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NEXUS Association: Microsystems Networking for Europe



Information Society
Technologies

Ayman El-Fataty
NEXUS Steering Committee member
on behalf of

Sean Neylon
Chairman of Nexus Association
www.nexus-mems.com





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What is NEXUS ?



Nexus is a Pan-European Microsystems Association

based in Neuchatel, Switzerland

- **Operations Manager**

Alan Greatbatch

- **Contact:**

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- **Membership: Free at the moment**

Please register – Application forms are available



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Mission



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To service the European microsystems component community – *transferring research to Industrial Users* – by:

Organising **networking events**, and **publishing independent market studies & roadmaps** to help plan future research and set industrial strategies as well as monitor effectiveness of current programmes within the EU.



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Objectives



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- **Networking, Dissemination & Cross fertilisation**
 - EPoSS/Euripides future smart systems and integration of microsystems
 - IPs and NOEs, other EC-funded MNT projects
 - Inclusion of NMS (New Member States) / ACC (Associated Candidate Countries) into FP7
 - Inclusion of SMEs into FP7
- **Worldwide promotion** of EU research into smart health
- Provision of independent, affordable, expert-driven:
 - **Market / Application studies**
 - **Technology Roadmapping reports**



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Steering Committee (SC)



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Chairman:	Sean Neylon	Colibrys
Vice Chairman:	Patric Salomon	4M2C
Operations Manager:	Alan Greatbatch	NEXUS
Treasurer:	David Holden	CEA
SC:	Roberto Della Marina	Olivetti
SC:	Carmen Moldovan	IMT
SC:	Henning Wicht	WTC
SC:	Ayman El-Fatary	BAE Systems
SC:	Andrew Richardson	Lancaster Un
President:	Thomas Hinderling	CSEM



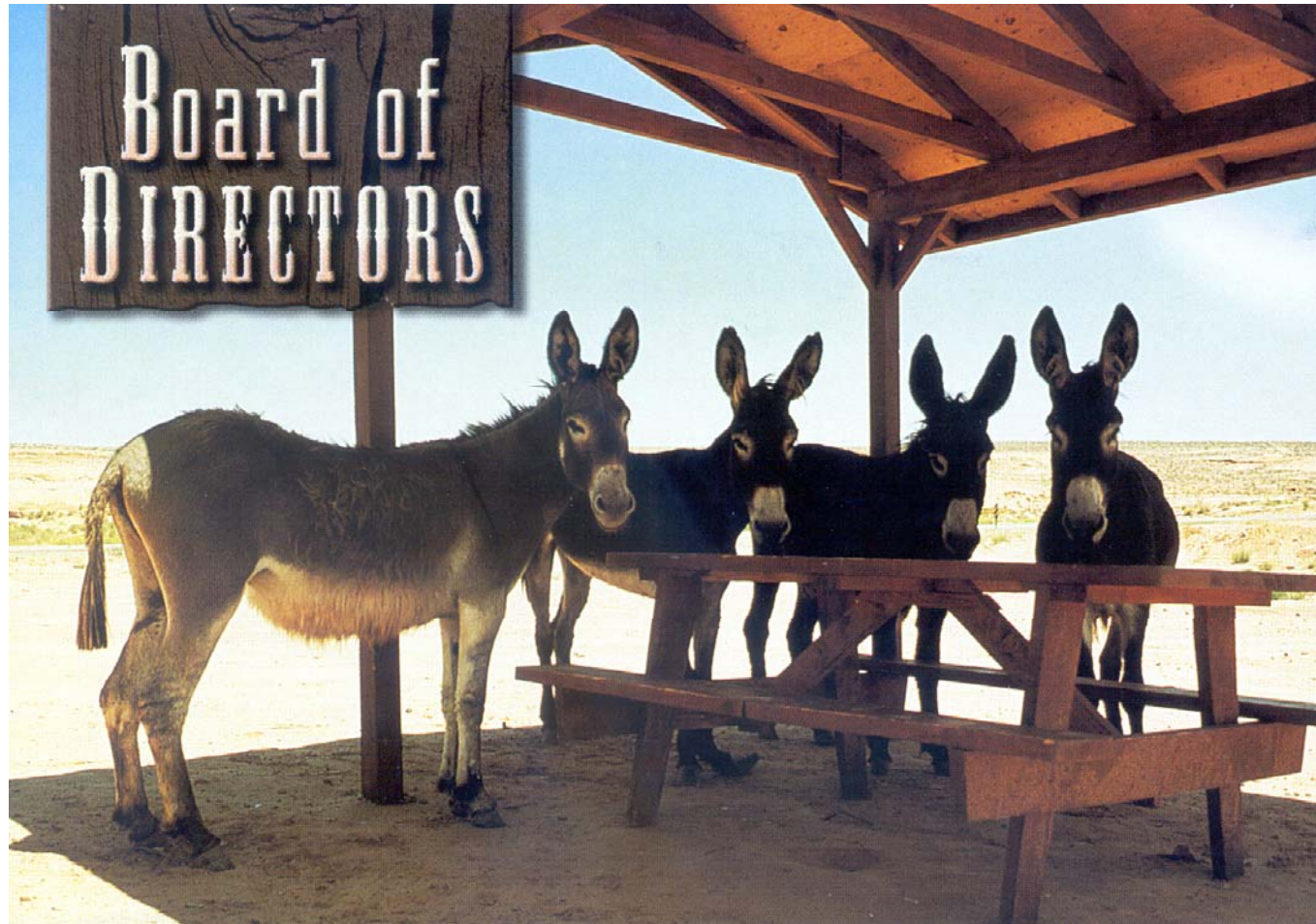
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Not a Board !!??



