



Institute of Advanced Telecommunications (IAT)

Swansea University

*'The Commercial Interface of IAT:
Delivering Solutions to SMEs'*

Dr Christian Bryant

Technology Transfer Manager



Proud partner in the Mobile Virtual
Centre of Excellence www.mobilevce.com





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1. What is IAT?

- We are a '**research-led**' institute that aims to develop products with real commercial potential. We integrate ground breaking academic research with knowledge transfer expertise.
- We provide tailored solutions to leading multinational companies and entrepreneurial SMEs.
- We are based in Swansea University, which possesses expertise in electronic engineering, computer science and mathematics. We are ideally placed to research and integrate all aspects of communications technology.
- Three broad research groups are present within IAT; **Photonics (Optical Communications), Wireless Communications and Networks.**
- IAT **research expertise** is complemented by an experienced **commercial team.**
- IAT is financially supported by ERDF Objective 1 funding through the Welsh European Funding Office (WEFO) and has a number of project partners including collaborative industrial partners



2. Research, Laboratories & Test-beds

- Photonics, Wireless communications and Networks areas of research are all described by previous speakers and are detailed in the glossy booklets within your packs.
- In short, IAT possesses;
 - Academic expertise and research excellence
 - Well equipped state-of-the art laboratories
 - Commercially facing test-bed facilities
 - Demonstration Laboratory of Technologies

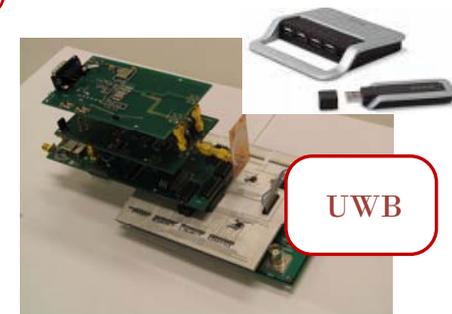
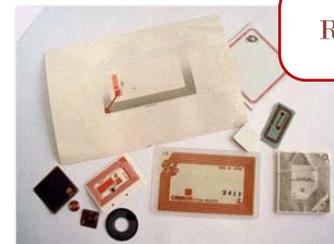
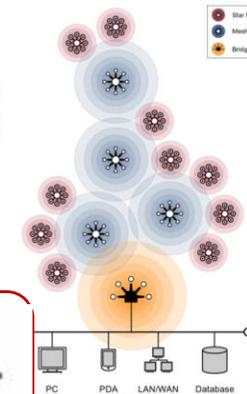
A *'can do'* attitude that underpins our commercial imperative

- Today – A tour of our facilities plus opportunity to chat with us



Demonstration Laboratory of Technologies

- Wireless possibilities are manifold and complex
- Different solutions exist for different scenarios
- The aim of the laboratory is to demonstrate the different technologies in context, for real
- IAT researchers use the lab as a focal point for discussions, generating new ideas and concepts with companies
- Wireless solutions covered so far include:
 - Wi-Fi
 - Bluetooth
 - ZigBee
 - UWB (Ultra Wide Band)
 - RFID



3. Our Collaboration Portfolio

The Commercial Team are currently engaged with organisations on a number of levels

- Strategic Collaborative Investment and Research programmes with Large Organisations
- Long term infrastructure and collaborative research (in partnership with other University Departments / Large Organisations to support SME engagement) – Convergence Funding
- Long term collaborative R&D projects with large organisations (International)
- Collaborative R&D projects with Universities and Companies (UK and International)
- **Problem solving / consultancy and collaborative R&D activities with SMEs (e.g. within Objective 1 areas of Wales)**
- Seeking Collaborative R&D Funding for Research Themes from Government and Higher Education bodies (Wales / UK)



4. How do we engage with collaborators?

- Attendance of International (GSMA, CeBIT etc) Technology Brokerage Events
- Linking and applying for strategic funding with UKTI and Welsh Assembly Government (T&I, A4B programme, Sector and IBW) initiatives
e.g. Members of the Welsh Opto-electronic Forum
- Bespoke (capability and case study examples) promotion to SMEs; including
 - Company friendly (non academic) promotional literature
 - Focused programme of technical seminars in partnership with large organisations
Technology Evening with EADS
Future of Mobile Broadband Event with Orange and Analysys Mason..... etc.
(*Future e-crime and security event & General Telecoms technology brokerage event*)
 - Showcasing technology opportunities e.g. 'Demonstration laboratories'
- Joining UK **K**nowledge **T**ransfer **N**etworks (e.g. Digital Comms and ITS) and EU Technology Platforms (e.g. e-mobility)



How do we engage with collaborators?

We also strategically position IAT at the forefront of future developments

- Member of the WAG ICT Special Interest Group (Futures and Horizons) alongside other Welsh HEIs.
- Theme leader (Telematics / ITS) in an all-Wales HEI Transport Research programme – FASTER Wales (HEFCW)
- Analysis of ‘future sector trends’ from various associations, e.g. Global System for Mobile communications Association – GSMA
- IAT has an important role within Swansea University’s industry-facing ‘2nd Campus’

.....but how (practically) can we work with SMEs?



