



ARTEMIS

Genesys Workshop
Munchen, 4 February 2009
Summary of Call 2008 and preparation
of Call 2009

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Advanced Research & Technology for Embedded Intelligence and Systems



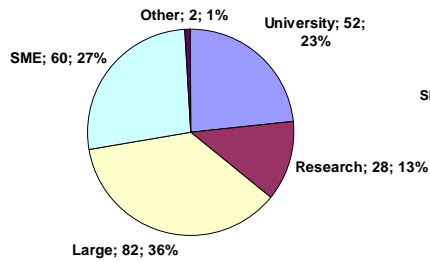
Results of first ARTEMIS call

- 17 proposals above threshold
- 10 proposals below threshold
- 12 proposals selected and retained for negotiations → $\frac{12}{27} = 45\%$ success-rate
- Total eligible cost around 200 M€
- Total Public funding around 90M€
- 27% of participants are SMEs
- 68% of € in 3 large projects (>30M€)
- 82% of € in medium large projects (>10M€)
- Time to contract considerably reduced compared to FP7 and Eureka



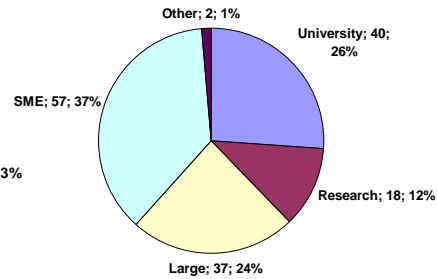
Breakdown of participants in numbers for selected proposals

Total number of Participations



Total: 224

Number of distinct participations



Total: 154

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Conclusions on selection results

- Good coverage of Sub-Programmes SP1, SP3 and SP5 in selected proposals as requested in AWP
- SMEs represent 27% of participations or 15,6% of funding
- Broad range of participants
- Some Sub-Programmes will need to attract a wider constituency (buildings, energy, health etc.)
 - See Call 2009

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Achievements and expectations

- JTI established in time and 2008 Call completed as promised/planned,
 - Swift / high quality evaluation and selection
 - Ambitious ARTEMIS R&D plans and content
- Strong Industry/partners commitment is now needed to meet SRA and SP's strategic targets and gain world wide competitive advantage
 - Technological developments proposed in call-1 require swift and smart project execution
- The JTI is about realising a European strategy, not just “another” implementation mechanism

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Reflections

- **Leadership and commitment of main actors is key**
 - Then no problem is too hard to solve
- **Complex legal and administrative set up**
 - But can be replicated easily once successfully done
 - Value in the process too! (European integration)

Risks and success factors

- **Can industry make the right (strategic) choices?**
 - JTIs as mechanisms vs. strategic instruments
 - Inclusiveness
- **How can integration with EUREKA be achieved?**
- **Can the partners adjust to their (new) roles?**
 - Industry and R&D community, member states, Commission
 - Joint Undertakings: loyal to their cause
- **Must not lose sight of the original objectives!**

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Status ARTEMIS JU

- Autonomy expected in summer 2009
- European Commission is in charge until autonomy
- Staff
 - Head of administration and finance starts 1 March 2009
 - First Project Officer starts 1 April 2009
 - Executive Director expected summer 2009
 - 3 new posts have been published (deadline 2 March 2009)
- Office will be in Brussels (Covent Garden)

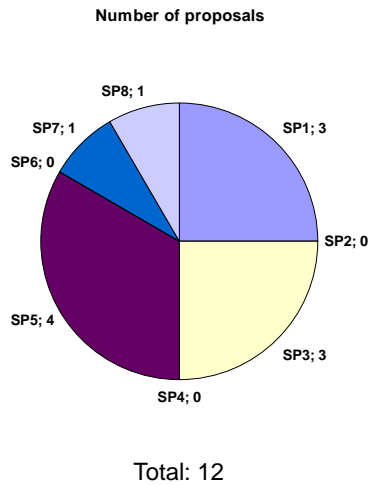


ARTEMIS Sub Programmes

- SP1: Methods and processes for safety-relevant embedded systems
- SP2: Person-centric health management system
- SP3: Smart environments and scalable digital services
- SP4: Efficient manufacturing and logistics
- SP5: Computing environments for embedded systems
- SP6: Security, privacy and dependability
- SP7: Embedded technology for sustainable urban life
- SP8: Human centric design of embedded systems



