

RRG2021  
John Ball – Pat Inc.  
“RRG Meets the IT Industry”

Overview: This presentation uses two current applications on computer to highlight the need for linguistics, like RRG, to be extended.

The first application is a soon-to-be-released around-the-world ticket booking virtual assistant. It integrates language with an interactive visual display and the underlying design splits the user requirements that are used for interaction, with the IT requirements that drive today's systems.

The second system is the DevEx (Developer Experience) built to help users understand the capabilities of a conversational system based on RRG linguistics for use in conjunction with applications like the RTW system above.

To keep the discussion relevant to RRG2021, John Ball, the founder and CTO of Pat Inc and cognitive scientists who created Patom (brain) Theory in the 1990s, covers a number of areas in which linguistics helps those “dumb computer programmers” who want to create AI using the science of linguistics. The areas of interest are:

1. What is the current scientific crisis in AI involving language?
2. What is the Holy Grail (of artificial intelligence) we need to develop and why? It is the storing of language-independent context from books and articles in a lossless format. Using RRG, this must be a contextual network, not just a semantic network, since context is needed in discourse pragmatics to resolve ambiguity.
3. Why is discourse pragmatics the area of RRG that is not yet exploited in industry? The reason it is important is because natural language understanding (NLU) as implemented in chatbot systems today, ignores phrases and instead uses sets of hand-entered sample sentences to match an intent. That completely ignores the context of the discussion and instead relies on out-of-context sample files for ‘understanding.’
4. What is Pattern-Atom theory (Patom) and with its basis on sets and lists only (as modelled in the brain model) why does syntax and predicates appear to be manipulators of sets (i.e. not trees). This relates to the concept of decomposition in which parts-of-speech are decomposed with the RRG science into predicates and referents as the building blocks of language. That has been shown to make computer emulation much easier and system performance faster.

Questions on the video presentation can be made live on August 5 during the lunch session and can see more use of the DevEx system.

John Ball

July 26, 2021