5. Collaborating with SMEs

IAT aims to be a sustainable hub for telecommunications with its activities including; long and short term collaborative R&D; technology transfer; postgraduate training and the generation of spin-off activities

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IAT was specifically targeted by the Welsh European Funding Office (WEFO) to deliver economic development objectives for the benefit of the region. *End date June 2008**

These relate to IAT working with Small and Medium Size Companies (SMEs) based in Objective 1 areas of Wales (West Wales and the Valleys)

IAT offers a range of collaborative support opportunities to SMEs (small and medium enterprises) such as expert problem solving, objective advice, consultancy and access to test facilities

We can (and have) identified, scoped opportunities and undertaken projects collaboratively with SMEs that have employ a wide range of tailored communications technology solutions



6. The Process

- Initial IAT 'Capability Analysis'** What skills / competencies / know how / kit was available
Workshop for all Staff – Bespoke capability offering created
 - Mail shots (over 1150 SMEs)** Staggered, sectoral / technology based. Market intelligence used in
Combination with managing delivery (resource vs. expectation)
 - Strategic Visits** Technology / 'Problem solving' surgeries / visits with companies,
e.g. Optic Technium (WOF); CAST; @ Wales; Business Intermediaries
 - SME Facing Events** IAT Hosted events (e.g. EADS - Jan 08; Future of Mobile Broadband
Orange / Analysys Mason – May 08)
 - Individual Company Visits
Opportunities Analysis** Technology Translation of Problem Statements into deliverables
 - Develop Collaboration Proposals** Iterative process resulting in mutually agreed deliverables at the outset
 - Undertake Project** Undertake the work, continued dialogue with the company
- To date: 95 Objective 1 based SMEs given advice, resulting in 28 Collaborative Projects**
- Impact Assessment** What were the pros / cons of the study – have we (IAT) made a
difference (£ and employment at the SME)



7. Examples of Collaborative Projects with SMEs



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- Access to specialist equipment and consultative advice to enable companies evaluate and test existing communication products (e.g. PBX VoIP project) and offer design alternatives.
- Test, evaluation, measurement and consultative assistance in wireless communications including novel Bluetooth, WiFi, Ultra Wide Band (UWB) and RFID applications, e.g. in enhanced remote data gathering (utilities) and in enhanced fire safety systems
- Effective laser module sourcing including the efficient modelling and re-design of optical components for diverse applications in healthcare, telecoms and transport
- Feasibility and scoping studies into the metrology of electrical cables
- Studies into novel applications of Organic LEDs (e.g. in healthcare)
- Consultation, laboratory based testing and potential deployment of an enhanced Wireless Mesh Network at a tourist attraction
- Feasibility studies regarding existing and potential connectivity (e.g. diverse connectivity and bandwidth options) with respect to expansion plans of companies in the area of managed data services





8. Results of IAT's engagement with SMEs

- To date, IAT has **given advice** to numerous **(95)** SMEs in Objective 1 Areas of Wales
- As a result, we have (and are in the process of) undertaking **28 collaborative projects** with SMEs.
- A managed process of post-intervention follow-up (**impact follow up**) has shown that such assistance at the very least provided positive resource to the assisted company saving management time, but encouragingly has, in some cases, has given more tangible benefits to the SME, e.g. enhanced products or processes, resulted in improved efficiencies and reduced costs
- Through events (*like this!*) and continued meaningful and bespoke engagement of SMEs we hope to develop a technology community having IAT as its networking hub.
- **Impact Follow up** is ongoing (post-collaboration project event) to fully quantify (£ and employment) the impact of IAT's intervention with the SME is ongoing.
- **An early snapshot** of quantified data available after **Impact follow up** (to date) shows that IAT's collaborative projects with SMEs has shown

Increased Turnover at collaborating SMEs	£1.65M
Jobs created at SME collaborators	13
Jobs safeguarded at SME collaborators	55

Note: Collection of the above and other 'impact' metrics is ongoing

....and some comments from SME collaborators



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"IAT is in the forefront of technology advancement and introducing this new technology is strategic to our company growth"

"A very good piece of work"

"We would like to get more involved with IAT. There must be lots of opportunities for joint ventures"

"Working with IAT is a good way of adding additional resource to our project and accessing the IAT network of people that was extremely relevant to our research. It certainly helped to reduce the time we would have spent researching."

"IAT provides a gateway to innovation and expertise not available in our own infrastructure and the location is very suitable".

"The support was timely and by gaining access to the test and measurement equipment we were able to get involved with a major new customer to sell the product in bulk."

"We are keen to form closer working relationships with IAT as part of a future R&D strategy. Such a partnership arrangement would enable the company to share expertise in the preparation of new products and business opportunities utilising innovation ideas/technologies not yet in the market."

"IAT provided timely support and enabled us to launch an exciting new product"



9. The Future?.....Digital Economy of Wales

- IAT's ERDF funded was **extended** from its initial deadline of June 2008 until **end December 2008**
- IAT **will continue** its managed engagement and bespoke promotion with companies to ensure we provide continued advice and deliver collaborative projects to enable SMEs develop new products, processes and services.

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- Following this period we plan to continue our support of the local economy through applications to further structural fund programmes, i.e. Through a further ERDF Convergence bid
- IAT is a major partner in the **Digital Economy of Wales (DEW)** 'Convergence Fund' bid. (Joint bid – Swansea and Bangor Universities being the partners)

The **DEW** project will maximise the economic potential of Welsh SMEs operating in the digital economy and will help ambitious businesses realise their potential for growth.

DEW aims to make a lasting and transformational contribution to the economy by transferring University research to SMEs, enabling them to increase their level of R&D to meet new market opportunities – a key driver in Welsh economic development policy for a knowledge economy



Contact us

If you would like to discuss your business requirements with a member of the IAT commercial team then please feel free to chat with us today

or, if you think of something after you leave.....

Contact

Beverley Guess

iatcommercial@swansea.ac.uk

+44 (0)1792 513460

Many thanks!