecture of a mobile app facing the challenge of multiple simultaneous health data sources was designed
- Technological aspects of implementation the proposed architecture for Android and Windows Phone were studied