

## APS - European Centre for Mechatronics, Aachen/Germany



### > 30 European Research Projects in:

- ESPRIT
- BRITE
- SPRINT
- COMETT
- DECOMMISSIONING
- IST
- GROWTH
- EUREKA



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### Research Areas in AAL:

- Sensor / Actor Network
- Telemanipulation
- Mobile Systems
- Embedded Mechatronics
- Collaborative Systems
- Agent Technology
- Human-Centered-Interaction
- Simulation, VR + AR
- Robotics
- Service Engineering

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### Development of a Smart Home Environment:

APS intends to develop and implement an **open, reconfigurable service-oriented cross-layer HW/SW infrastructure** to enable **collaborative assistance** with **plug & play** and **self-organising capabilities** applicable in a **Smart Home Environment**.

Based on networked (wired/wireless) distributed heterogeneous physical objects with embedded intelligence like actors, sensor systems, peripheral equipment, and tools, the integrated approach envisaged will combine appropriate **generic middleware** with open interfaces and **application platform solutions** with encapsulated **functional services** to enable communication, configuration, and controlled collaboration of all sub-systems towards a common goal.

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### Task-driven Virtual Clustering:

Development of Human-centered Assistance System with the capability to adapt autonomously. Required sensoric information as well as output devices will be dynamically clustered according to the Task.

#### Aim:

The **ultimate aim** is to enable humans to live together in partnership and share their skills with Embedded Mechatronical Systems in their Smart Home Environment.

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