SCUBE-ICT Training Session

Part I: How to join a ‘competitive consortium’ preparing an FP7 ICT Proposal

Giles Brandon
Intelligentsia Consultants

Agenda

1. Introduction
2. Step 1: Background work
3. Step 2: How to identify ‘successful’ European ICT partners
4. Step 3: Alternative routes to identifying European ICT partners
5. Step 4: How to approach successful European ICT partners
6. Step 5: How to identify other ICT related calls for proposals

Giles Brandon, gilesbrandon@intelligentsia-consultants.com

Introduction (1/2)

1. Important to have a **realistic outlook**
2. Average success rate for all FP7 ICT proposals is about 15-20%
3. Under FP6 IST, the success rate for Belarus was 11.5% (6 x NoE/CA/SSA and just 1 x STREP)
4. No one can promise you success … but you can do a lot to reduce the risk of failure
5. Preparing a competitive ICT proposal is a challenging task even for experienced European ICT organisations
6. For ‘inexperienced’ ICT organisations from ‘third countries’ (e.g. Belarus and Ukraine), very difficult and time-consuming to form project consortia and write competitive ICT proposals

Giles Brandon, gilesbrandon@intelligentsia-consultants.com

Introduction (2/2)

6. Not put off yet?! So, what can you realistically do?
7. Identify ‘successful’ European ICT organisations who are preparing FP7 ICT proposals
8. ‘Successful’ European ICT organisations = Track record of successful EU funded project implementation
9. Persuade the ‘successful’ European ICT organisations to let you join their consortia by offering unique/specific research capabilities that they need

Giles Brandon, gilesbrandon@intelligentsia-consultants.com

Step 1: Background work (1/2)

1. Study past and current EU priorities concerning ICT research to understand if your research is relevant

   - Examine DG Information Society's webpages (http://cordis.europa.eu/themes/home_en.html)

   - Download and examine the latest FP7 ICT work programme (http://cordis.europa.eu/fp7/wp-2009_en.html)

   - Register for ICT news on DG Information Society portal (http://ec.europa.eu/information_society/newsroom/cf/userregistration.cfm?nextStep=userprofile.cfm)

   - Register for research*eu – free magazine of the European research area (http://ec.europa.eu/research/research-eu/index_en.html)

Giles Brandon, gilesbrandon@intelligentsia-consultants.com

Step 1: Background work (2/2)

1. Investigate FP6 IST and FP7 ICT projects in your areas of interest

   - Search ICT Results news service and register for e-bulletin (http://cordis.europa.eu/ictresults)

   - Search ICT projects on the Cordis database (http://cordis.europa.eu/search/index.cfm?fuseaction=proj.advSearch)

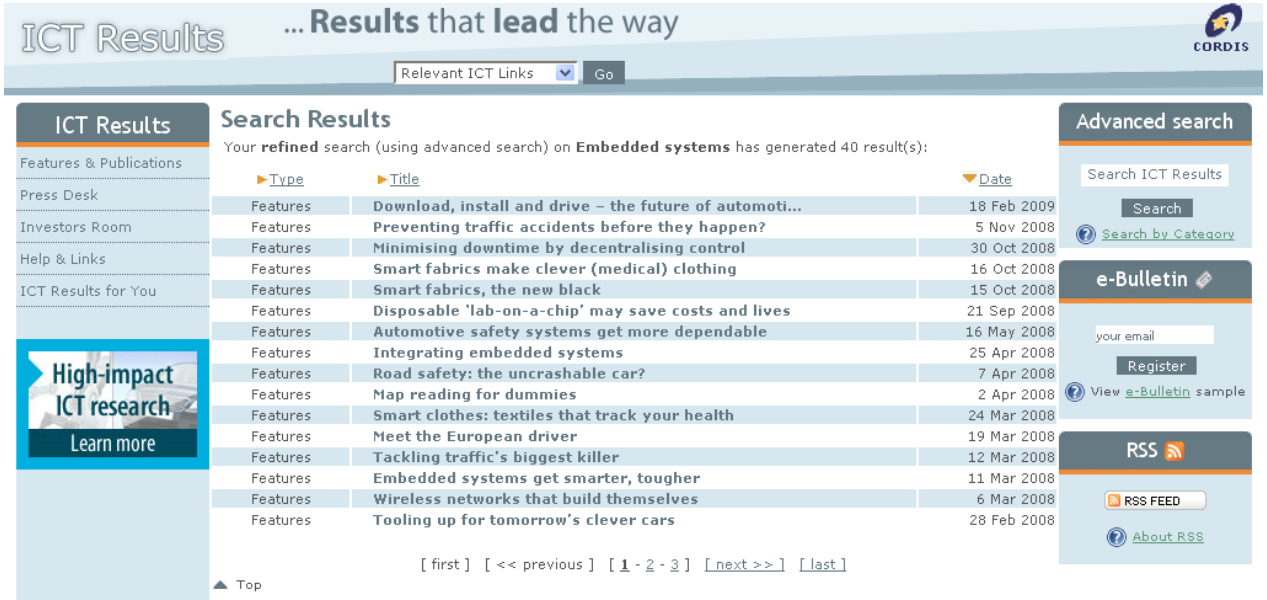
Giles Brandon, gilesbrandon@intelligentsia-consultants.com

