

Author:	Peter Schlumpf, Unisensor AG, Switzerland
Title:	Medical applications of wireless passive SAW strain gages and pressure sensors
Abstract:	<p>We have come a long way since Stephen Hale first measured arterial pressure in a horse in 1733, and Scipione Riva Rocci invented the blood pressure cuff (circa 1890). Presently, we are capable of measuring pressure in the human body in more than 100 location points. As a result of this massive increase of applications, there is a potential weekly production of 800,000 (<40 million/year) extracorporeal pressure sensors worldwide for medical purposes. Additionally, there are many being produced and integrated in medical-equipment, such as infusion pumps, blood dialysis, syringe pumps, etc.</p> <p>The potential application of these wireless passive SAW pressure sensors in the medical field will be restricted by its advantages and disadvantages. The most significant advantage is that these sensors are fully implantable and do not require battery and any electronic or software in the sensor. On the opposite spectrum, there will be challenges of making them compatible technically and commercially with the existing costly Hospital equipment base.</p> <p>Peter Schlumpf, UNISENSOR's CEO, will present the application of SAW pressure sensors in ICP (intra-cranial pressure) technology, together with its potential market use.</p>