
**Grant agreement no. 607379**

SPA.2013.2.1-01 - Analysis of Mars Multi-Resolution Images using Auto-Coregistration, Data Mining and Crowd Source Techniques

- Collaborative project -

# D8.4

# iMars Promotional Online Videos

WP 8 – Outreach

Due date of deliverable: Month 39 –March 2017

Actual submission date: 31 / 03/ 2017 *(*) EC approval pending*

Start date of project: January 1st 2014 Duration: 39 months

Lead beneficiary for this deliverable: Deutsches Zentrum für Luft - und Raumfahrt (DLR)

Last editor: Konrad Willner

Contributors: Konrad Willner

| Project co-funded by the European Commission within the Seventh Framework Programme (2007-2013) | | |
|---|---|---|
| **Dissemination Level** | | |
| **PU** | Public | X |
| **PP** | Restricted to other programme participants (including the Commission Services) | |
| **RE** | Restricted to a group specified by the consortium (including the Commission Services) | |
| **CO** | Confidential, only for members of the consortium (including the Commission Services) | |

# History table

| Version | Date | Released by | Comments |
|---|---|---|---|
| 0.1 | 02.03.2017 | K. Willner | Initial Seed |
| 0.5 | 28.03.2017 | K. Willner | To DLR internal review |
| 0.6 | 29.03.2017 | K. Willner | Inputs from KG, to review |
| 1.0 | 31.03.2017 | Jan-Peter Muller | Final video added |

# Executive Summary

The iMars project focuses on developing tools and value-added datasets to increase the exploitation of space-based data from NASA and ESA mission imaging and 3D data beyond the instrument teams. iMars adds value by creating more complete models of the surface from stereo and use these 3D models to create a set of co-registered imaging data through time, permitting a much more comprehensive interpretation of changes on the Martian surface to be made. Emphasis is placed on co-registration of multiple datasets from different space agencies and orbiting platforms around Mars and their synergistic use to discover what surface changes have occurred since NASA's Viking Orbiter spacecraft in the mid-1970's.

The ESA Mars Express High Resolution Camera (HRSC) provides the base data, where possible. iMars will greatly extend the use of archived data by providing mapped and co-registered images. The resultant time-stamped imagery is interfaced to automated data mining analysis software based on techniques developed for Earth surveillance.

This document briefly summarizes the activities towards the dissemination action of online promotional videos. Several partners provided video material that is publically shared through an iMars video channel as well as served through http://www.i-mars.eu/outreach/media .

# Table of contents

# Key word list

Dissemination, Video, iMars, Promotion, Demonstration of Results

# Definitions and acronyms

| Acronyms | Definitions |
|---|---|
| 3D | Three dimensional |
| ESA | European Space Agency |
| HRSC | High Resolution Stereo Camera |
| NASA | National Aeronautics and Space Administration |

# Summary

This document provides a short list and directions to the location of the delivered promotional online videos created within the scope of Task 8.4 “Promotional online videos for what extra resources at RPIFs for iMars access as well as how to use iMars tools”. This deliverable – D8.4 – was announced in the description of work as a demonstrator such that the actual material is placed elsewhere but not in this document.

The created videos promote activities and results of the iMars project past the project’s end. A collection of videos comprising descriptive videos, tutorials, and virtual flights over the reconstructed Martian surface have been produced.

The videos demonstrate results of the iMars project, and describe the developed tools and techniques used to derive the data products.

A total of 11 videos were placed on a dedicated YouTube Channel that can be accessed through https://www.youtube.com/channel/UCnQ_SviuCnJjSQOG8v-Ru1Q as well as through http://www.i-mars.eu/outreach/media.

A complete list of videos including a short description, the video producing partner, the video duration and URLs is provided in the table below.

# List of Promotional Videos

| Video | Partner | Description | Link | Time |
|---|---|---|---|---|
| iMars Tools | UCL | ACRO – Automated Co-Registration and Ortho-rectification<br>Introduction to the method | https://youtu.be/_WV2R3oNH1g | 12:25 min |
| iMars Tools | UCL | CASP-GO – Co-registered ASP Gotcha Optimized<br>Introduction to the technique | https://youtu.be/A_TaUnLZEN4 | 4:26 min |
| iMars Tools | UCL | Data mining<br>Show why data mining is so relevant, show results of data mining, how it was achieved | https://youtu.be/3BDjQ5r9rYg | 8:21 min |
| Fly over | FUB | Atlantis flyover demonstrating different techniques for 3D display of videos.<br><br>Anaglyph<br>Side by Side | https://youtu.be/drIrzIv48Y0<br><br>https://youtu.be/drIrzIv48Y0 | 3:19 min<br><br>3:18 min |
| Fly over | FUB | Becquerel crater 3D animation based on HRSC data products. Makes use of several HRSC observations of different time periods. | https://youtu.be/JQg99FtJ3r8 | 1:28 min |
| Fly over | FUB | Marwth Vallis fly over with comparison of HRSC and CTX data products resolutions. | https://youtu.be/PIYByraC7nk | 2:42 min |
| iMars Tools | FUB | The iMars web-GIS: Tutorial | https://youtu.be/mPfd4n1CZQw | 5:36 min |
| iMars Data | DLR | Descriptive video explaining the background of deriving HRSC terrain models and image mosaics | https://youtu.be/IlGekB-DT3Y | 4:07 min |
| iMars Tools | EPFL | Explanatory video demonstrating the developed QGIS plugin to display and view radargrams | https://youtu.be/xTC5Zict1xU | 2:08 min |
| iMars Activities | UNOTT | Video introducing the “Mars in Motion“ project at Zooniverse. | https://youtu.be/Q7FiPN88XMc | 6:46 min |
| Fly over | UoS | CTX DTM flyover of Euripus Mons | https://youtu.be/RwhLhQDacqc | 0:47 min |