BiomedConnect

BiomedConnect:
Cloud platform for collection and analysis of biomedical data

Rybinsk, 2014

Modern development areas

- Mobile Technologies
- Wearable Electronics
- Cloud platforms
- Health 2.0

The need for telemedicine today

- Desire to take care of ones health and parents and relatives health, and struggle withlack of time

- Early diagnosis of diseases

- Remote monitoring of the health status of the patient (e.g., Holter monitoring)

- Informatization of medicine - increasing opportunities

- Health personalization - searching convenient tools

BiomedConnect

Growth points

- Development of biomedical sensors
  - Wearable Electronics
  - Smart sensors and wireless communication

- Developing expertise analysis of sensor data and expert systems

- **Infrastructure projects that allow introducing results of developments today - BiomedConnect**

Cloud Platform BiomedConnect
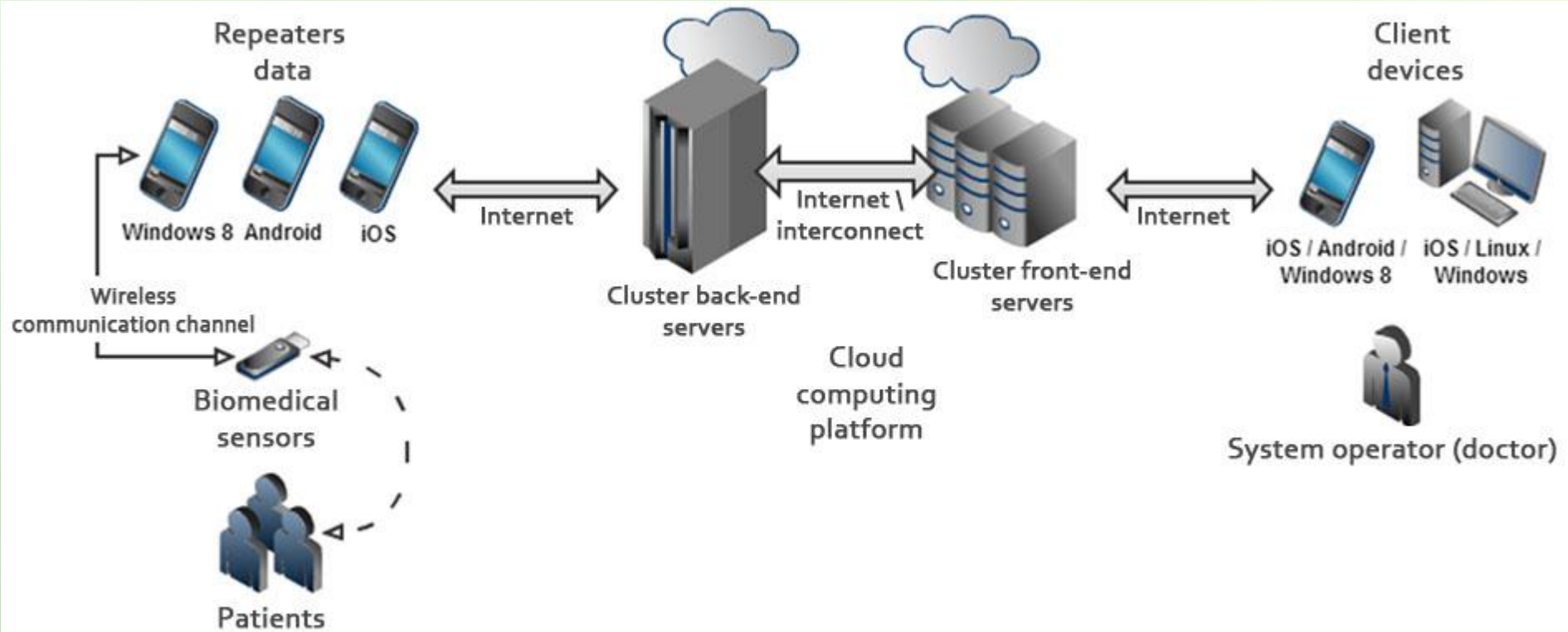
Users

- Regional cardiac centers

- Remote medical facilities (medical and obstetric stations)

Biomedical sensors for BiomedConnect

- Currently, 6 and 12 channel portable electrocardiographs

- To be developed:
  – Spirometer
  – AD-monitor
  – Pulsometer
 – It can be any device with an open protocol and wireless (Bluetooth, WiFi) communication channel

Application areas

- Hazardous cardiac arrhythmia (WHO: "80% of premature heart attacks and strokes can be prevented")

- Acute coronary syndrome

- Severe diabetes

- Bronchial asthma

- Epilepsy

- etc.