Breakdown between Sub Programmes for selected proposals



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CESAR Objectives – SP1

Process: One significant innovation for overall reduction of development time or effort, between 30% and 50%, depending on the domain

Reference Technology Platform (RTP):

Double within 5 years the number of European technology providers and European SMEs joining the CESAR ecosystem as contributors to the RTP

RTP: Reduce by 50% the cost of integration, configuration, deployment, and maintenance of appropriate tool-chains for all major actors in the supply chain involved in the project

- Budget approximately 58.5 million Euros
- Start: 1 March 2009

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CHES Objectives – SP1

Objective:

- Building modelling languages for extra-functional properties.
- Developing tools for evaluation of extra-functional properties of component contracts.
- Adapting component infrastructures for the integration of real-time and dependable patterns
- Validating the approach through multi-domain case studies

Project Facts

- **Start:** February 1st, 2009, **Duration:** 3 Years, **Total cost:** 11.9 Mio €

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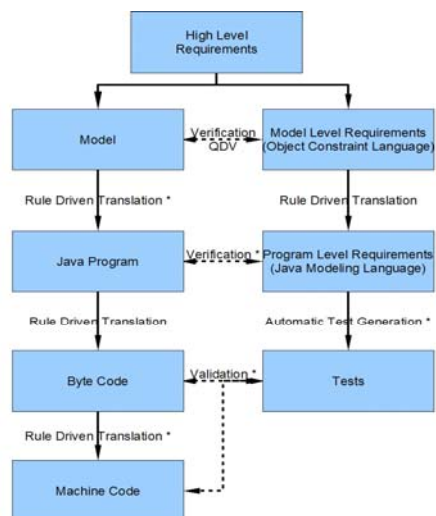
CHARTER Objectives – SP1

Objective

Develop concepts, methods, and tools for embedded system design and deployment that master complexity and substantially improve the development, verification and certification of critical systems

Project Facts

- Start:** 1 April 2009
- Duration:** 3 Years
- Total cost:** 5.237 Mio €



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SOFIA Objectives – SP3

Objective:

- Create an Open Innovation Platform (OIP) providing the interoperability levels that enable interaction and data exchange between multi-vendor devices.
- Create interaction models and embedded devices to support a variety of smart spaces and a variety of users.
- Create methods, techno-economic structures and toolkits for the deployment of smart environments and for the development of services and applications based on smart environments
- Define scenarios and use cases to demonstrate the capabilities of the OIP and the proposed interaction models and techno-economic structures in personal spaces, indoor spaces and cities.

Project Facts

- **Start:** Jan 1st, 2009, **Duration:** 3 Years, **Total cost:** 36.5 Mio €

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EMMON Objectives – SP3

Objective:

- Research, develop and test a functional prototype for large scale WSN deployments;
- Advance the number of devices by one order of magnitude (wrt SoA);
- Simulation tools for networks two orders of magnitude above SoA;
- The goal is to create technologies that allow effective monitoring with 10,000 to 100,000 devices, monitoring an area of 50 square km in a real world scenario.

Project Facts

- **Start:** 1 March 2009, **Duration:** 3 Years, **Total cost:** 2.6 Mio €

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SMART Objectives - SP3

Objective:

Create an innovative WSN infrastructure based on both off-the shelf Reconfigurable devices (FPGAs) and specially designed Reconfigurable Application Specific Instruction Set Processors (RASIP).

