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Situated and Autonomic Communications in IST

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Future and Emerging Technologies
DG Information Society
European Commission

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IST - Future & Emerging Technologies

- More exploratory and visionary research
  - Helping new IST-related S&T fields and communities to emerge
- Complementary to
  - other IST strategic objectives
  - other FP6 'Anticipating S&T needs / frontier research' (new fields / multidisciplinary work)
- Open scheme: openness to unforeseeable ideas
  - Continuous submission call
- Proactive initiatives: critical mass where focus is needed
  - e.g. 'beyond robotics', 'complex systems research', "situated and autonomic communications"

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IST Call 4, November 04, 1,009 million euro closing on 22 March 2005

Strategic Objectives 2005-06	**Indicative budget**
2.4.1 **Nanoelectronics**	74
2.4.2 **Technologies and devices for micro/nano-scale integration**	75
2.4.3 **Towards a global dependability and security framework**	63
2.4.4 **Broadband for All**	65
2.4.5 **Mobile and Wireless Systems and Platforms Beyond 3G**	138
2.4.6 **Network Audio Visual Systems and Home Platforms**	63
2.4.7 **Semantic-based Knowledge and Content Systems**	112
2.4.8 **Cognitive Systems**	45
2.4.9 **ICT Research for Innovative Government**	46
2.4.10 **Technology-enhanced Learning**	54
2.4.11 **Integrated biomedical information for better health**	75
2.4.12 **eSafety – Co-operative Systems for Road Transport**	82
2.4.13 **Strengthening the Integration of the ICT research effort in an Enlarged Europe**	63
FET Proactive Initiatives	54
2.3.4 (viii) **Advanced Computing Architectures**	
2.3.4 (ix) **Presence and Interaction in Mixed Reality Environments**	
2.3.4 (x) **Situated and Autonomic Communications**	

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Situated and Autonomic Communications

- **Situated** Communications:
  - Reacting locally on context changes
    - Ranging from sensor networks to virtual networks of humans
  - Considering strategic needs (social or economic, not only technological, e.g. privacy)

- **Autonomic** Communications:
  network elements autonomously interrelated and controlled, learning the desired behaviour
    - self-organising
    - radically distributed
    - technology independent

- Self-organisation needs broad **interdisciplinary** approach
  - software and hardware developments, radio technology advances, design methodology, control theory, formal methods, distributed systems research, complexity theory, game theory, etc.

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Situated and Autonomic Communications in a nutshell

- **IST FET "proactive" initiative to identify new "situated" and "autonomic" communication/networking paradigms in a long-term (10-20 years) time frame**
  - **Combining technological and socio-economic research**
    - **To make sure it is necessary and adequate to the needs**
  - **Multidisciplinary research**
  - **Launch TODAY, call closing March 2005, budget ~20 M euro**
  - **Open for Integrated Projects and Networks of Excellence**

FET OPEN will be open until September 2005

For Specific Targeted Research Projects, CAs and SAs

Possible to submit STREPs in situated & autonomic communications

But VERY HIGH competition (=high rejection rate)

1:3-4 short, 1:5 full = 1:15-20 overall (1:3-5 in proactive initiatives)

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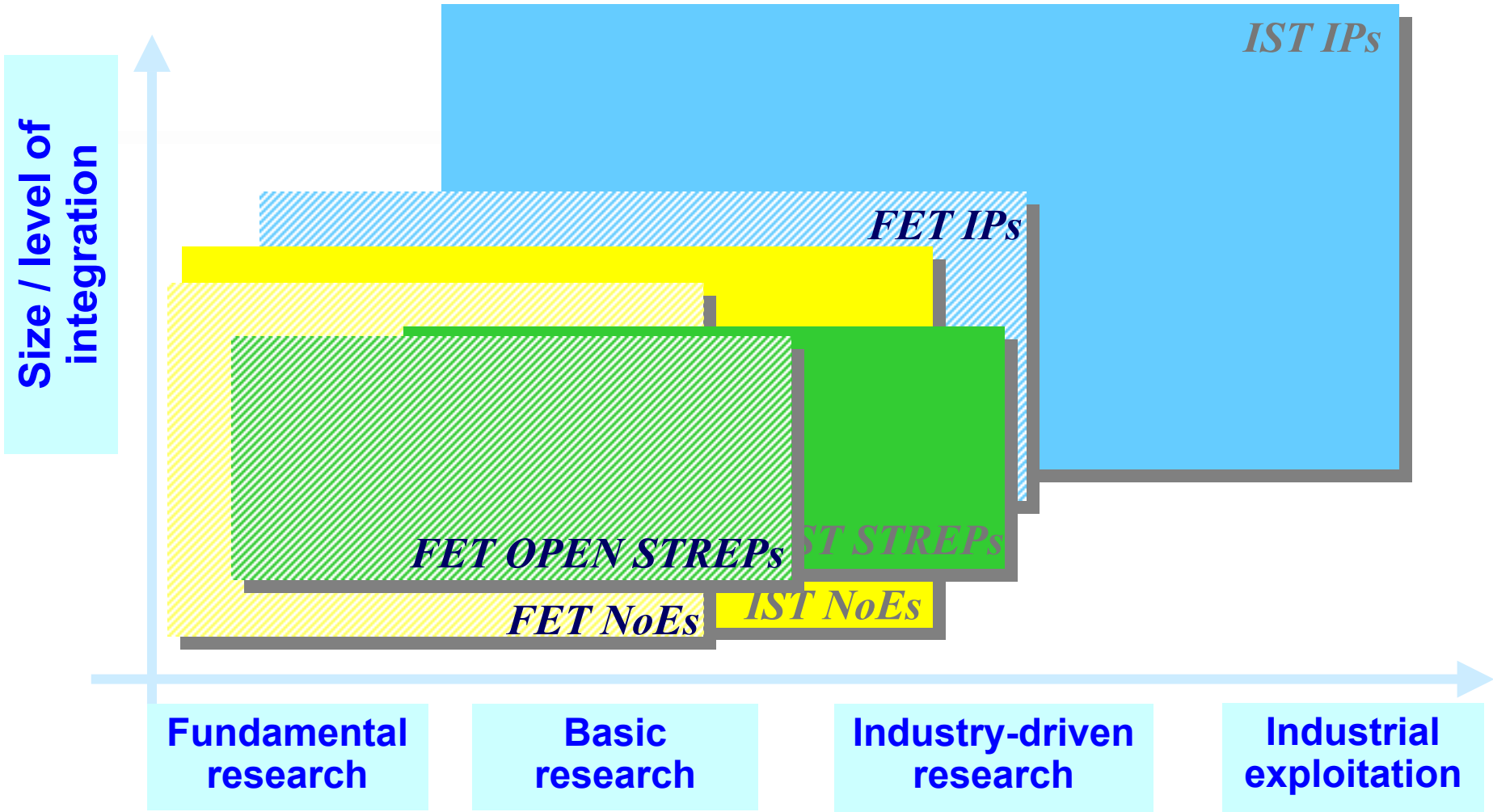
IST vs. FET instruments



