



# SIROM



## News Article on SIROM Project Consortium Meeting 3

Xiu Yan, Oct. 2017

SIROM Project Consortium Meeting 3 (PM3) was held at DFKI (Bremen, Germany) on the 4<sup>th</sup> and 5<sup>th</sup> of October, 2017. During PM3, the consortium reviewed project progress made by each partner over the last quarter, organised consortium after PDR so that the consortium can align the scope of their activities better with the activities identified at PDR led by SENER. Representatives from SENER, Leonardo, University of Strathclyde, DFKI, Space Applications and MAG SOAR, and the project officers from Programme Support Activity (PSA) of the Strategic Research Cluster in Space Robotics Technologies of Horizon 2020 programme of the European Commission Dr. Daniel Noelke and Dr. Javier Rodriguez Gonzalez attend the physical meeting, whereas colleagues from ADS-UK, TAS and TELETEL and the as the Research Programme Officer of the European Commission's Research Executive Agency Dr. Christos Ampatzis attended the PM3 via phone and video conferencing.

DFKI also offered an extensive tour of their research facilities and research outcomes in the form of completed prototypes of various types of robotic systems or on-going partial prototypes of robotic systems being developed.



Photo 1 Consortium members are discussing agenda times.

For this project consortium meeting, the following agenda has been proposed and followed during the two-day long meeting:

## October 4th

14:15-19:00

Organization scheme of the consortium after PDR in order to align the scope of activities for each partner assumed at the proposal preparation with the activities identified at PDR:

- Identify responsibilities declared by each partner from the proposal documentation
- Define the elements of the SIROM project deliverables from PDR status
- Allocate responsibilities among consortium based on the previous points
- Define and justify an allocated budget for all Product Tree (PT) elements
- Define scope and/or design solutions for each PT element
- Propose AIT activities and outline next steps

## October 5th

09:00-10:30 Visit to DFKI facilities

10:30-12:00 Continuation of previous day discussions. Conclusions and agreements

12:00-12:30 CDR calendar & Situation of the Project

The first topic of discussion was on the agreement of the number of active/passive SIROMs. Second item of discussion was the Product Tree.



Photo 2 Consortium members visiting DFKI lab and SherpaTT robotic system

For the dissemination and exploitation activities, presentation from Strathclyde highlighted some past events and future plans. As the organiser of the 16th Mechatronics Forum International Conference (Sep. 2018), Strathclyde proposed to organize a specific session dedicated to Space robotics and mechatronics including SIROM as a key component and this received support from consortium members. The following dissemination results and plans were made:

### Dissemination Announcements

1. University of Strathclyde, with the support of Institution of Mechanical Engineers (IMechE) and Intuition of Engineering and Technology (IET) Robotics & Mechatronics TPN will organise the 16th

Mechatronics Forum International Conference-MECHATRONICS 2018: Reinventing Mechatronics in Sept, 2018. A special session will be arranged for SIROM project as well as other OGs as a platform to disseminate the research findings.

Detailed information can be found at conference website and all partners are encouraged to participate this conference.

<http://mechatronicsforum.co.uk>

2. SIROM project will support the 69th International Astronautical Congress (IAC), to be held at Bremen, Germany, on 1-5 OCT 2018. More information can be found at the conference website: <https://www.iac2018.org/>

3. Researchers from SIROM project attended 14th Symposium on Advanced Space Technologies in Robotics and Automation (ASTRA 2017), which was held on 20-22 June, 2017, at Leiden, Netherlands. Following paper was presented:

Wiebke Wenzel, Roberto Palazzetti, Xiu T Yan, Sebastian Bartsch, "Mechanical, thermal, data and power transfer types for robotic space interfaces for orbital and planetary missions – A technical review".

Three papers have been presented at 68th International Astronautical Congress (IAC), which was held on 25-29 September, 2017, Australia. The paper details are:

- a. Roberto Palazzetti, Wiebke Wenzel, Sebastian Bartsch, Karen Donaldson, Xiu-Tian Yan, "Toward a multifunctional interface for future planetary and orbital missions", IAC-17.C2.2.7,
- b. Thomas McMaster, Xiu T Yan, "The design of a lightweight robotic arm link using functionally graded materials: a case study", IAC-17.C2.IP.40.
- c. Thomas McMaster, Xiu T Yan "A methodology for design of lightweight parts in harsh environments", IAC-17.C2.9.5
- d. Scott Brady, Xiu T Yan, "Lightweight Means of Actuation for Use in Space-Based Robotics", IAC-17.C2.7.4.