

Proposal for Forming an IAA Study Group

Title of Study: Knowledge Management for Space Applications

Proposer(s): Roberta Mugellesi Dow, ESA

(Must be member(s) of the Academy M or CM)

Primary IAA Commission Preference: Commission 4

(From Commission 1 to Commission 6)

Commissions: 1 Space Physical Sciences, 2 Space Life Sciences, 3 Space Technology & Systems Development, 4 Space Systems Operations & Utilization, 5 Space Policy, Law & Economics, 6 Space and Society: Culture and Education

Secondary IAA Commission Interests: Commission 6

(From Commission 1 to Commission 6)

Members of Study Team

Chair(s): Roberta Mugellesi Dow, ESA

(Must be member(s) of the Academy, M or CM)

Secretary:

Other Members:

Ing Victoria Alonsoperez, IEETECH, Uruguay

Ing Julio Cesar Castillo Urdapilleta, Director of Security, Mexican Space Agency

Ing Beatrice Barresi, Integrated Applications Manager, European Space Agency

After the Integrated Applications Technical Committee scheduled on 27/09/2017 in Adelaide, other members will be identified that could join the Study Group.

Short Description of Scope of Study

The objective of the Study Group is to demonstrate that the sharing of the methodologies, tools and knowledge amongst the countries in all aspects related to integrated applications can add value to the downstream applications and services and lead to a more harmonized set of practices and innovative methods.

Integrated Applications concerns with the development, implementation and pilot operation of applications of space systems that combine data from different types of satellites, such as telecommunications, Earth observation and navigation, with terrestrial capabilities.

The Applications offer solutions to problems that range from improving and securing transport systems to developing emergency and disaster management systems. They are not pushing any particular technology, but respond to users' needs, addressing a number of themes. Users and stakeholders are brought together within the space industry and service provider organisations, assisting in development of the necessary technical solutions and feeding back the experience into the development of future space systems.

International Academy of Astronautics (IAA)

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Instructions and application form: see: "Scientific Activity" section at <http://iaaweb.org/content/view/256/393/>

Space companies, ranging from startups to big corporations providing services in different sectors including agriculture, farming, mining, and fishing, among others, have realized that knowledge is the key. Finding the right path from data to information to knowledge is not always easy in a world where we tend to be rather overwhelmed with information. Even with small quantities of data it can be challenging to understand the data in a way that it can be useful.

Space Applications addresses this challenge by federating large volumes of heterogeneous data in meaningful ways and by providing natural ways for users to interface and interact with the data. The two main orientations are semantic interaction with large volumes of data and Long Term Data Preservation, ensuring the data we do have is not lost and remains usable.

Methodology:

(Email works, workshops, stand alone conferences, interim publications, etc.)

A feasibility study should be conducted to identify the main steps to be covered. The study will identify selected target sectors to be investigated and for them an analysis of the data that can be used, the methodologies in use, the applications will be identified and collected in a database.

A first draft with recommendations will be prepared after the GLAC2018..

A consolidated report will be prepared afterwards.

Time Line:

(Cannot exceed three years)

Deadline for preliminary draft: September 2018.

Full study report September 2019

Final Product (Report, Publication, etc.):

Final report available by end of 2019.

Target Community:

Small Satellites experts community, members and non-members of the Academy.

Space exploration community, Scientists, engineers,

Space Agencies from Africa and Latin America and other space agencies for support

Support Needed:

Potential Sponsors:

To be returned to the IAA Secretary General Paris

by fax: 33 1 47 23 82 16 or

by email: sgeneral@iaamail.org

Date: 29 August 2017

Name: Roberta Mugellesi Dow