

**C-MAC MicroTechnology hosts influential skills shortage roundtable
discussion with leading industry figures.**

**Coordination, inspiration and industry funding essential to combat
decline in profession**

*C-MAC MicroTechnology, Thales, Unite and Imperial College debate issues facing
UK high-tech businesses*

Buckinghamshire, 24th October 2007 – C-MAC MicroTechnology hosted a roundtable event in Central London last week, where leading representatives from the UK's engineering and technology industries met to discuss the growing engineering skills shortage facing UK technology companies.

Britain once had a global reputation for engineering excellence. While the country does still produce some of the world's finest engineers, the output from the education sector is not meeting demand. Regardless of popular perceptions, the UK still has a large and vibrant engineering industry, but the future success of this sector is uncertain if trained and enthusiastic engineers are not produced by the country's schools and universities.

Chaired by Indro Mukerjee, CEO of C-MAC MicroTechnology, participants were: Paul Hill, General Manager, Aerospace and Defence, C-MAC MicroTechnology; Dawn Ohlson, Director, Educational Affairs, Thales; Barry Trimmer, Research, Technology and Engineering Director, Thales; Peter Skyte, National Officer, Unite; and Dr Stepan Lucyszyn, Reader in Millimetre-Wave Electronics and Senior Admission Tutor, Imperial College.

Indro Mukerjee, CEO, C-MAC MicroTechnology, commented: "Industry, education and society need to unite to preserve and advance the future of the UK's technology and **C-MAC MicroTechnology**

engineering industry. To enable this we need to help foster a pipeline of enthusiastic, innovative and motivated graduates to join the engineering and technology workforce.”

Following below is a summary of the key challenges which were identified during the discussion:

Inspire children early

- Brain drain - engineering is losing some of the best graduates to the City and other 'high flying' and well-paid careers. Industry must help make graduates realise the excitement, fulfilment and challenges which come with an engineering career.
- Children haven't changed – they still exhibit early curiosity and enthusiasm for how things work but this needs to be captured and nurtured. This is a challenge for primary and secondary schools.

The role of teachers

- There is a huge role for teachers to play in motivating potential engineers - industry must do more to help them become technology evangelists as they don't always have the visibility and resources to communicate and inspire as much as they want to.
- It's too easy to say that there are no 'modern' engineering role models – teachers can help fill this void by providing the inspiration and guidance to young students.

Industry investment

- Committed and long-term direct investment by industry into universities and students is essential, for example lab funding and student sponsorship. This will build relationships with students, embed the link with industry and give students faith that an engineering career is worthwhile.

Champion UK technology and engineering expertise

- The UK doesn't promote its technology leadership enough. There are not many British technology brand names e.g, Mercedes, Intel, Sony, but a lot of 'unseen' expertise goes into these products. Industry needs to be better at shouting about what we do best.
- The term “engineer” is often abused in the UK – many children's first exposure to an engineer will be the person that fixes the washing machine and this leads to a lack of understanding of the profession.
- There is a need to keep UK technology expertise at the design-led and creative side, and not erode this current strong position. Requires inventive people – very highly skilled graduates and trainees.
- Conversely, industry needs to examine what role manufacturing will play in this regard – will it be sustainable to only keep UK technology at the high value design-led end of the value chain?

Good intentions

- Coordination and leadership of existing initiatives – too many start from good intentions and amount to little, or do not deliver on expectations.
- In countries such as China, India, Japan commercial companies all come together under the stewardship of government, with tangible results. Can and should this be replicated in the UK?

Panellists represented different elements of the industry but were united in a common goal – to encourage more young people to enter the engineering and technology professions. When

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asked what their one wish would be to change the status quo, the following responses summed up their key concerns:

“See more inventive students coming out of schools to support the growth of UK technology industry and its international competitiveness.” - Barry Trimmer, Thales

“Determine what the most effective way to engage with schools is, and to help technology companies do this better.” - Dawn Ohlson, Thales

“To see the rhetoric about the workforce being the UK’s greatest asset become a reality.” - Peter Skyte, Unite

“For industry to put their hands in their pockets and fund students and engineering departments.” - Dr. Stepan Lucyzsyn, Imperial College

“That kids would aspire to careers in engineering and see it as a positive, exciting and rewarding route to pursue.” - Paul Hill, C-MAC

NOTES FOR EDITORS:

Headed by Indro Mukerjee, **C-MAC MicroTechnology** is the world leader in high-reliability electronic systems, modules and components for the automotive, medical, communications and aerospace industries. Our head office is in Wooburn Green, UK, and we have design and manufacturing facilities in the UK, France, Belgium and Canada, with additional dedicated sales and customer support teams throughout Europe, the USA and China. We have built up an extensive intellectual property portfolio and considerable electronics design and manufacturing expertise geared to our target industries. Our products are often found in applications that operate in harsh environments, at extremes of temperature or frequency. The company is divided into two business groups.

C-MAC MicroTechnology offers unrivalled expertise in the design and manufacture of advanced high-precision microelectronics systems. Specialities at our production sites at Great Yarmouth in the UK, Sherbrooke in Canada and Ronse in Belgium include thick-film printing on ceramic and other substrates, surface-mount hybrid circuits, DC/DC power modules, direct-attach flipchip, low-temperature cofired ceramic (LTCC), chip-on-board (COB), multichip module (MCM) assemblies and PCB assembly. These manufacturing resources are complemented by an integrated design-to-test service encompassing ASIC design as well as analogue, digital, RF, mixed-mode and thermal simulation. Through our independently accredited test house facility, we can carry out product qualification and material evaluation to internationally recognized standards.

www.cmac.com

For further information please contact:

David Atkinson
Hotwire
0207 608 4684

David.atkinson@hotwirepr.com

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