



Knowledge Base Management Simplified with EZ Vector-KB

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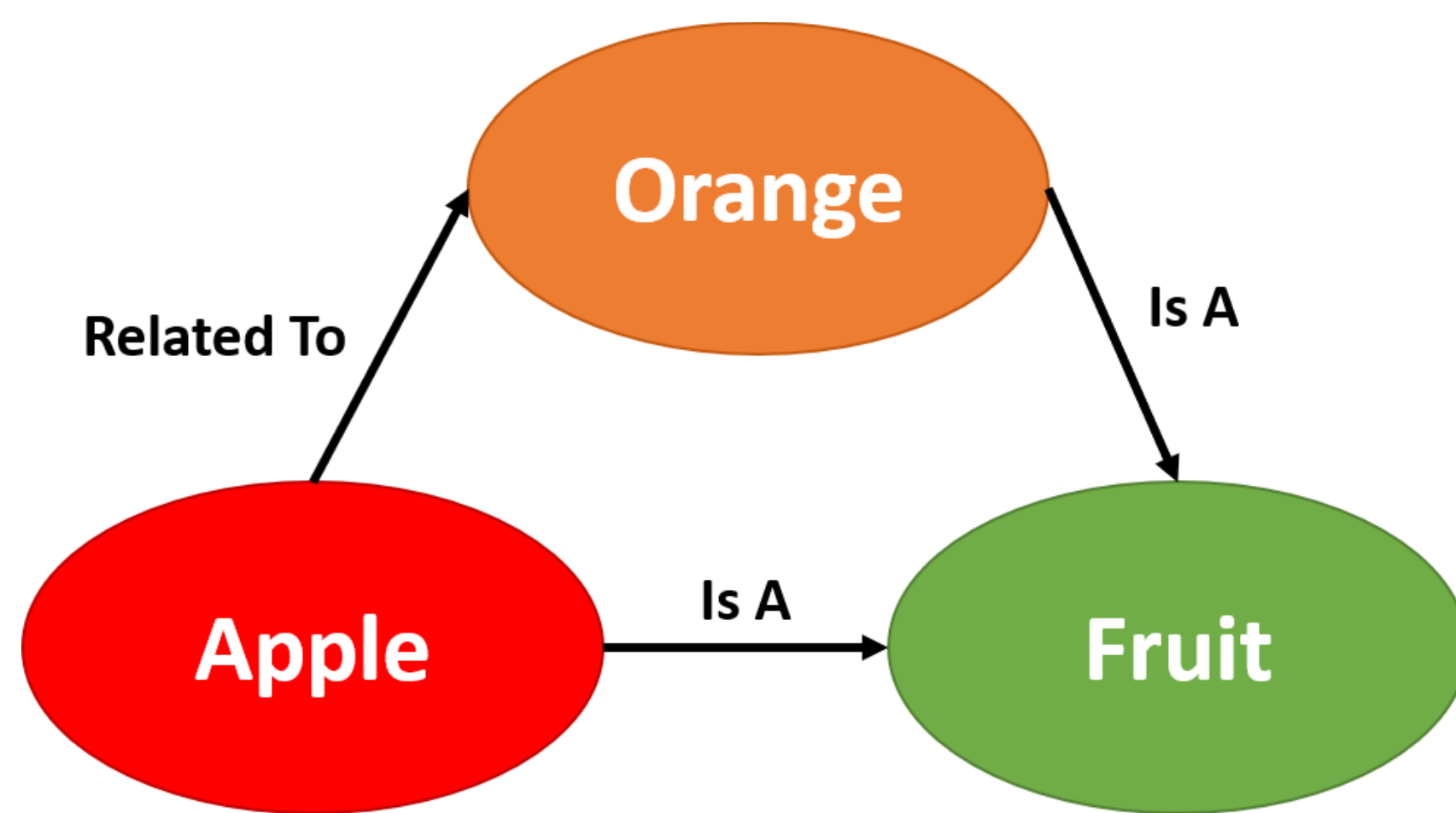
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Objectives

