

Title (en)  
DOPPLER DETECTION OF PULSATILE BLOOD FLOW

Title (de)  
DOPPLER-DETEKTION EINER PULSIERENDEN BLUTSTRÖMUNG

Title (fr)  
DETECTION DOPPLER D'UN ECOULEMENT SANGUIN PULSATILE

Publication  
**EP 1963884 A1 20080903 (EN)**

Application  
**EP 06832152 A 20061207**

Priority  
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Abstract (en)  
[origin: WO2007069155A1] Pulsed-wave Doppler is a well-known ultrasound technique used to quantify blood flow in the circulatory system. By using short bursts of ultrasound and measuring the frequency shift of the returning echo, it is possible to estimate blood velocity in a narrow volume inside the body. Arterial blood flow shows a characteristic pattern that is modulated by the beating heart. However, veins shows a flow that is more unpredictable in nature, continuous most of the time, but sometimes pulsatile. In some occasions, the vein is collapsed and no flow can be detected. This makes detection and differentiation of the veins and arteries difficult because of the unpredictable flow in the veins. The present invention overcomes this unpredictable nature of blood flow by modulating the flow into a recognizable pattern that can be identified with Doppler ultrasound techniques . Arteries and veins can be differentiated since they can show different flow modulation patterns depending on the pressure applied.

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