

# TRACKS

News from Trackwise – The RF PCB Innovator

Autumn 2009

## TRACKWISE – 20 YEARS AND STILL GROWING STRONG(ER)

**Trackwise is celebrating its 20th anniversary in 2009.**

Having been founded in May 1989 as Trackwise Designs Ltd, a PCB design bureau, Trackwise soon moved into PCB manufacture. In 1996 we were asked to manufacture a very large PCB, one of the early GSM900 base station antennas.

Having survived the acquisition of the company by Philip Johnston in 2000 and the near-collapse of the TMT sector in 2001, Trackwise has gone from strength to strength, being awarded the Queen's Award for Export in 2005, acquiring its main UK competitor in 2006 to become the principal UK supplier of antenna and PTFE PCBs.

The story of Trackwise over 20 years could not have taken place without the dedication of a large number of employees – 6 of whom have now been with Trackwise for more than 10 years. Between the current employees of Trackwise, we have more than 120 years of experience of manufacturing PTFE PCBs.

2009 has seen the completion of our factory reorganisation – a complete reconfiguration in order to reflect our facility in India and the new economic climate. The new facility is leaner and operationally improved, ensuring that Trackwise is fit for the next 20 years.



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## Trackwise Epitome India – new facility opens



**Trackwise Epitome India (TEI) facility for manufacturing antenna and RF PCBs has been relocated to Epitome Components new facility in the “SUPA Industrial Estate” MIDC located on the Ahmednagar-Pune Highway.**

This new 55,000sq.ft. facility extends Epitome Components' leading position in the manufacture of single sided PCBs into double sided (pth) and multilayer PCBs.

The new facility contains Epitome Components' large format PCB capability (1800mm\*610mm) – unique in India – as well as the RF PCB manufacturing capability that has been qualified and proven in production for many of the world's leading antenna manufacturers.

With the long-awaited auction of India's 3G licenses due to take place in Q4 2009, 2010 is set to be an exciting and important year in Indian telecoms.

For an established, experienced and proven partner in India to provide your antenna and RF PCBs, please be in touch with Trackwise Epitome India and come and see the excellent new facility.



# PIM study – funding for five more years

Trackwise are delighted that **Dr Aleksey Shitvov of Queen's University of Belfast was successful in his application for a Research Fellowship of the Royal Academy of Engineering/ EPSRC and has been awarded the Fellowship to continue the study of PIM in printed circuits for the next five years. Trackwise are proud to be supporting Queen's University in this important research.**

# Trackwise to exhibit at LAPC 2009

Trackwise are pleased to announce that they will be exhibiting at the **5th Loughborough Antennas & Propagation Conference 2009** to be held on 16th-17th November 2009 in **Burleigh Court Conference Centre, Loughborough University.**

“LAPC 2009 will focus on new ideas and the latest developments in antenna technology, applied technology, applied electromagnetics and the propagation sciences for both academia and commerce throughout the international community.”

We would be delighted to welcome you to our stand at LAPC and to have the opportunity to explain our up-to-date achievements and also about exciting new developments within UK and India.

# Trackwise team get on their bikes

**Trackwise staff have taken full advantage of the UK government Cyclescheme for tax-free bike purchase and we now have several regular long-distance commuters.**

The combined efforts of Trackwise cyclists are estimated to have saved 8.5 Tons of CO2 emissions in 2009 – and the plan is to increase this by at least 25% in 2010.

There are early-stage plans for a Trackwise team to tackle a long-distance event in 2010 – perhaps Etape du Tour (a stage of the Tour de France) or Etape Caledonia in Scotland (closer, shorter but probably not such nice weather!)

Anybody interested in participating with or sponsoring the Trackwise cycle team – please be in touch!



# HRH the Duke of Kent visits Trackwise

**Trackwise were greatly honoured by the visit of HRH the Duke of Kent as President, The Engineering Council to the company on Tuesday March 3rd.**

Accompanied by HM Lord-Lieutenant for Gloucestershire, Mr Henry Elwes, HRH the Duke of Kent was welcomed by Philip Johnston – who gave him an introduction to the company and its 20 year history and then was given a tour of the Trackwise facility by Mike Prosser and Colin Hallam.

