Key message:

**Successor generation can be done efficiently with database techniques in lifted planning!**

**LIFTED PLANNING**
- Ground states + action schemas
- States can be seen as databases
- Conjunctive preconditions = conjunctive queries
- Performed efficiently if hypergraph is acyclic
- Happens in 90% of the IPC action schemas tested

**EXAMPLE**

```liftplan
(:preconditions
 (and (at ?X ?Y)
  (path ?Y ?W)
  (path ?W ?Z)))
```

Corresponds to:

```math
at(X, Y) \land path(Y, W) \land path(W, Z)
```

If query hypergraph has a join-tree, it is acyclic

Acyclic query evaluation is **output-polynomial**

**RESULTS**

Time comparison in hard-to-ground domains:

Better than grounding in most of the tested instances

Faster than previous state-of-the-art lifted planner

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**Higher** number of solved instances