Step 2: How to identify 'successful' European ICT organisations (1/3)

1. European ICT organisations who have successfully implemented FP6 IST/FP7 ICT projects:

   - A) Use the "Advanced Search" and/or "Search by Category" facilities on the ICT Results news service (http://cordis.europa.eu/ictresults)

     e.g. Editorial Theme = Embedded Systems (scan the features, collect project coordinator contact details, visit project website etc)



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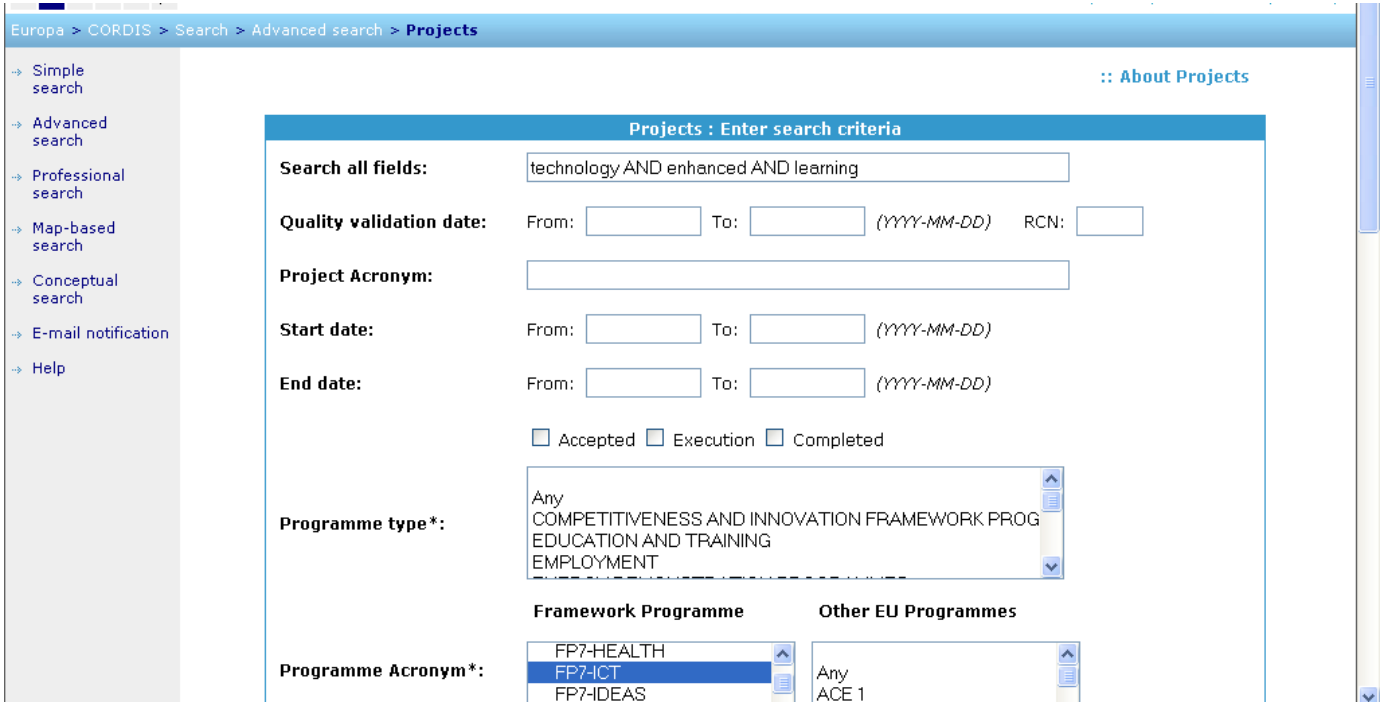
Step 2: How to identify ‘successful’ European ICT organisations (2/3)

