



Real-time Tools for Exploring the English Language

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Abstract:

The concept of Viewpoint Reasoning was proposed a number of years ago within the context of 3D Model Based Vision for representing viewpoint information about a scene and the objects therein. This concept is based on a representation that stores feature visibility in terms of 3D surfaces or solids that encapsulate individual objects or the whole scene, much in the same way as property spheres and the aspect graph. When the visibility of objects and their features are represented in this way, answers to questions about the joint visibility of features from viewpoints within a scene are at hand. With respect to computer graphics, viewpoint reasoning requires semantics to be routinely associated with 3D objects and the scenes they are placed in. Once this is done a large number of options become available for interacting with a scene and individual objects in a task-oriented way and not just in terms of geometry. Viewpoint Reasoning can be applied within the areas of Computer Graphics and Robotics to problems such as Good Viewpoint Selection, Sensor Placement, Motion Planning and Object Exploration. This talk describes a system, written in the programming language Python, which demonstrates how such tasks can be performed even when complex objects are involved.

Biography:

Andrew Ernest Ritz has Masters degrees in Ergonomics (London University) and Signal Processing and Machine intelligence (Surrey University). He has been working on Artificial Intelligence related problems since partici-



pating in the UK Alvey program in the 1980s. Recently, he is focussing on making the applications he has developed available on the web. These tools were created while working for his own company, Langtech, and funded in part by E NET Production, Katowice, Poland.

Publication of speakers:

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2. X. Schmitt, S. Kubler, J. Robert, M. Papadakis and Y. Letraon, "A Replicable Comparison Study of NER Software: stanfordnlp, NLTK, opennlp, spacy, Gate," 2019 Sixth International Conference on Social Networks Analysis, Management and Security (SNAMS), Granada, Spain, 2019, pp. 338-343.
3. The Bullock Committee report, Her Majesty's Stationery Office, London, 1975.
4. George A. Miller (1995). Wordnet: A Lexical Database for English. Communications of the ACM Vol. 38, No. 11: 39-41.

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