



Writing with GRIOT
(Poetic System Designer Input)

Reading/Interacting with GRIOT
(Poetic System Output & User Input Loop)

The GRIOT system:

- (1) **Writing with GRIOT:** Initially a poetic system designer inputs the following components, which are processed by the system in preparation for user input:
 - (1.1) A set of **Theme Domains** that provide information about a set of concepts (in “The Girl with Skin of Haints and Seraphs” the **Theme Domains** are: skin, angels, demons, old Europe, and old Africa, composed of sets of axioms),
 - (1.2) A list of **Keywords** that access each theme domain,
 - (1.3) A set of poetic narrative **Phrase Templates** (phrases organized by the type of clause they can compose, with wildcards that will be replaced on each execution), and
 - (1.4) A **Narrative Structure** that defines how clauses can be composed (in “The Girl with Skin of Haints and Seraphs,” these are based on a model from socio-linguistics research, a formalization of William Labov’s structure of narratives of personal experience).
- (2) **Reading/Interacting with GRIOT:** During the execution of **GRIOT**, each time the user enters a term it is scanned for a match with the domain **Keywords** and a response is produced as output to the screen. This process occurs as follows:
 - (2.1) The system constructs conceptual spaces from the selected **Theme Domains** based upon the user’s input. These conceptual spaces form an **Input Diagram** which describes two concepts that will be combined and the commonalities between them.
 - (2.2) The core of the work is an algorithm called **ALLOY** that I implemented to model conceptual blending, not natural language processing. What comes out of it are conceptual spaces and axioms, not English sentences. The conceptual spaces in the **Input Diagram** are blended using **ALLOY** to construct new concepts.
 - (2.3) The output from **ALLOY** is mapped to a grammatical form using a **Grammar Morphism**.
 - (2.4) These grammatical blends then replace wildcards in the narrative **Phrase Template** to compose the appropriate clause type (as determined by the **Narrative Structure**). The Phrase Template is now said to be “instantiated,” and is output.
- (3) **Input Loop:** If the poem is not yet complete the system awaits new user input.

The GRIOT Architecture