



TRIBO-ACOUSTIQUE® SENSOR

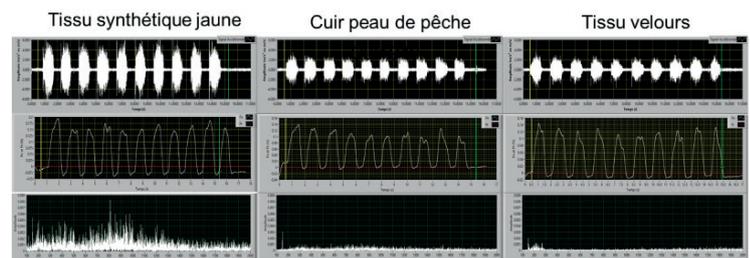
A device that “objectifies” touch

Sensory properties already play a key role in the design of objects that come into direct contact with humans: tablets, telephones, cars, textiles, cosmetics, leather, packaging and the like. In fact, at a given level of technical quality, purchase decisions will focus on objects that provide comfort and enjoyment. To cater to manufacturers' new need to be able to objectify touch, LTDS researchers have developed a Tribo-Acoustic® sensor capable of measuring touch.

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Scientific / technological breakthrough

By imitating the role played by skin sensory receptors in the fingertips, the Tribo-Acoustic® sensor uses the vibro-acoustic information generated by friction with the skin as an important signature of touch. It uses the model of human fingertips to measure the vibrations generated by friction from a touch movement. This device has been tested and validated on different types of materials, including human skin, hair, textiles, leather and plastic. The measurements obtained correlate with the subjective results obtained by the experts. The involvement of Ingénierie@Lyon in this project helped remove technological and scientific barriers and enabled the Tribo-Acoustic® sensor to be developed for use in the manufacturing and industrial sphere.



Competitive advantage for the economic stakeholders

In today's fiercely competitive global environment, sensory stimulation has become a key component in the value chains of materials and products.

By measuring tactile perception, the Tribo-Acoustic® sensor can be used to monitor and evaluate, and come up with solutions for correcting sub-optimal manufacturing practices that cut down on economic and ecological waste. The device can also be used to establish uniform, identical quality control standards that can then be rolled out to different geographical manufacturing sites.

This is very useful for rigorously monitoring and comparing different tactile sensations in an objective manner.

