



Qt-based ECG Compression Library



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Mobile Healthcare vs. Cardiovascular and Ischemic Diseases

- Heart Attack — the leading cause of sudden death in developed countries and Russia
- Long-term continuous monitoring — the only way to alarm a doctor timely
- Impossible in hospital circumstances and with standard 12-lead ECG monitors
- We need simple personal-use devices

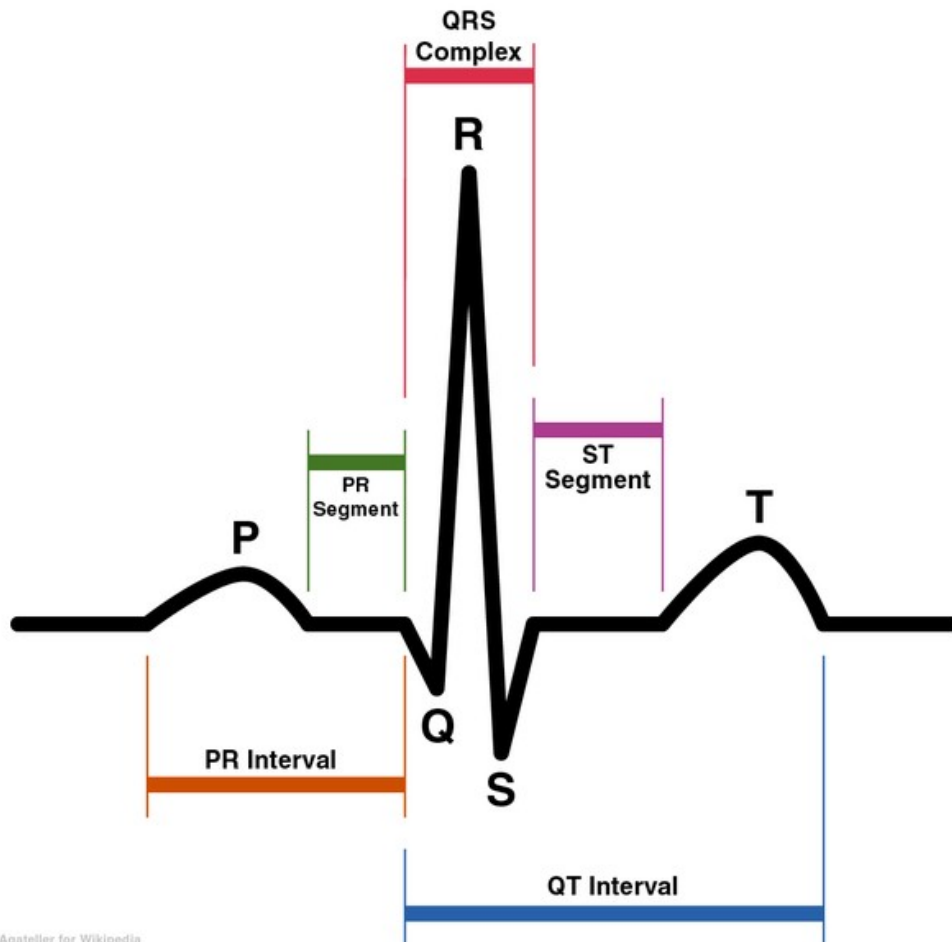


FRUCT Mobile Healthcare WG

- Teams from six Russian universities (FRUCT members)
- Working with leading experts from Medicine
- Regular meetings (Skype telcos, face-to-face)



Electrocardiography Background and Alive ECG Monitor Capabilities





Long-term purposes of the project

- The system that would connect the patient and the doctor 24/7
- The system that would predict abnormalities of heart function and alarm the specialist
- The system that would be integrated with medical databases



Short-term purposes of the project

- Grow the competences in Mobile HealthCare area in PetrSU
- Develop a simple library that would be able to compress ECG data and reduce traffic
- The system that would be integrated with medical databases



The Team

- Management
 - Alexander Borodin
 - First «quick and dirty» prototype implementation
- Developers (3rd year students)
 - Yulia Zavyalova
 - Anna Sapankevich
 - Maxim Obryadin



Experts

- Tatyana Kuznetsova
 - M.D., Head of the department of Faculty therapy
 - The main non-staff cardiologist of Karelia
 - The chief of department of cardiology of Hospital of the first help
- Oleg Medvedev
 - M.D., Chair of Pharmacology at the School of Medicine, Lomonosov Moscow State University



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Other directions

- Evgeny Tsvetkov (Msc student)
 - Microcontroller guru and hardware enthusiast
 - Try to reimplement ECGMonitor from available (cheaper) components
 - Strategy?
 - More functionality on the hardware side — high quality hardware filters.
 - Less functionality on the hardware side — we able to process data on the phone!