

PCT PORTRAITS

Combating Hazards

More than 1.2 million international patent applications, covering new technology of every description, have been filed since the Patent Cooperation Treaty (PCT) began operating in 1978. Continuing our series of snapshots, WIPO Magazine dips into the PCT database and seeks out the people behind the patents. In this edition, innovators from Israel, Australia and the U.S. pit human ingenuity against natural and unnatural hazards.

Shark shock



A shark approaches then turns away from a diver wearing the Shark Shield.

It was the stuff of nightmares. Mike Wescombe-Down was, at age 16, a carefree, water-loving youth, until his diving companion was mauled to death by a Great White Shark in the coastal waters of Australia. The trauma left him with a hatred of the notorious predators. But as he came to know and understand their ways better, this developed into a desire to find a technical solution that could prevent the recurrence of such horrors, while enabling swimmers and sharks to co-exist safely in the same waters.

Mike Wescombe-Down's research led him to some ingenious technology,

which had been developed in the 1990s by the well-respected Natal Sharks Board of South Africa. Based on electronic wave-fields, this was marketed to divers under the name of Shark POD, but the product was bulky and expensive, and enjoyed limited success. Mike set up the SeaChange Technology company, acquired the rights to the South African technology under an exclusive worldwide licensing agreement, and put his diving experience and industrial design skills to work to produce a new, improved shark deterrent.

The result was the Shark Shield™, featured last year on the Australian Broadcasting Company's (ABC) *New Inventors* series. The compact device, which straps onto a swimmer's leg, or into a diver's pouch, consists of two electrodes, which generates a powerful electromagnetic field around the user in the water. A shark which swims within

seven meters of the device experiences a sensation of acute discomfort as the electric waves hit sensory receptors found on the shark's snout. While completely harmless, should the shark draw nearer, the discomfort grows more intense until it causes muscle spasms and drives it away. Neither the swimmer, nor other marine life, is affected.

SeaChange Technology Holdings, based in Adelaide in South Australia, filed four international patent applications via the PCT in 2002 and 2003. These covered their Shark Repelling Device and related inventions, including a shark-repelling hull for boats. Mike reports that the Shark Shield is selling well, to both recreational and professional divers, swimmers, surfers, fishermen and kayakers. ■

For more see:
www.sharksheild.com