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Right place at tyhe right time

WHAT'S the time? According to Dr Dominic Mikulin of OptiSynx, the actual time is currently a balancing act between accuracy and usability.

A Caesium atomic clock provides top-level, Stratum 1 accuracy - the slight drawback is one costs \$1 million.

Dominic said: "Caesium atomic clocks are amazing Second World War technology. You boil caesium in a glass tube and bombard it with microwaves.

"Using rubidium is safer, but not accurate enough. Users tend to combine the two - rubidium clocks corrected by GPS caesium signals but these are weak and can be eliminated by weather conditions."

He and business partner Jeremy Sosabowski propose a low-cost, robust alternative based on standard telecoms components, not reliant on third-party sources like GPS signals, and offering Stratum 1 time accuracy.

Nothing sexy looking, Dominic concedes, just "a box of time".

But he says: "For the lifetime of the product, it will be correct. It does not need resetting, it's auditable, it's perpetual. You buy your own bit of time.

"Everyone, everywhere would have this universal time, a bit like GMT. It would be OptiSynx time, or OptiSynx time plus five hours."

They set up in business in April, having first met when Dominic, a former employee at TTP Comm ("It was great to get paid to play, to invent and solve problems"), mentored Jeremy at Enterprise Tuesdays at Cambridge University's Department of Engineering.

They hope to meet the untapped need for high accuracy time. Replacing existing clocks in mobile phone base stations with OptiSynx would allow operators to fit in more calls.

Dominic, 34, said: "We could reduce the number of base stations needed by better use of the spectrum.

"Once our box is inside the station with accurate time, your mobile phone can be located to within centimetres.

"We can provide a better GPS system for the networks."

Their initial business plan sought funding of £700,000 but investors balked. But £25k came from Cambridge Enterprise Pathfinder Fund, the Gatsby Foundation award and a Cambridge University Entrepreneurs prize to buy components for a prototype.

OptiSynx were in the top 10 in the recent Running the Gauntlet competition but were unsuccessful ultimately.

The plan now, as they expect to rent business premises and stop working from home, is to raise £300,000 to create a prototype.

With time of the essence, Dominic said: "We have intentions to invest, subject to conditions, of £100,000. We have interested parties to the tune of millions."

Other potential applications could be for road pricing with a GPS tag on a mobile phone tracking a vehicle's time and road location.

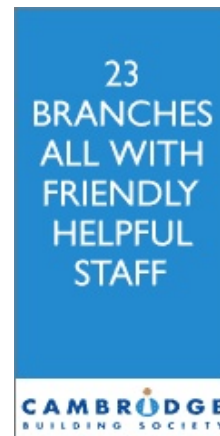
Eventually the company's "box of time" could be reduced to a \$10 chip but Dominic said: "We are in limbo until we raise the money."

But for the man who says he is a world expert in 55-dimensional, non-orthogonal hyperspace fitting for ferro-electric LCDs, time and space seem to hold no fears.

He hopes seed funding will soon materialise from business angels or venture capitalists.

And his message to potential customers is: "OptiSynx is here, in the right place with the right time."

For more details at www.optisynx.com/p >



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