BiomedConnect features

- Receiving data from biomedical sensors and visualization on a mobile device

- Relaying data to the cloud

- Processing data in the cloud

- Videoconferencing with doctor from browser

- Visualization of data and processing results in a thin client with an adaptive user interface design

- Formation of user response (reaction doctor)

- Utilitarian function (keeping the database of doctors, patients, searching, filtering, statistics and so on.)
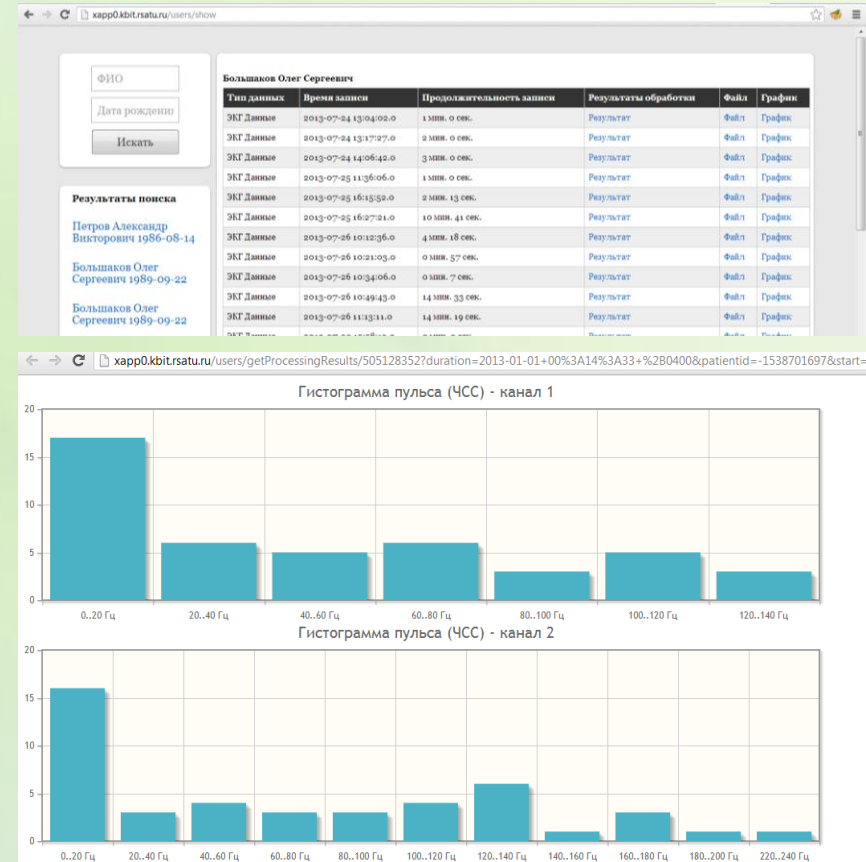
Platform test

- Product testing
  - Load testing (10,000 patients, 1,000 doctors)
  - Emergency testing (testing platform resiliency in case of failure of equipment)

- Field experience
  - Tests based on FAP Krasnaya Gorka, Rybinsk district and City Hospital № 6 Rybinsk
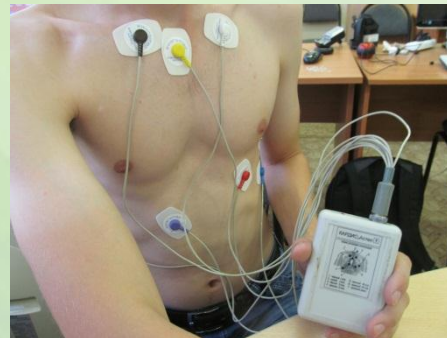
Support of IHE \ IH7 standards

- Currently, work is underway to test IH7 integration on the Russian Federal Health Information System
  - Integration with the registry of patients service
  - Integration with CDA services

- Unified patient identification implementing

- IHE XDS.b (Cross-Enterprise Medical Document Sharing) implemented