- B) Search ICT projects on the Cordis database (http://cordis.europa.eu/search/index.cfm?fuseaction=proj.advSearch)

  B.1) e.g. “Technology Enhanced Learning” under FP7 ICT



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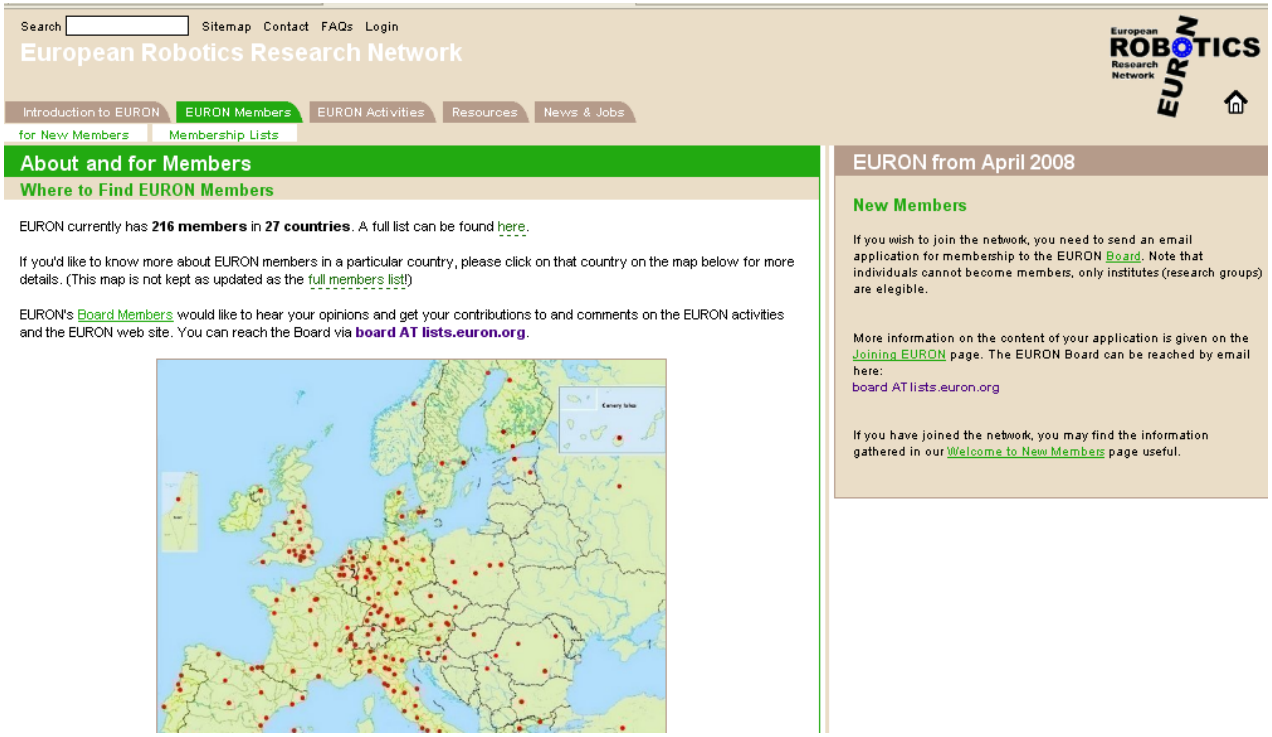
Step 2: How to identify 'successful' European ICT organisations (3/3)

- B) Search ICT projects on the Cordis database (http://cordis.europa.eu/search/index.cfm?fuseaction=proj.advSearch)

B.2) e.g. Euron - Network of Excellence on Robotics, www.euron.org



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Step 3: Alternative routes to identifying European ICT partners (1/4)

1. FP7 support actions: SCUBE-ICT (www.scube-ict.eu), ISTOK-SOYUZ (www.istok-soyuz.eu) and (www.extend-ict.eu)
    - Organising awareness raising and networking events
    - Organising delegation tours and helpdesk

