

## Andrew Dewdney

Having studied Physics at Oxford University, Andrew Dewdney went on to Imperial College in London, researching the optical properties of III-V semiconductors for his Ph.D., before joining Oxford Magnet Technology to design magnets for MRI in the mid '90s. Being able to use his physics background to advance healthcare is a combination that fascinates him to this day. So much so, that when offered the opportunity in 1998 to be a delegate in Erlangen for two years, he quickly said yes, despite not being able to speak German! Two years has evolved into becoming a permanent resident, marrying a German wife and becoming a father of two dual-nationality children (and being fluent in German). He has worked in Erlangen since then, as part of the R&D team developing magnets and passive shimming for all of MR's products to be launched after that.



Erlangen, Germany



### How did you first come in contact with MRI?

It was a shock – some German physicists from Siemens came over to Oxford and explained what was wrong with our new magnets and I had to measure it! It was a steep learning curve, but my fascination grew with the challenges it presented ... and MAGNETOM Symphony went on to be a very successful system.

### What is most fascinating about MRI?

MRI is such a sensitive physical phenomena, it never ceases to amaze me that it is possible to install thousands of MRIs around the world, all capable of producing such detailed images and every time I get the chance to see the results of some new imaging technique, I am astonished at just how much we can measure in the human body, by simply flipping nuclear spins.

### What is your role in the development of MAGNETOM Vida<sup>1</sup>?

MAGNETOM Vida is the next development in a long line of MR systems I have worked on. In particular I contributed to the magnet design and homogeneity specifications and also a totally new field stabilisation concept, advancing it from the first invention through early development and final testing until reaching the goals we had set, addressing a long-standing problem for high-performance MRI.

### What is most motivating about your job?

I am involved in many aspects of the life of an MR system: developing a new product is one part, but I am also responsible for continuing support, long after the initial launch excitement is over and therefore quality is important to me: many of my friends and family have needed MRI scans over the years – who knows which system will be needed next? And it's satisfying to know that I contribute to people's health and well-being all over the world.

In contrast to this, I have the occasional chance to support university research customer projects with innovative hardware such as multi-channel non-linear gradient or shim arrays – the excitement of academic research and working with multi-national teams on unique systems fosters innovation and brings fresh ideas for future products.

### What would you do, if you could do for one month whatever you wanted?

In the MR world, I would appreciate a month's secondment to one of the university research groups, with time to learn something new within the broad spectrum of MR. With the family, I would love to take a large RV with mountain bikes on board through the northern Rockies – and for my other hobby, attend a large annual Scottish Country Dance Festival near Boston MA on the way home!

<sup>1</sup> 510(k) pending. The product is still under development and not commercially available yet. Its future availability cannot be ensured.