

IAF SPACE SYSTEMS SYMPOSIUM (D1)

Lessons Learned in Space Systems: Achievements, Challenges, Best Practices, Standards. (5)

Author: Mr. Dimitar Mihaylov

University of Strathclyde, United Kingdom, dimitar.mihaylov@strath.ac.uk

Ms. Graye Broughton-Stuart

University of Strathclyde, United Kingdom, graye.broughton-stuart@strath.ac.uk

Dr. Yashar Moshfeghi

University of Strathclyde, United Kingdom, yashar.moshfeghi@strath.ac.uk

Prof. Massimiliano Vasile

University of Strathclyde, United Kingdom, massimiliano.vasile@strath.ac.uk

Mr. Andrew Herd

ESA - European Space Agency, The Netherlands, andrew.herd@esa.int

A SPACE CONVERSATIONAL AGENT FOR RETRIEVING LESSONS-LEARNED AND EXPERT
TRAINING**Abstract**

Knowledge loss occurs when experts leave a project or organisation, this is particularly in the form of tacit knowledge which those experts have gathered through experience. This experiential knowledge is inherently difficult to communicate, so new techniques are required for capture, storage and retrieval. To improve and replace an existing technique at the European Space Agency, a conversational agent is being developed which will be able to process tacit knowledge. The Space Conversational Agent for Retrieving Lessons-learned and Expert Training (SCARLET) must be able to extract expert-level tacit knowledge and store this in a retrievable format for later recommunication. This paper is an analysis of the precedent of this type of system and an introduction to the architecture of SCARLET, including a novel support system for the Question Generation task. It also discusses the use of rule-based chatbots in place of dialogue generation systems for closed domain applications. At present, SCARLET is capable of following simple conversational threads for information capture and retrieval.