Paper ID: 27581 oral

44th SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The Next Steps (A4)

SETI 1: SETI Science and Technology (1)

Author: Prof. Alexander Ollongren Leiden University, The Netherlands, a.ollongren@umail.leidenuniv.nl

ON MODALITIES IN LINGUA COSMICA LOGICA

Abstract

In the author's recent monograph Astrolinguistics the design and the use of a suitable linguistic system for the construction of messages for interstellar communication is described in extenso. The Lingua Cosmica Logica System, referred to as LINCOS, is based on constructive logic. It employs the Calculus of Constructions with Induction (CCI), closely related to intuitionistic logic. As Aristotelian propositional and predicate logic is expressible in LINCOS, using an environment of data, the system is complete in a static way. In order describe aspects of situations of a non-static nature, the system can be enriched by modalities, useful as a means for expressing dynamic logic notions. A modality is a meta notion in logic. In the present contribution a specific modality, called activation, is introduced and applied for adjusting environments of data. In this way a new step towards universal applicability of LINCOS is achieved.