The photograph shows Conrad Bailey explaining to HRH the Duke of Kent the very wide range of products manufactured by Trackwise, including parts exported from UK to China, India and Thailand.

# Trackwise support Q-par Angus for A400 antennas

**Q-par Angus has designed and produced a range of special microwave antennas for the A400 transport plane for protection against missile attack.**

Jenny Holiday Director of Q-par Angus said “The antennas have very accurate PCB structures for the internal circuits and for the antenna elements themselves. These have to be made to very high levels of accuracy and must be consistent from one antenna to another. This is why Trackwise was chosen to help us develop and produce these parts. The antenna performance is superior to competitors and we are finding other markets for these in surveillance and direction finding applications.”



*Founded in 1973, Q-par Angus specialise in the research, design, development and manufacture of microwave antennas, systems and components.*

## RF Materials

### New products

The field of RF Materials is a complex and fast moving one, with all of the major suppliers continuing to come up with new products, new variants on old products etc – there are also a number of interesting new entrants to the market – all leading to a bewildering proliferation of products and product names.

Trackwise ensure that they keep on top of all of these developments – so that you don't have to! – and we maintain a database of all available substrates in the Materials section of our website [www.trackwise.co.uk/Default.aspx?tabid=93](http://www.trackwise.co.uk/Default.aspx?tabid=93)

If you need any advice on material selection – on technical and/or cost grounds – please do not hesitate to contact Trackwise.



### Trackwise bin end sale

**Trackwise have slow-moving stocks of a number of RF Materials which we are offering at attractive 'bin end sale' prices. All are as-new and fully traceable with suppliers' CofC.**

There is a list of available materials on our website, or for an up to date list, please contact Sharon Prosser.

### Low Dk foam dielectric

After Arlon's decision to stop manufacturing their FoamClad product, Trackwise have sought a replacement solution to the advantages of a substrate that approximates to an air dielectric.

Trackwise procure a closed cell RF foam and by use of suitable RF flex circuits, are able to produce a highly effective foam based laminate with a very low Dk (c1.1 – depending upon thickness) and very low loss.

This has been demonstrated to be wholly suitable for low power antenna applications.

**If you require any further details on this innovative product please do not hesitate to contact Trackwise.**

# Trackwise – continuing to serve international markets for specialist PCBs

**Trackwise, formed in 1989, specialises in the manufacture of antennas using printed circuit technology – including very large (up to 2.8m) boards used as the radiating element in cellphone base station antennas.**

The company exports to antenna manufacturers around the world, including the USA, Australia, Europe, China and Thailand, **with exports to China representing more than 20% of Trackwise turnover.**

At Trackwise, we specialise in leading-edge PCB manufacture.

Over the past few years we have invested extensively in manufacturing technology dedicated to the production – to a very high degree of precision – of the very large high-frequency printed circuit boards used as antennas in the cellphone base stations run by mobile phone operators.

Our antenna PCBs range from very small chip-sized terminal antennas for PCMCIA cards etc through patch and panel versions for applications such as WiFi and WIMAX to the largest GSM base station antenna

or FSS (frequency selective surface). The boards are based on PTFE, FR4 and flexible substrates.

Trackwise has patented a number of innovations for the antenna community, including TrackSlip® a low-friction surface finish for the sliding element of variable tilt UMTS antennas.

The skills acquired in manufacturing antenna PCBs have brought success for the company in other RF and microwave industry sectors, such as security systems, broadcast and vehicle telematics.

## Investment in physical and human resources

**Trackwise have continued to make significant investments – in plant and people – at their facility in Tewkesbury.**

Trackwise have invested in a new waste water treatment facility from Env-Aqua Solutions Ltd. This will ensure that Trackwise continue to meet the stringent contamination requirements placed upon us by our local water authority – and allow us to reuse a significant percentage of our waste water.

Darren Wright has successfully completed his NEBOSH General Certificate. The award demonstrates a professional level of competence in the management of health & safety at work. Congratulations to Darren on achieving this nationally recognised award.



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