## Prover9 Search Strategies Two Ideas

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## Hint Candidates

Observation: *Any* derivations of clauses that *suffice* to derive a key clause are potentially valuable proof sketches for deriving that key clause in related runs.

Idea: Ancestors of a derived hint matcher in one run might be useful as hints in related runs.

Note that it doesn't matter if the first run is successful or not.

## **Prehints:**

```
Given i: C // not a hint matcher
Given i+1: H // hint matcher
```

Using conventional settings in Prover9, C necessarily participates in the derivation of H.

## Hints Degradation

Idea: Don't degrade a proper subsumer of a hint matcher.