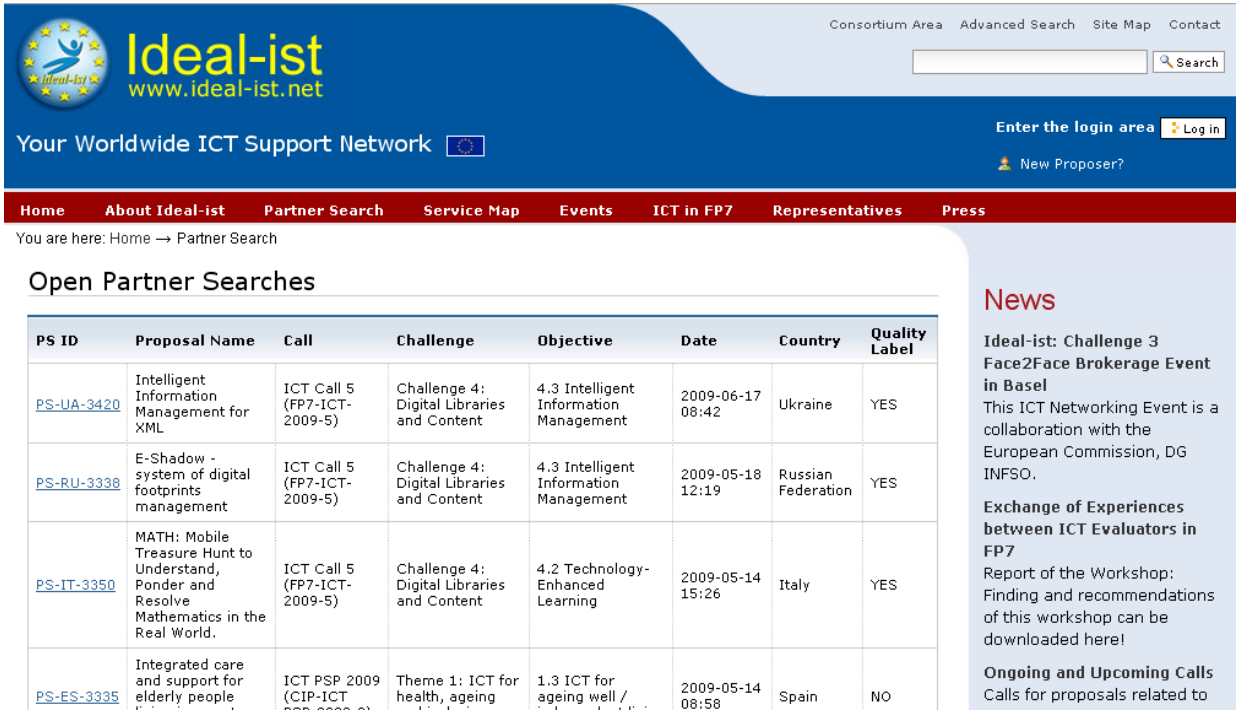
2. European Commission organised FP7 ICT information-days in Brussels and Luxembourg (and elsewhere in Europe)
    - Presentations concerning call objectives
    - Networking
    - Recent events, see news on LvCSTEI website (http://cstei.lviv.ua)

Giles Brandon, gilesbrandon@intelligentsia-consultants.com

Step 3: Alternative routes to identifying European ICT partners (2/4)

1. Ideal-ist Partner Search (www.ideal-ist.net)

   - Ideal-ist network of representatives (covering 65+ countries)
   - Partner search facility

