

LEAPFROGGING THE COMPETITION

Local glass-machining manufacturer Wangi Industrial stands out with its innovative solutions and IP strategy

In the past, you could accidentally scratch the screen of your digital device with your fingers or stylus, affecting its display quality or touch response.

That may not be the case today, with Wangi Industrial's tetrahedral amorphous carbon (TAC) coating for glass. The TAC coating, which is a variant of the diamond-like carbon (DLC) coating, provides harder protection and is scratch resistant. The DLC coating is commonly used for scanner glass, such

as those found in barcode scanners at supermarkets and biometric passport readers at airports.

The company's second innovation is the use of nano-imprint technology – a collaboration with the Agency for Science, Technology and Research (A*STAR) – to develop anti-reflection, and water- and grease-repellant screens. "This means that there won't be glares or reflections from light sources or grease marks from fingerprints on touch screens, such as

those on smartphones, tablets and in-flight entertainment," explains Mr Chew Ker Yee (*photo, second from left*), Vice-President of Business Operations at Wangi, a local precision glass machining company, which was founded in the 1960s. Wangi manufactures glass for various industries, such as electronics.

When asked about how the technology works, Mr Chew says: "It's like Play-Doh. Essentially, we create nano-structures, or tiny 'cones', on the Play-Doh, which are then hardened onto a glass screen." According to Mr Chew, the "cones" are 20 times smaller than a red blood cell and, as a result, it enables the screen to transmit more than 99% of light, and repel water and grease.

Wangi has filed two patents for this second innovation – both co-inventorships with A*STAR's Institute of Materials Research and Engineering (IMRE). Wangi has exclusivity over the use of one of the patents. The next step will be bringing the solution to market and promoting mass adoption.

Its third and most recent innovation involves the integration and development of its TAC coating and

