Knowledge Base (Facts)

Counterpoints

- Sequences consisting of a full Cantus Firmus and incomplete contrapuntal voices.
- Sequences are all valid in terms of both voice leading and harmony.

Experimental Counterpoints

- Sequences consisting of a full Cantus Firmus and incomplete contrapuntal voices.
- Sequences are all valid in terms of voice leading, but NOT NECESSARILY in terms of harmony

can-move-major-2nd-up can-move-major-2nd-down

can-move-minor-3rd-up

etc. (See Rules Handout)

valid-perfect-5th

valid-major-3rd

valid-minor-3rd

etc. (See Rules Handout)

Voice Leading Validation Rules:

These each listen for new Facts (Counterpoints) for which their described vocal move is valid. If any ARE valid, the specified voice move is added to the counterpoint and a new "Experimental Counterpoint" is created

Harmonic Validation Rules:

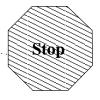
These listen for new

"Experimental Counterpoints" and attempt to harmonically validate the recently added note. If any of the intervals are correct, the rule asserts a new fact -- a new "Counterpoint" with the new note added from the previous voice leading step.



Constantly Listening for new Facts of that category.

Creation of a new Fact if a rule matches an existing fact. The parameters of the new fact depend on the rule being used.



Stop Rule:

If the counterpoint voice is complete, make some last checks and print out the result. (See Rules handout)

Figure 1: An Overview of the Expert System