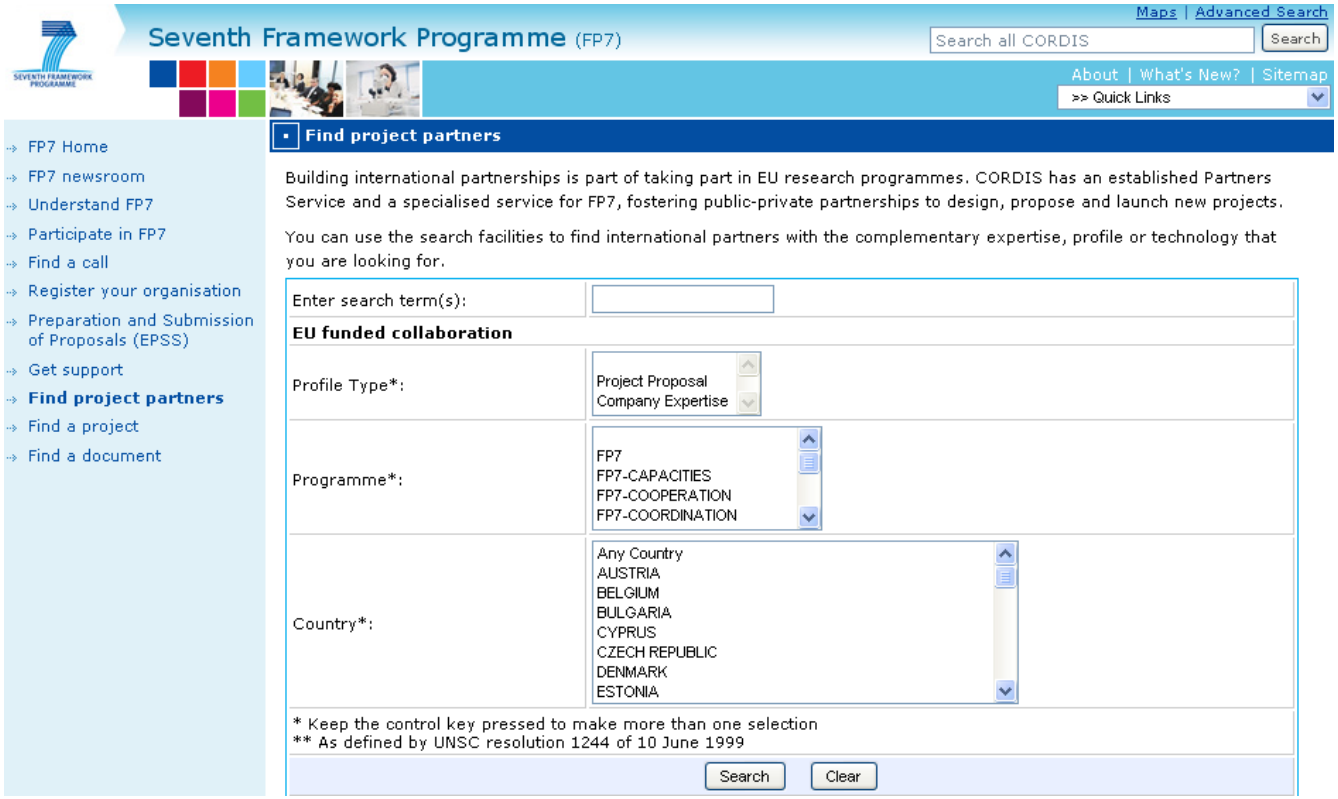


Giles Brandon, gilesbrandon@intelligentsia-consultants.com

Step 3: Alternative routes to identifying European ICT partners (3/4)

