

Life After The Labs

Peter Selway

Following the Nortel takeover, I had a fair idea that my career in materials and components would not last quite long enough to take me to retirement. So over a few years I had developed a network of contacts which had the potential to develop into post-STL activities.



- SERC (as it was then) research committees
- Research steering groups
- Visiting Professor at Imperial College.

1998 – 2005

When I left STL in 1998 I was invited to join Imperial, based in Electrical Engineering but employed by the Centre for Electronic Materials and Devices (CEMD) which was a cross disciplinary/cross department virtual centre.

- Bringing an industry view and contacts to the activities
- Improving communications across the diverse research groups
- Spotting opportunities for cooperation
- Improving the external exposure of the Centre and its component parts.

The job was a great deal of fun and meant talking to very bright and energetic research groups, a bit like being at STL in its heyday. Over this period, I also:

- Organised some open days to showcase the activities to industry and the press
- Produced a regular newsletter to improve the sharing of ideas and results
- Wrote a couple of quite large reports for external use
- Gave the occasional lecture e.g. to MSc students on the management of R&D.

After a few years, the 'branding' changed and everybody became obsessed with 'nanotechnology' so we faded the CEMD and the College rode the new bandwagon.

2001 – 2011

I was a Non-Executive Director of Microsaic plc, a company set up to exploit the research of the group in EEE working (mostly) on silicon microengineering. It was familiar territory for me, harking back to the ground-breaking work started by John Greenwood at STL in the 1960s and continuing under the leadership of David Satchell, 'Jackie' Jackson (to 1985) and Pete Graves (until its transfer to Druck Ltd, Leicester, in 1989). After a few false starts the company focused on developing a miniature quadrupole mass spectrometer that was small enough and low enough power for an individual chemist to have one on his workbench (shades of the old ICL 'one per desk'). Potential uses foreseen included in security and drug discovery. As often happened in device development, we thought we understood the device but then it took years to unravel the intricacies, then more to sort out things like:

- The HV electronic drive circuits which required previously unheard-of linearity
- The software
- The plumbing to introduce liquid samples from a liquid chromatography system
- Stability and resilience.

However, the result now is the Microsaic 4000 MiD, a fully integrated, versatile miniature mass spectrometer system now being marketed. The complete system has at its heart a microfabricated Ionchip®, a proprietary vacuum interface and a Spraychip®.

2008 – 2012

The final and most rewarding and entertaining activity I had, post-STL, was as a member of the Royal Academy of Engineering committee that awarded the annual MacRobert Award. Once again, the STL grounding was very valuable, both by having been exposed to such a variety of technologies, and also having been involved many years ago in applying for the award. The process involved reviewing application forms and then

visiting the groups involved to see their development. The sheer variety and calibre of the groups we visited made the whole experience amazingly stimulating – artificial limbs, jet engines, clever off-road suspension and terahertz technology to detect mines to name a few.

I did finally retire a few years ago, but count myself extremely fortunate to have had a long and rewarding post-STL career, which was only made possible by the experiences gained in 35 years of working in such a dynamic and capable organisation as STL, with all the great people who were there.

The Microsaic 4000 MiD



Microfabricated silicon on glass Ionchip®



Microfabricated Spraychip®



Quadrupole mass spectrometer

Alan Hartley-Smith

After leaving STL I held positions as:

- Marketing Communications Manager with Ferranti Electronics
- Freelance consultant
- Marketing Communications Manager for a spin-off company from the University of Manchester Institute of Science and Technology (UMIST).



I was recruited by UMIST Electrical Engineering Department to run a project to design a system for the Electronic Design Engineering Consortium (EDEC), under the auspices of the Government's Teaching and Learning Technology Programme (TLTP). The objectives were to link eight universities to produce and then use a common set of course modules for the undergraduate syllabus. I designed and implemented with two post-graduate students a writing, editing, storage and delivery mechanism using PCs, based on the emergent World Wide Web platform. A Mosaic browser was linked to audio/visual applications for production and display clients, working with NCSA servers located in Manchester and Bristol. Thus in 1992 we had what would now be called an online content management system, which was eventually relocated to Oxford Brookes University. As a reminder, while at STL I had designed, and demonstrated at an international conference, an electronic audio/visual presentation system based on the Microwriter and Teletext, but this was not taken up by ITT or STC.

I was appointed World Wide Web Officer for UMIST to spread the word and encourage the take-up and use of the technologies by all departments.

I was appointed as a lecturer within the Department of Computation to produce, deliver and examine under- and post-graduate courses in internet technologies, together with the creation of a Centre of Expertise in e-Commerce (CEeC). Its aim was to promote the use of the WWW by Small and Medium Companies (SMEs) and its development by businesses, including encouraging graduates to create start-ups within an incubator facility at the University. This led to the first UK degree in e-commerce with a specialisation in internet security, including the provision of a 'neutral observer' service for providers of digital certification services, to ensure compliance with regulations.

I retired from the Department when I reached the compulsory age of 67, just before the dissolution of UMIST and Victoria University of Manchester (Owens) and the creation of the new University of Manchester.