# S-Case

We are young innovators with the determination and precise goals. Team S-Case is created by Martin Pekarčík, Ivan Zvara, Martin Zvara, František Kudlačák and Ján Forgáč. Our study industries are not so close to each other (medic, geophysicist, computer scientist, designer), but such a colorful combination of people can create much more creative and often more daring ideas in an unusual form.

Imagine living in a country where about your health and another 100,000 people care for just over 160 doctors. This inconvenience causes not only overcrowded waiting rooms but also insufficient prevention by the doctor. This though has become reality in Slovakia, many times people spend hours in medical facilities, and finally, after medical examination have gone out with an unsolved problem.

The S-Case team's goal is to develop a medical-technology device that would replace large, numerous, cost-intensive and energy-intensive facilities. It would also increase self-monitoring in the general public and consequently prevention of the patient.

Of course, S-Case's goal is not to replace a physician or high-specific medical devices. The main task is to reduce mortality in the human population and also to improve the connection between the doctor and the patient.

S-Case will be able to measure human physiological functions, even without the presence of medical staff, and then telemedicine to send the measured data directly from S-Case to the

mobile / computer application of the physician. S-Case will also detect and analyze individual human physiological / non-physiological functions using artificial intelligence.


**S-Case embedded accessories:** ECG, Vein Seeker, Fonendoscope, Pulzmeter, Oximeter, Thermometer.

### 1. ECG

Electrocardiograph will be able to measure electrical activity of the heart. ECG conteins 20cm cables within 2 electrodes whose put on the patient´s chest. This part of S-Case has wide scale of using, one of that is ability to measure a respiration.

### 2. Vein Seeker

Our main motivation is obesity, that occurs more and more frequently in human beings. The global average of obesity is 35%.

This was one of the reasons why to develop a device, which would be able to detect anatomical structures, unidentifiable due to a barrier of fat. S-Case will be capable on the basis of exact wavelength of infrared light, to drain the veins that come into contact with the healthcare professional or the medical practitioner in taking blood and administering the infusions intravenously.

When you are watching veins in real-time, we will be able to avoid either the hematoma or edema, which is just beginning and also to detect the rupture of the vein.

### 3. Fonendoscope

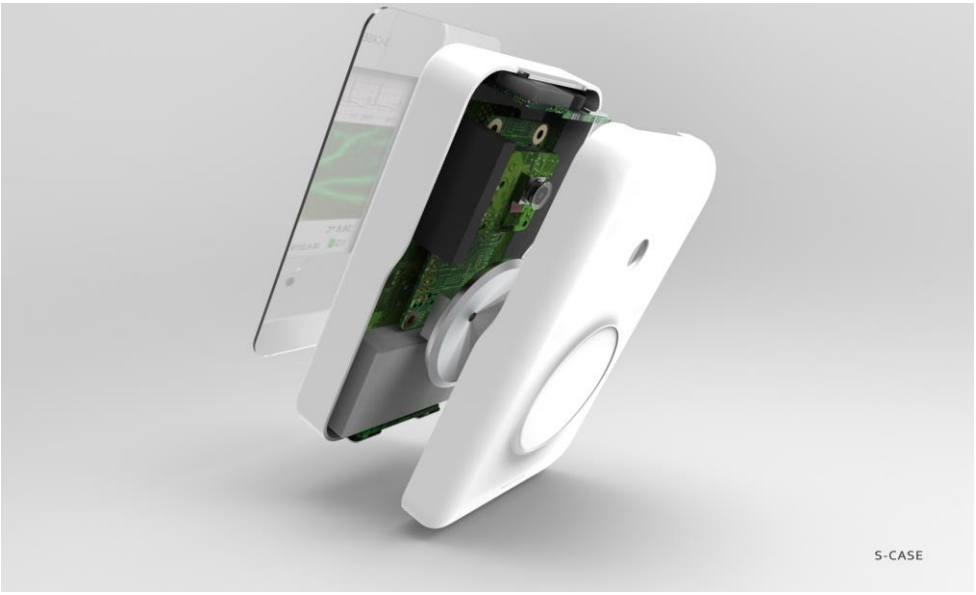
An electronic stethoscope, a more distinct resonance membrane built into the back of the device, which, on the basis of a highly sensitive microphone sensor, is capable of transmitting auscultation of the heart valves directly from the investigated subject to the investigating patient to the hearing and vision systems of the person undergoing the procedure.

Based on the measured data, phone audio records will be evaluated and subsequently displayed, not only on the audio side, but also visually by the curve projected on the device screen at the current time during performance.

### 4. Pulzmeter, Oximeter, Thermometer

Another device incorporated in a dedicated device is a pulse meter and an oximeter. The sensors on the back will provide the highest accuracy of saturation measurement of blood by oxygen, indicating the resulting pulmonary function and heart rate.

It will of course be a non-contact thermometer that provides contactless measurement of the body and surface temperature of an individual at any time and environment. Simply direct the thermometer perpendicularly, e.g. to the external ear canal and to the screen you will see a sensible body temperature.




All of this is not just in our imagination but development of S-Case is going on from April 2018. We hope that our device will make doctor´s job easier and faster in all around the world.

We are S-Case and we want to make world healthier.