1. Cordis FP7 Find Project Partners service (http://cordis.europa.eu/fp7/partners_en.html)

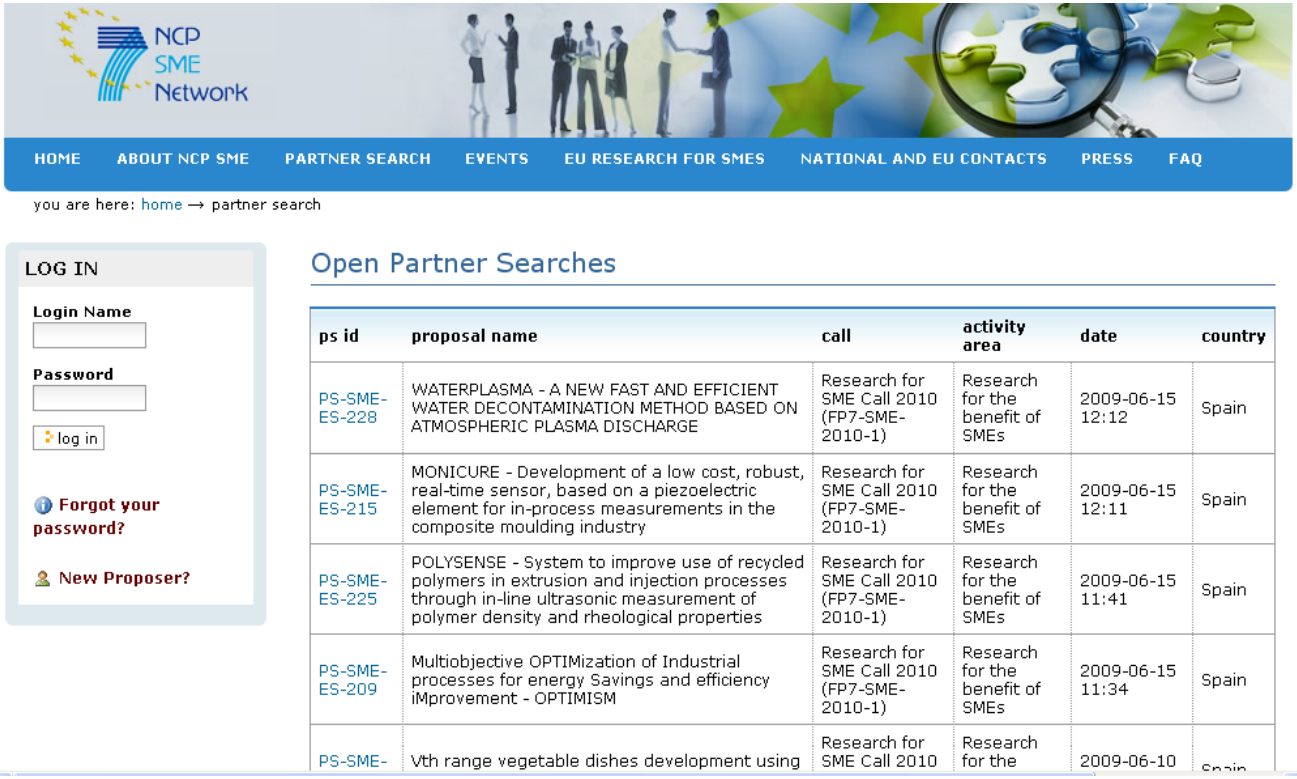
   - E.g. Search on “microsystems and smart miniaturised systems”



Step 3: Alternative routes to identifying European ICT partners (4/4)

1. NCP SME Network (www.ncp-sme.net)

   - Partner searches for SMEs
   - Not limited to ICT



ps id	proposal name	call	activity area	date	country
PS-SME-ES-228	WATERPLASMA - A NEW FAST AND EFFICIENT WATER DECONTAMINATION METHOD BASED ON ATMOSPHERIC PLASMA DISCHARGE	Research for SME Call 2010 (FP7-SME-2010-1)	Research for the benefit of SMEs	2009-06-15 12:12	Spain
PS-SME-ES-215	MONICURE - Development of a low cost, robust, real-time sensor, based on a piezoelectric element for in-process measurements in the composite moulding industry	Research for SME Call 2010 (FP7-SME-2010-1)	Research for the benefit of SMEs	2009-06-15 12:11	Spain
PS-SME-ES-225	POLYSENSE - System to improve use of recycled polymers in extrusion and injection processes through in-line ultrasonic measurement of polymer density and rheological properties	Research for SME Call 2010 (FP7-SME-2010-1)	Research for the benefit of SMEs	2009-06-15 11:41	Spain
PS-SME-ES-209	Multiobjective OPTIMization of Industrial processes for energy Savings and efficiency iMprovement - OPTIMISM	Research for SME Call 2010 (FP7-SME-2010-1)	Research for the benefit of SMEs	2009-06-15 11:34	Spain
PS-SME-	Vth range vegetable dishes development using	Research for SME Call 2010	Research for the	2009-06-10	Spain

Giles Brandon, gilesbrandon@intelligentsia-consultants.com

Step 4: How to approach successful European ICT partners (1/5)

1. Prepare marketing material

   - Even universities and research institutes need marketing material!
   - But, marketing material is often too long, unclear and uninteresting!
   - Prepare one page, A4 sized profile form – focused on a single research department or technology
   - Highlight past international research experience
   - Don't forget to mention what you look for:

     e.g. "We want to join a consortium of European ICT organisations preparing a proposal for Objective 4.2 Technology Enhanced Learning under FP7 ICT Call 5"

   - Good example: technology profile form used by STCU (see http://www.stcu.int/documents/download/TPF_Example.pdf)

