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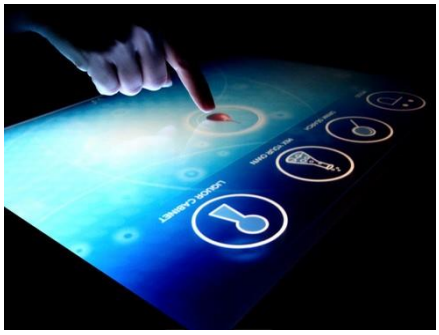

TechTalk

Touchscreens ©

by John McCarthy

Hi and welcome to this very latest edition of Tech Talk. More and more of our electronic gadgets are now controlled through touch screens: mobiles, tablets, phablets, fridges, cash machines, intelligent watches, computer screens and TV sets; a tap over here, a swipe over there, and any time you take public transport you'll see hundreds of people prodding, pinching, swishing their digits against and talking into their devices. Research into touchscreens dates back to the 1960s, and the first rudimentary models appeared on consumer gadgets during the '80s, but were limited to a finger push and were of restricted use.

Touchscreens have been an optional extra on cars for a few years now and provide optimum control over air-conditioning, GPS, radio and stereo and infotainment in general. However, from personal experience I've discovered that it can be extremely dangerous to take your eyes momentarily off the road to stab my way through a selection of menus before finding the required function. Bearing in mind that distracted driving is the number one cause for accidents, this is obviously not a step in the right direction. However, technology is at hand, and engineers and software designers are coming up with highly innovative ways of using the now ubiquitous touchscreen.

Bosch, the well-known producer of automobile parts, has been experimenting with 'haptic feedback' technology; Haptics is the science of simulating touch sensations. Vibrations and visual effects are already employed to let the user know whether icons or keys have been selected, but Bosch's novel approach is to include different textures that are clearly discernible to the fingertips. These can be either rough or smooth to the touch, and the idea of course is to enable the driver to feel for the right control button without having to look at the touchscreen. Moreover, by applying variable pressure, it's possible to scroll faster or slower through a selection process.

A quick tap on an icon will open the app, whereas a more sustained press will make the screen vibrate, open a sub-menu and allow you to do certain things more quickly.

Sooner than you think, operating touchscreens without actually touching them will become a reality. The marketing boys will have to think up a new name for them then.

Samsung, for instance, have devised a method of employing infrared sensors just above the screen to detect certain hand gestures. Such technology could also work in cars. BMW has developed a screen that works in conjunction with a camera in the roof of the car in order to detect and recognise hand gestures. If you hear the familiar ring-tone associated to your best friend, simply pointing towards the screen will enable you to answer; if it's the boss, a mildly-miffed swipe of the hand with suitably pursed lips will reject it.

It's no accident that touchscreens have become as popular as they have. Touch is one of the most important senses; indeed perhaps the first we develop in early infancy, and teaches us to interact with our environment and other humans. The technologies of the near future will change our tactile perception of the screen: flat one moment, a 3D keyboard the next, a contoured map of a region we intend visiting, hands-on experience in a biology lesson, as we perhaps move away towards fully gesture-based interfaces and eventually immersive reality.

Thank you for listening and join me for more Tech Talk next time here on EnglishWaves.fr.