This infrastructure will support video and data compression as well as high-levels of security with a lower power consumption than the existing offerings

Project Facts

- Start: 1 March 2009, Duration: 3 Years, Total cost: 4.5 Mio €



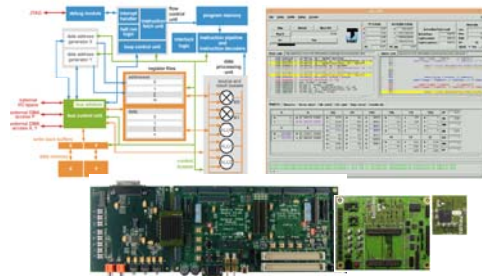
SCALOPES Objectives – SP5

Objective:

- to enable an industrially sustainable path for the evolution of low-power multi-core computing platforms for application domains with strategic value for European competitiveness

Project Facts

- Start: January 1st, 2009
- Duration: 2 Years
- Total cost: ±36 Mio €



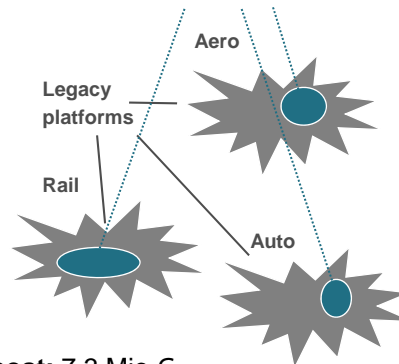


INDEXYS Objectives – SP5

Objective:

- Cross-domain instantiation of GENESYS embedded system architecture
- Industrial-grade exploitation on real-world platforms
- Railway, Aerospace, Automotive and Industrial Control domains.

Adopt GENESYS architectural principles at appropriate levels of existing (legacy) platforms.



Project Facts

Start: 1st April 2009

Duration: 2.5 Years

Total cost: 7.3 Mio €

Total funding: 3.9 Mio €

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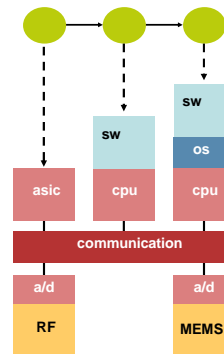
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SYSMODEL Objectives – SP5

Objective:

To develop supportive modeling tools for the design and implementation of *time and power critical, heterogeneous systems*. The focus is on reuse of existing models and their integration in a heterogeneous system. The vision is to allow SMEs to build cost-efficient ambient intelligence systems with optimal performance, high confidence, reduced time to market and faster deployment.



Project Facts

Start: 1 January 2009, **Duration:** 3 Years, **Total cost:** 5.4 Mio €

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iLAND Objectives and Results – SP5

Goal:

Develop enabling technologies and infrastructure of a modular *component-based middleware* for infrastructured *Networked Embedded Systems* that have strong needs for *deterministic dynamic functional composition* and *reconfiguration*

Concrete Results:

- Middleware lightweight architecture
- Deterministic middleware services
- QoS-based resource management
- Application modeling approach for deterministic dynamic reconfiguration and composition
- Validation through three application demonstrators

Project Facts

- **Start:** 1 March-2009, **Duration:** 3 Years, **Total cost:** 3.9 Mio €

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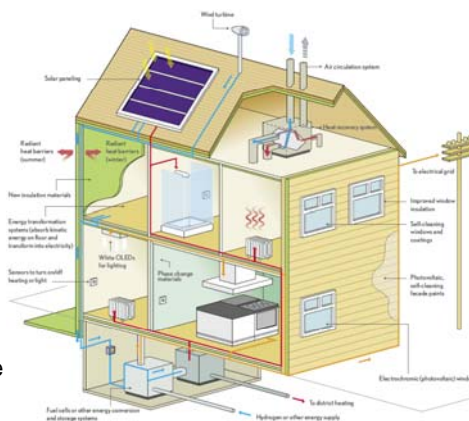


eDIANA Objectives – SP7



Objective:

- To enable sustainable urban life through rationalization in the use of resources while increasing comfort in urban environments by means of embedded technology and integration technologies within residential and commercial buildings
- To achieve greater efficiency in use of resources, prioritizing energy, more flexibility in the provision of resources and better situation awareness for the citizen and for service and infrastructure owners



Project Facts

- **Start:** 1 January 2009 **Duration:** 3 Years **Total cost:** 17 M€
- **National Contribution:** 4.5 M€ **JU Contribution:** 2.9 M€