MICROSYSTEMS TECHNOLOGY

A NEW PROGRAMMABLE 3-AXIS PIEZOELECTRIC NANOMANIPULATOR WITH ULTRA-LOW DRIFT FOR CELLS TECHNOLOGIES

Description

Robotic micromanipulators are used for demanding biotech applications such as Patch Clamp (holding and positioning a cell), IVF (in-vitro fertilization), and cell cloning, as well as in the semiconductor integrated circuits industry – all growing markets. LILEYA's PSF-3 IVF is a state-of-the-art 3-axis nanomanipulator system based on advanced piezoelectric rotary motor, integrated with a digital signal processor (DSP) multifunctional programmable controller including 46 operations. When the motor is deenergized, it provides an automatic solid brake on movement, with almost undetectable backlash and drift. It works by converting the rotary motion of an advanced piezoelectric motor (fitted onto each axis of the nanomanipulator) into linear motion. A combination of high torque, variable speed and high angular resolution enables the piezoelectric motor to be used in either continuous or stepper mode. These characteristics facilitate a smooth transition, without degradation in intrinsic performance, from an angular step of less than 5 μrad to continuous motion, and a range of angular velocities, from 5 μrad/sec up to 60 rev/min. This translates into a linear resolution of 0.4 nm and a linear range of velocities from 0.4 nm/sec to 500 μm/sec for each axis of the PSF-3IVF. Additional benefits of the PSF-3 IVF design include the elimination of heat dissipation, the use of nonferrous and nonmagnetic components, ultra-low electrical noise and lowsupply voltage (12 VDC), which together make the PSF-3 IVF ideal for very sensitive applications.

Innovative Aspect and Main Advantages

PSF-3 IVF combines extremely high resolution (0.4 nm), long term stability (drift less than 2 nm/hour @ 20°C) and long travel (10 mm). The "Stick/Slip" is one of the major factors, which limits nanometer resolution and hence the performance of traditional nanopositioners/manipulators. The PSF-3 IVF overcomes the stick/slip effect using the unique combination of the piezoelectric motor and DSP control. Any angular position of the rotor is locked by the selfdecelerating torque of the motor. The same force locks the whole friction system of the nanomanipulator. To limit the effect of any jump when initiating motion the unlocking process must occur almost instantaneously (within 10-100μsec). PSF-3 IVF's DSP core has been designed to implement a step formation within 2-10 μsec/μrad. This timing results in an angular step of the motor in the nanometer range, which translates immediately into an equivalent linear step eliminating measurable static friction effects.

Areas of Application

LILEYA's advanced Nano-Manipulator technology is designed to meet a variety of positioning needs for the scientific, biotechnology, medical, semiconductor and industrial markets. It is suitable for applications such as: patch clamp experiments on cells in culture, microinjection into cells, cell imaging, cellular and material handling, IVF fertilization and sterility treatments, DNA cloning experiments, extracellular recording, intracellular recording, cytopathology, precision robotic applications, MRI-guided robotic surgery applications, integrated circuits applications, IC mask generation and alignment, IC lithography, IC wafer measurements, fiber optic assembly and alignment, laser production, E-beam control for IC's, ion beam control for IC's, read-write heads for recording tape and CD's, storage media applications.

Fig.1 SOFTWARE PSF-3 IVF

Fig. 2 Nanomanipoulator PSF-3 IVF

Fig. 3 Nanomanipulator PSF-3 IVF –H

Stage of Development

LILEYA's unique designs are protected by:

- United States Patent "MICROMANIPULATOR", Application Serial No.#2005/0023930
- Russia Patent "MICROMANIPULATOR" No.2041480
- UA Patent "MICROMANIPULATOR" No.2002064866

LILEYA builds systems with superior high performance characteristics and it can produce 50-100 systems in years at a low cost.

Contact Details

Contact person: Serhiy Petrenko
Small Scientific Production Enterprise "LILEYA"Ltd
Address: Kiev-056, 37Pobeda aven., KPI, departament 1730, PSON, r.289
Tel./Fax: (380-44) 241-96-31
Mob.: 8(067) 918-32-68
E-mail: tyll@ravenrx.kiev.ua
Web-site: www.piezomotor.com.ua

Technology Reference

natalya.mykhaylovska@stcu.int

Department of Open Education Systems (Nikolaev State University)

Who we are

The Department of Open Education Systems operates under the Nikolaev State University after V.O. Sukhomlinskiy. It specializes in the implementation of the principles of open education, in particular, distance learning in the educational area of Southern region of Ukraine. The department is training the faculty of foreign philology (different specialties) for distance learning, and plans to cover all the institutions and faculties of the university as soon as possible.