- Develop a solution for managing a knowledge base that saves time without sacrificing functionality

Background

- ConceptNet – Knowledge base that details semantic relationships between terms



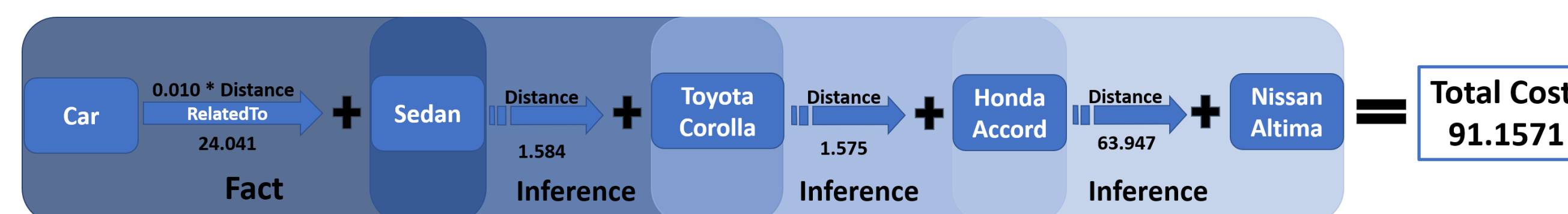
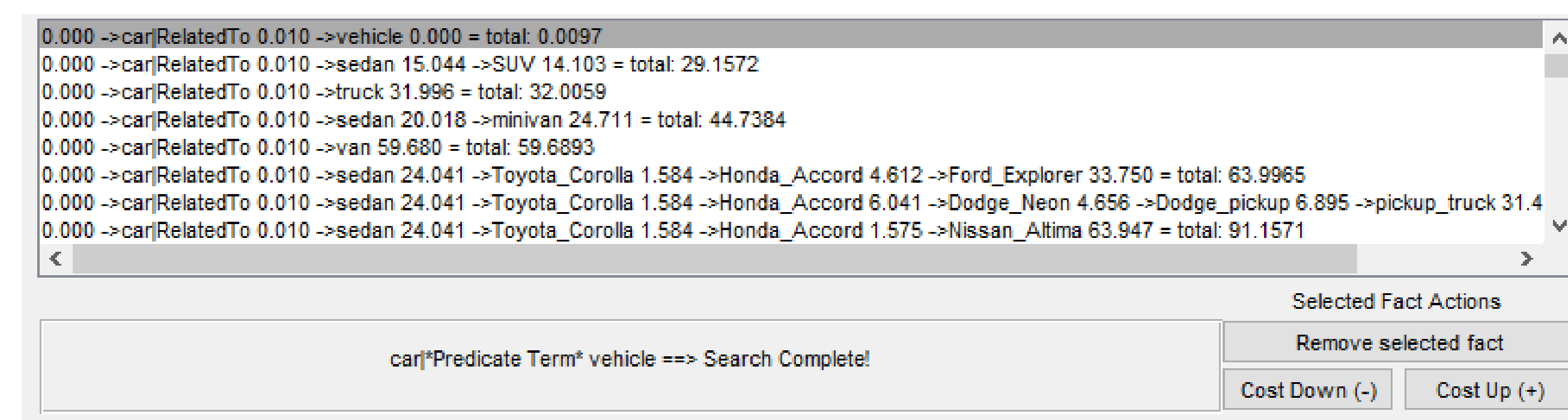
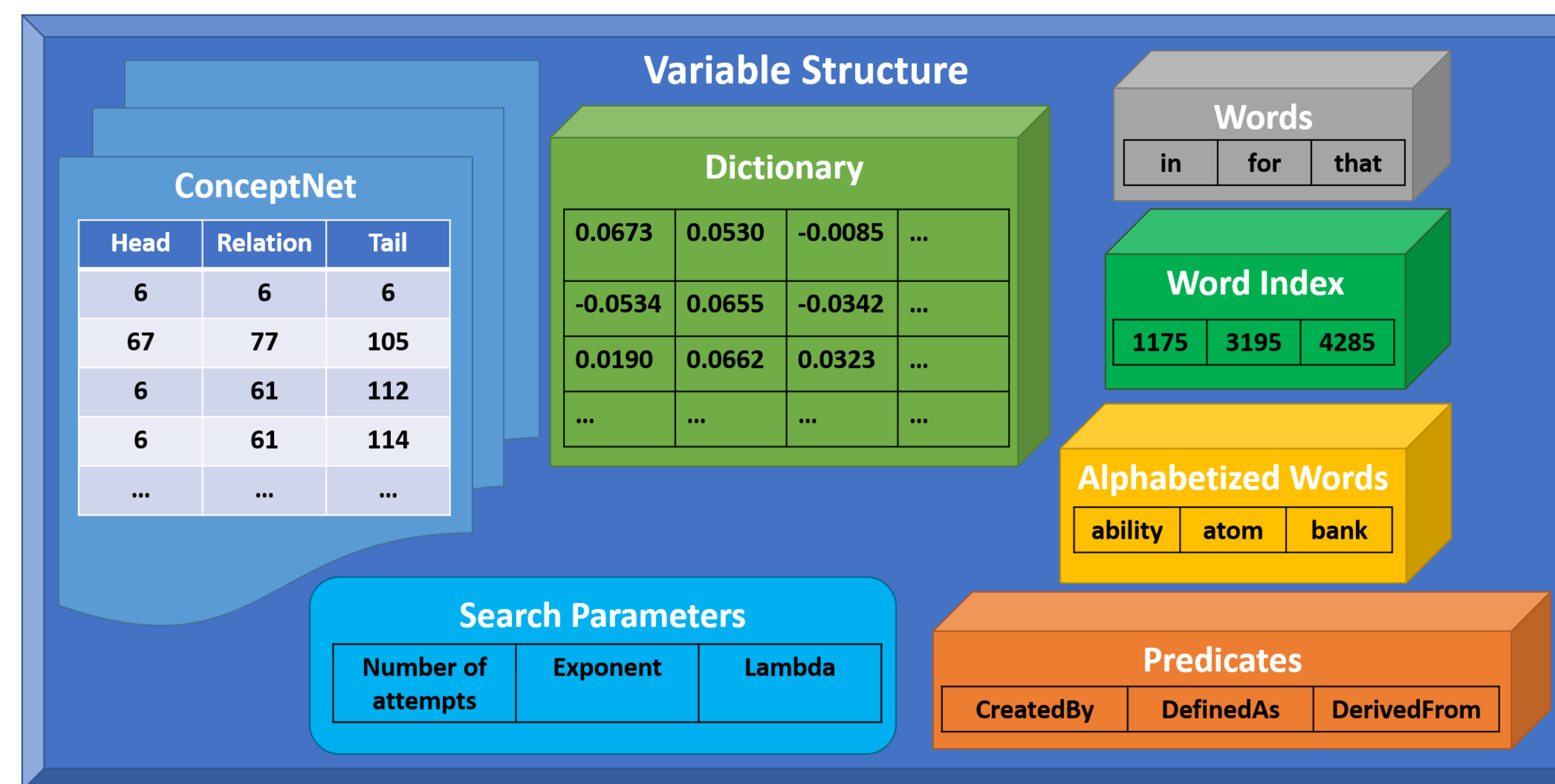
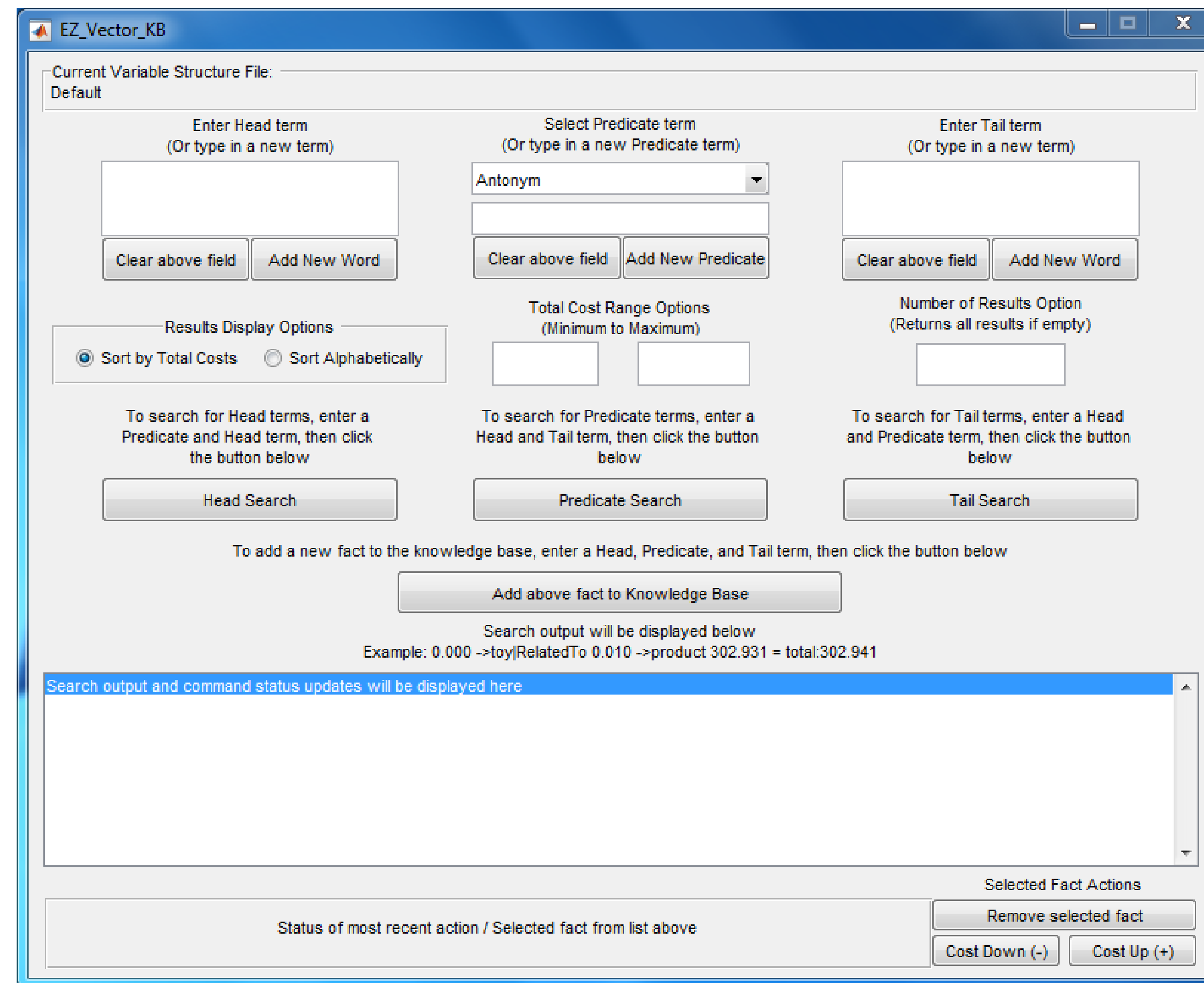
- Vector-KB – Framework that uses semantic knowledge bases for deductive reasoning
 - Returns relevant conclusions based on prior knowledge, or facts
 - Capable of inferring additional conclusions utilizing existing facts

Challenges

- Vector-KB is useful, but management requires prior system knowledge to operate

Solution

- Develop an intuitive graphical interface to simplify Vector-KB management for general use
- Queries executed via text fields, button and drop-down menus
- System complexity retained



Features

- Flexible query searching
- Fact management
- Results sorting and filtering
- Import/export variables as files

Discussion & Conclusions

- EZ Vector-KB introduces an automated method for managing a knowledge base system
- Applicable to numerous domains

Path Forward

- Modify fact management function to adjust answers with inferences
- Apply interface to object detection and Internet of Things experimentation
- Utilizing interface to create a knowledge base specialized for a potential hazard context

