TITLE: Mars in Motion: An online Citizen Science platform looking for changes on the surface of Mars

ABSTRACT BODY:
Abstract (2,250 Maximum Characters): The European FP7 iMars project has developed tools and 3D models of the Martian surface through the co-registration of NASA and ESA mission data dating from the Viking missions of the 1970s to the present day, for a much more comprehensive interpretation of the geomorphological and climatic processes that have taken and do take place. We present the Citizen Science component of the project, 'Mars in Motion', created through the Zooniverse's Panoptes framework to allow volunteers to look for and identify changes on the surface of Mars over time. 'Mars in Motion', as with many other current citizen science platforms of a planetary or other disciplinary focus, has been developed to compliment the results of automated data mining analysis software, both by validation through the creation of training data and by adding context – gathering more in-depth data on the type and metrics of change initially detected.

Through the analysis of initial volunteer results collected in the second half of 2016, the accuracy and ability of untrained participants to identify geomorphological changes is considered, as well as the impact of their position in the system. Volunteer contribution, either as a filter for poor quality imagery pre-algorithm, validation of algorithmic analysis, or adding context to pre-detected change, and their awareness and interpretation of its importance, can directly influence engagement with the platform and therefore ultimately its success. Understanding the effect of the volunteer and software's role in the system on both the results of and engagement with planetary science citizen science platforms will be an important lesson for the future, especially as the next generation of planetary missions will likely collect data orders of magnitude greater in volume. To deal with the data overload, it is likely that human or software solutions alone will not be sufficient, and that a combination of the two working together in a complimentary system that combines and exploits their strengths could provide a viable solution.

CURRENT * **CATEGORY:** Other

CURRENT : None

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