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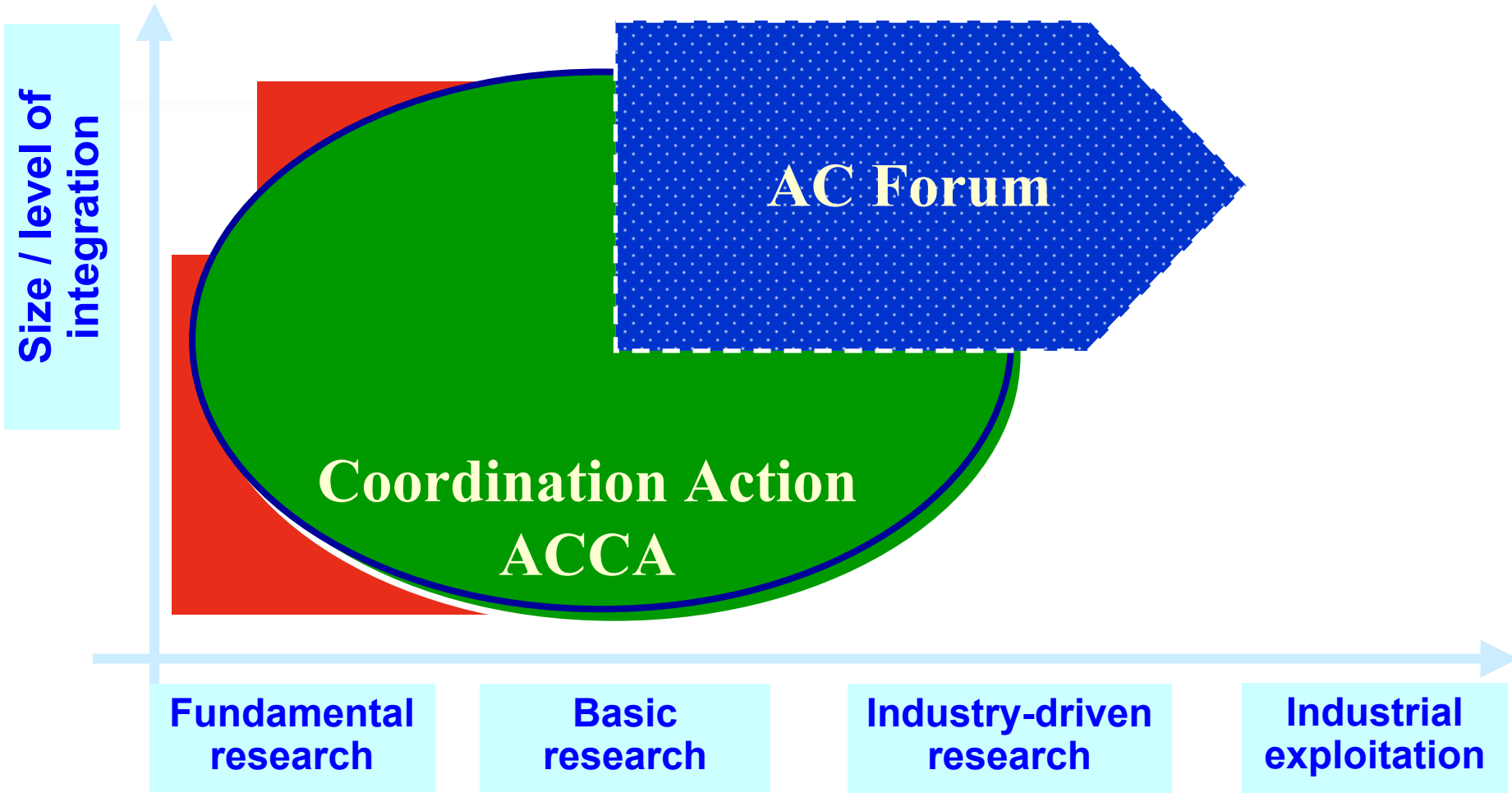
"autonomic" initiatives



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