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Activities



- **FP7 Specific Support Actions:**
 - **Brokerage events** in collaboration with existing trans-national, national, regional networks & clusters
 - MINOS/UKMNT/Swiss MNT/Bayern Innovativ
 - Euripides, ERA-Net
 - Harsh Environments: CANEUS
 - **Promotion (CSEM/CEA/UK-MNT)**
 - (IPs) SmartHEALTH
 - (Services) Europractice, Integram+, Patent-DfMM....
 - **Dissemination:** Website, E-Zine, MST News
 - **Networking** between research and industry
 - **International cooperation** - MIG/Metric (USA), Micromachine Center Japan, ITRI Taiwan, etc



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Example Brokerage events



- | | | |
|--------------------------|----------------------------|-------------------------------|
| • Bucharest | 22-23rd March | MINOS |
| • Stresa | 24-25th April | DTIP (Patent-DfMM) |
| • Loughborough | 2 nd May | (CEMMNT) |
| • Nuremberg | 23rd May | Sensor & Test (IVAM/AMA) |
| • Neuchatel | end of June | (Swiss MNT) |
| • Warsaw | 4-8th June | Europractice (Minos) |
| • Braga, Portugal | 19th Nov | Microfluidic Workshop, |

Note: NEXUS can provide support for travel to help with enhancing NMS/ACC visibility in Western Europe



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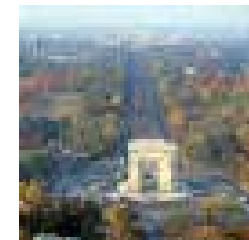


NEXUS / MINOS Brokerage Bucharest 22-23rd March 2007



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- Over 250 attendees with NMP on Day 1
- Over 100 attendees for ICT Day 2
- Major presentations: EU, Euripides, Nexus, IPs & NOEs
- Announcement of MINOS-NEXUS collaboration agreement
- Brokerage event:
 - 150 Database entries (for pre- and post event use)
 - 8 short Presentations
 - Poster session
 - Significant interaction





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NEXUS / PATENT-DfMM Event Stresa (I), 24-25th April 2007



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NEXUS / PATENT-DfMM Workshop on **Design for Reliability and Manufacturability in MNT** (24th Apr)

Topics addressed:

- Manufacturability into the design flow;
- Measurement strategies for calibration and test;
- Reliability assessment: state of the art and further needs;
- MEMS manufacturability within FP7.

NEXUS special session within DTIP on **Opportunities for Cooperative R&D**

PATENT-DfMM **panel** discussion within DTIP on **Design for Reliability and Test of Microsystems**

DTIP is the **Symposium on Design, Test, Integration and Packaging of MEMS and MOEMS**





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Roadmapping Activities



- **Horizontal Methodology Working Groups**

- **MEMS Design Modelling Simulation (DMS)**
- **Materials, Processes & Equipment (SEMI)**
- **Packaging & Integration**
- **Reliability / Test (Patent-DfMM)**
- **Metrology (CEMMNT)**

- **Thematic workshops**

- | | | |
|-----------------------------|----------------------|----------------------------|
| • µmachine summit | April 26-28th | Nexus as EC speaker |
| • RF Cluster Meeting | June 28th | Barcelona |
| • Microfluidics | November 11th | Braga, Portugal |



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Why Join NEXUS ?



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To help lessen your load



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Member Benefits



- ***Dating Service*** for NMS/ACC and SMEs
 - Advice on helping SME & NMS/ACC members on how to become active in European Microsystems projects
 - IPR
 - FP7 call information
- Research & intelligence on Industrial supply chain & networks
 - ***Yellow pages*** of MST players
- **Dissemination**: Website, Ezine, MST News
- **Visibility** within the EU



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The EPoSS challenges



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- Is by definition a LE driven activity
 - Don't have interest to address NMS/ACC or SMEs
 - Registration fees high for NMS and SMEs
 - Market down LE vision not bottom up SME view?
- Horizontal 'strategies' not optimal
 - Roadmapping is not best done by a 'national' research lab. Optimal participation requires
 - National independence
 - Research cluster independence
 - Research to industrialist/application perspectives
- Perceived as elitist & self serving



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the NEXUS assets



- Internationally **acclaimed** professional reputation
- Independent **Pan-European 'umbrella' network**
- **Respected** for market/roadmapping work addressing the supply chain from base materials through to smart components and sub-systems
- **Operational** organisation
 - Office established
 - Networking to NMS/ACC, SMEs, Regional
 - Dissemination systems addressing SMEs, NMS/ACC and all other MNT stakeholders
- Visibility and **support** within the EU



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In essence;
NEXUS helps you to
avoid the sharks





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by delivering added-value



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Thank you

Ayman El-Fatatry



Barbara Kruger - USA

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Nexus offering



- Manage independent roadmapping of ‘horizontal activities’ for EC, new projects, and provider inputs to updates to SRA
- Assistance in undertaking market studies at sub-system level with support for view of ‘value leverage’ within integrated systems
- Facilitate SMEs and NMS/ACCs participation within EPoSS launch projects – profile of interest identified confidentially to Nexus who seek potential candidates
- Nexus requires timely pre-vision of project proposals and opportunity to submit as partner for roadmapping.