Source: SUSCHEM SRA

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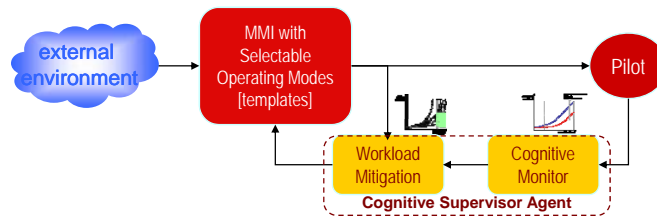
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CAMMI Objectives – SP8

Objective:

The objective of CAMMI is to demonstrate a joint-cognitive approach into controlling the platform, where a workload exceeding the operator's capability should reflect in offloading non-critical, time-consuming tasks to autonomous agents (software, artificial-intelligence agents) and to make the operator focus his capability to critical tasks only.



Project Facts

- Start: December 15th, 2008, Duration: 3 Years, Total cost: 7.3 Mio €

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Preparation for Call 2

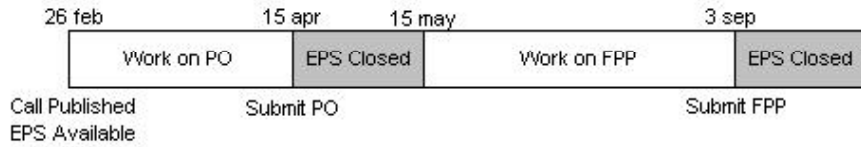
- ARTEMIS PAB meeting: 29 January 2009
 - Decision on ARTEMIS Work Programme 2009
 - Topics (already approved in previous meeting)
 - Evaluation criteria
 - National budget from each Member State is committed
- ARTEMIS JU budget is 55% on top of Member States budget
- Commission on behalf of the JU makes preparation for the Call including budget decision, Call text, Guide for proposers, Web material etc.
- ARTEMIS JU launches Call on 26 February 2009

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Timetable - Draft



Publication of Call	26th February 2009
Deadline for submission of the Project Outline (PO)	15th April 2009 <i>17h00 Brussels time</i>
Provision to the applicants with a technical assessment of PO	19th May 2009
Deadline for submission of the Full Project Proposal (FPP)	3rd September 2009 <i>17h00 Brussels time</i>
Evaluation and selection of proposals	October 2009
Start of negotiations for the selected proposals	Late October 2009

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General considerations

- Participation in the two phases, Project Outline (PO) and Full Project Proposal (FPP), is mandatory
- The PO is only for assessment - no scoring. The evaluation and selection of proposals will be done on the FPP
- The Part B of the PO is maximum 10 pages length and follows the same structure as the FPP
- PO and FPP must be submitted using the **ARTEMIS Proposal Service (APS)**. Proposals arriving by any other means are regarded as 'not submitted', and will not be accepted

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ARTEMIS Call 2009 – Budget

- **ARTEMIS Member States** **67.4 M€**
- **JU contribution:** **37.1 M€**
(55% of MS)
- **Total public funding:** **104.5 M€**

- **ARTEMIS JU funding percentage is 16.7% (as in 2008)**

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Project Outline Assessment

- 1. Relevance to Workprogramme and to overall ARTEMIS targets
- 2a. Soundness of the concept
- 2b. Clarity and quality of the objectives and expected results
- 4a. Contribution to the impacts listed in the workprogramme
- 4b. Degree of application innovation
- 4c. Expected market impact of the results
- 5. Quality of the consortium (complementarities, balance, SMEs)

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Full Project Proposal – Evaluation

- 1. Relevance
- 2. R&D innovation and technical excellence
- 3. S&T approach and workplan
- 4. Market innovation and market impact
- 5. Quality of consortium and management

Scoring of each criterion: 0-10

Criteria 1, 2, 3 and 5 will have a weight of 1

Criterion 4 will have a weight of 2

The threshold for the criteria 1, 2, 3, 4 will be 6

Overall threshold will be 40

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The public-private partnership for R&D in the field of ARTEMIS



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Thank you for your attention