

The Use of Robotic Rovers to Explore Mars

by Štěpán Pekař

Assessed by Kenneth Froehling, M.A.

Scope of Work

Mr. Pekař's thesis focuses on three space missions to Mars: Mars Pathfinder, Mars Exploration Rover and Mars Science Laboratory. These missions have led to four rovers—Sojourner, Spirit, Opportunity and Curiosity—being sent to the surface of Mars. This paper concentrates on the scientific tools of each rover, the technology used and the most important scientific knowledge gained during the missions on Mars.

Grammar & Vocabulary

Mr. Pekař regularly consulted me about the contents and language of his paper before its final submission. Many errors in grammar and vocabulary have been corrected, but unfortunately, there are still many errors which include:

- the *active* voice is used instead of the correct *passive* voice (e.g. p. 5, “As the MER mission comprises of two parts” and p. 6, “... the lander and rover (Sojourner) supposed to be working”)
- errors in relation to the use of *present simple*, *past simple* and *present perfect* (e.g. p. 14, “The second rover is sending information up to now” and p. 35, ‘Another measurement done on the surface of Mars have shown that Mars “has lost...”’)
- using *verbs* instead of nouns in the subtitled sections of chapter 2, 2.3 (p.22, **Characterize the Climate of Mars**, p. 23, **Characterize the Geology of Mars and Prepare for Human Exploration**)
- a few mistakes regarding *singular* and *plural* nouns are made too
- the incorrect use of *articles* can be found throughout the paper

Style

Overall this area is done quite well and I have few complaints here. However, Štěpán is inconsistent in his paper on when to just put the numeral or write it out. This is not a mistake in itself, but it can be perplexing to the reader (e.g. p. 19, line 4, “After about seven months of ...” vs. line 17, “...the rover stopped for 2 days ...” and p.11, “(the rover) stopped after 1 kilometre in the valley” vs. p. 20, “two meters deep, twenty-two meters wide”).

Contents

Mr. Pekař is very good in his overall analysis of the topic. He covered just about everything needed regarding the missions to Mars and the rovers that landed on the planet. His diagrams and figures are excellent and informative for the reader. Figure 8 did come out blurry (a fact which Štěpán pointed out to me in an email after his paper was already bound). But this figure aside, I could see while reading the final version that Mr. Pekař did a lot of research on his own and put in a lot of effort in writing his thesis.

Final Assessment

I really liked reading Štěpán Pekař's paper on the Mars Rovers, especially since I have a layman's interest in our Solar System. I learned a lot from his work too. However, his errors in grammar and vocabulary weakened his final product and unfortunately, I must bring down his final mark to

79%/C/dobře