DENDRAL Meeting
June 11, 1969
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JUN 2 3 1969

1. Rings -- Bersohn's proposal is much like previous work which comes to difficulties which the Hamiltonian circuit approach is designed to avoid.

2. Inference Rules from Predictor Theory -- two approaches
   i) From the behavior of the predictor
   ii) From the rules of the predictor, the theory itself,

   Best to use (ii) if possible, then test with (i).

3. Problem Solving in the DENDRAL Space
   Question: How can the structure generator tailor-make hypotheses in light of the data and the theory?

   Lederberg's suggestion:
   a) Call the predictor during structure generation to judge the plausibility of a radical. Alternatively, do this for each of the radicals in the dictionary at the start.
   b) Save the current state of Goodlist. (I.e., make Goodlist a list of previous states plus the current state.)
   c) At the top of Goodlist put the radicals which seem most plausible at the moment, taking others off which no longer seem likely in light of the data.
   d) Check to see that you have not used this new state of Goodlist, by checking through the list of previous states. This is necessary to avoid looping. We may not want the structure generator to finish a branch before Goodlist is revised, however, in which case the program is not necessarily in a loop if we reenter with some previously used Goodlist.
   e) Generate structures, looping back to (a) when appropriate.

   Other suggestions for efficient use of this strategy:
   a) If there is a dictionary, use the predictor on each item initially to put radicals on Goodlist.
   b) If the composition has only one heteroatom, make that atom the center of the structure.
   c) Put superatoms at the center of structures.
   d) Let the theory guide structure generation by look-ahead as in chess. E.g., Should the next node be a heteroatom? If yes, then take the current superatom off (the top level of) Goodlist, attach the heteroatom to it and put the new superatom on Goodlist.