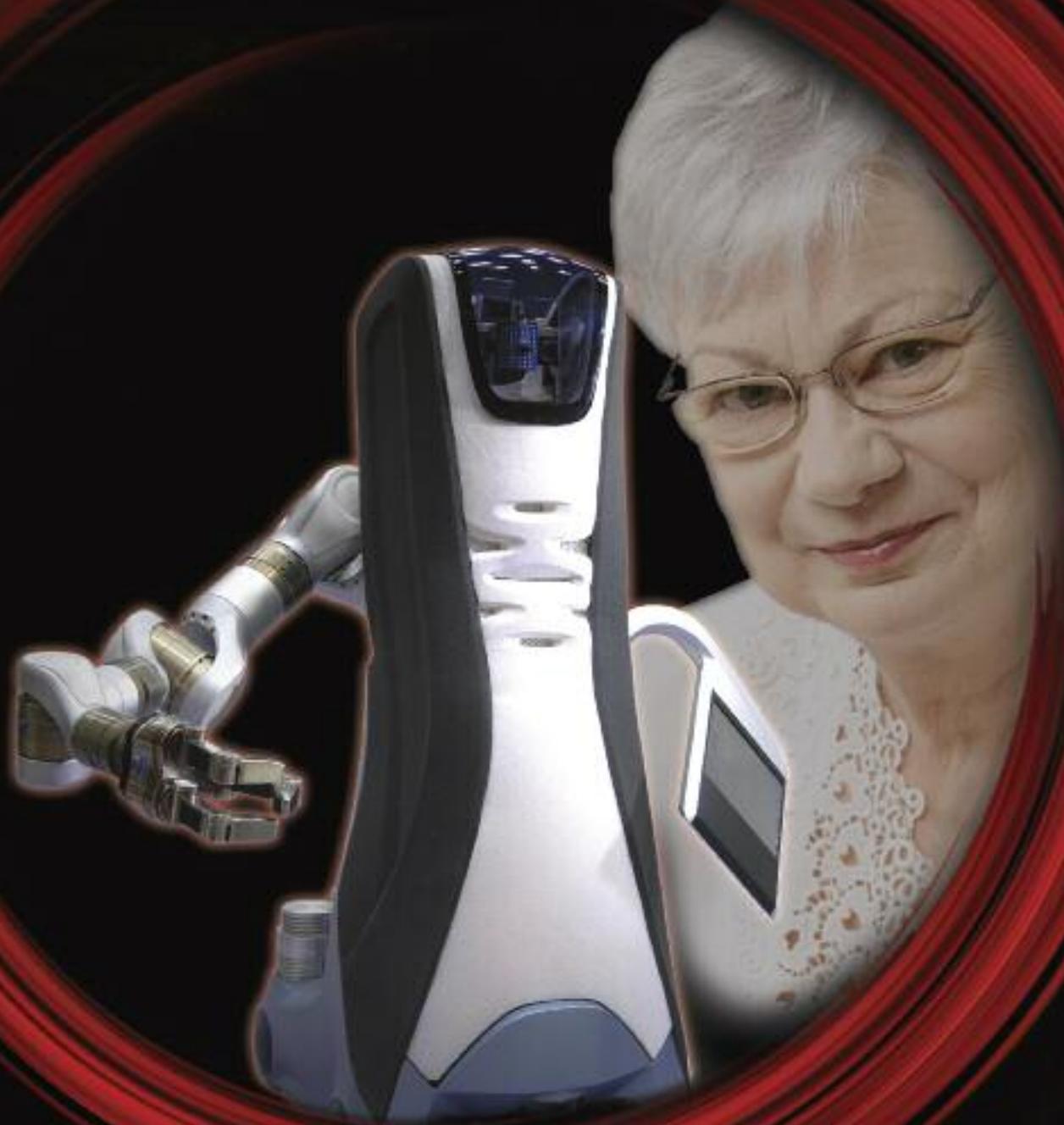


Multi-Role Shadow Robotic System for Independent Living



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SRS – Motivation / Background

Most elderly people want to live in the familiar environment of their own residence for as long as possible. However, with increasing age, a need for assistance and care often emerges. Because family care is not always an option, the elderly people then reluctantly move to a care facility, often leading to further deterioration.



SRS – Mission / Goals

The project “Multi-Role Shadow Robotic System for Independent Living (SRS)” focuses on the development and prototyping of multi-purpose remotely-controlled, semi-autonomous robotic solutions in domestic environments to support elderly people and prolong independent living.



SRS – Objective

Enable robot to act as a shadow of its controller. For example, elderly parents can have a robot as a shadow of their children or carers. In this case, adult children or carers can help them remotely and physically.



Remote Site



Local Site



SRS – Innovations

The objective will be realised by the following SRS innovations:

- **HRI design principles and interaction patterns** for semi-autonomous multi-role shadow robots in home environments.
- **A safety-oriented framework derived through extensive usability and user acceptance studies** that enable service robots to be effectively deployed in home care applications.
- **A new intent-based remote control mechanism** to enable the robot to be tele-operated over real-world communication network robustly.
- **An adaptive autonomy mechanism** to enable a highly efficient task execution for remotely controlled service robots.
- **A new robotic self-learning mechanism** to enable the robot to learn from its experience.

SRS – Expected Results

The following results are expected to be produced during the project period based on the SRS innovations:

SRS prototypes tested in home care scenarios specified in user requirement studies and provision of a practical robotic solution for prolonging independent living

A selected prototypic robotic home carer capable of doing unpredictable assistive tasks and can be controlled efficiently and semi-autonomously



“Intent-based” remote control, adaptive autonomy, self-learning, safety and HRI patterns validated and integrated as SRS general framework

A stepping stone for future robotic based independent living products and services.

SRS-PROJECT.EU



SRS Partners



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