Cooperation interests

The Department of Open Education Systems is interested in the development of open education in Ukraine, in particular, distance learning in universities and institutions of postgraduate education.
Our potential roles: coordinators, partners, scientific experts, a research center.

Directions in research and development cooperation

- distance learning courses;
- seminar of develop distance learning courses;
- distance-learning web-system;
- learning tools in open education.

What makes us a good partner:

- skilled, creative staff;
- own web-system of distance learning;
- experience in creating distance education courses;
- extensive use of information and communication technologies;
- introduction of innovative technologies in education.

Our achievements

- introduction of distance learning in the state educational system at the same level as other forms of studying;
- develop our own distance-learning web-system;
- creation of 15 distance-learning courses;
- the availability of certificates of participation in the distance learning courses on the use of different systems of distance education.

Participation in projects:

- in collaboration with the and Southern Regional Institute of Teachers Postgraduate Education conducted a pilot distance course for teachers and principals, developed new case-distance courses and distance courses of methodical support for the learning process of pupils;
- participated in the project «New technologies in education» (the organizer is the National Technical University «Kharkiv Polytechnic Institute») to introduce Web 2.0 technologies in distance education;
- create a web-portal of the Education Management University Central Institute of Postgraduate Pedagogical Education;
- creating a methodological resource to help schoolchildren and teachers (in collaboration with Southern Regional Institute of Teachers Postgraduate Education).

Other information

Name of the research department:
Dept. of Open Education
Name of the organization:
Nikolaev State University after V.O. Sukhomlinskiy
Country: Ukraine
Number of researchers: 12
Working languages: Russian, Ukrainian, English
Contact person: Samoylenko O.M.
Position: Head of the Department
E-mail: samoylenko65@mail.ru
For more information you can visit: http://dlearning.in.ua

Giles Brandon, gilesbrandon@intelligentsia-consultants.com

Step 4: How to approach successful European ICT partners (4/5)

2. Promoting your ICT organisation

   - Use personal contacts and referrals (usually best method)
   - Attend networking events organised by EC (don't hide, make a presentation!)

3. 'Cold emailing' successful European ICT organisations (part A)

   - Send short email in English (100 - 200 words)
   - Attach your marketing profile form(s)
   - Provide full contact details and website address

Giles Brandon, gilesbrandon@intelligentsia-consultants.com

Step 4: How to approach successful European ICT partners (5/5)

2. ‘Cold emailing’ successful European ICT organisations (part B)

- Successfully contacted someone by email … now what?
- Be brave and follow up with a phone discussion on how to collaborate
- If phone calls are too expensive, consider using Skype or Microsoft Messenger, and using a webcam, to enrich discussions
- Stay in regular contact

2. ‘Cold emailing’ successful European ICT organisations (part C)

- Tried contacting by email but no response
- Wait 1-2 weeks then follow up with another email or phone call (better)
- Always be polite
  - maybe many unknown reasons why you get rejected
  - you may not succeed first time but later

Giles Brandon, gilesbrandon@intelligentsia-consultants.com

Step 5: How to identify other ICT related calls for proposals (1/1)

1. FP7 Co-operation (http://cordis.europa.eu/fp7/cooperation/home_en.html)
   - Other FP7 programmes: Security, Space, Nanosciences, nanotechnologies, materials and new production technologies (NMP) etc
   - Joint Calls e.g. ICT-Energy and ICT-Security
2. European Technology Platforms (http://cordis.europa.eu/technology-platforms/individual_en.html)
   - Framework for stakeholders - led by industry - to define R&D priorities and fund collaborative R&D projects
   - e.g. ARTEMIS (Embedded Computing Systems), ENIAC (European Nanoelectronics Initiative Advisory Council), EUROP (Robotics), etc
3. Do your background research
   - Download work programmes and search them for key research terms (e.g. robotics, quantum information, etc) and call deadlines

Giles Brandon, gilesbrandon@intelligentsia-consultants.com

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Be patient, persistent and polite … Good luck!

Giles Brandon, gilesbrandon@intelligentsia-consultants.com