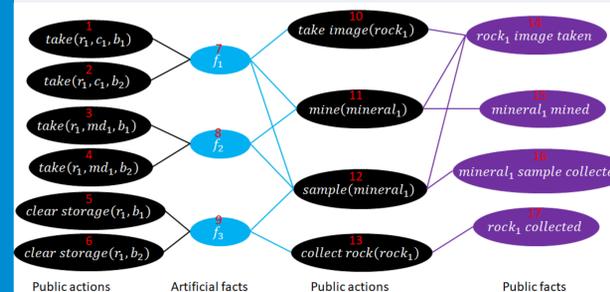
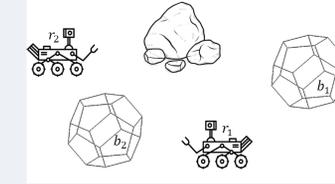


Privacy Preserving Planning: Plans can be found while revealing only a small portion of the private dependencies

Technical details



- Heuristics:**
- M1 – Precondition to the largest amount of public actions
 - M2 – Precondition to the largest amount of public facts.
 - M3 – Achieves the largest amount of public actions.
 - M4 – Achieves the largest amount of public facts.



Take a picture to get the presentation.



Take a picture to get the full paper.

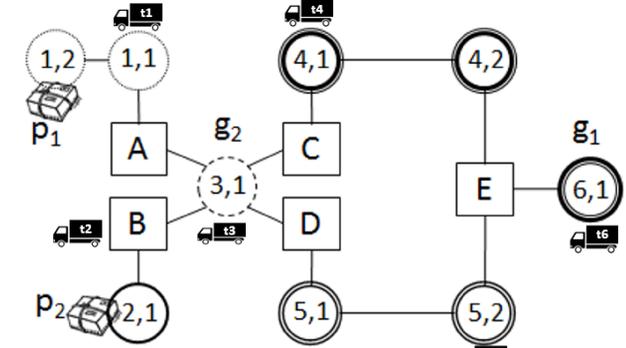
1. The Problem

Collaborative Privacy Preserving Planning (CPPP) algorithms reveal private dependencies.
Private dependency: which public actions facilitate the execution of another public action.
Can we find plans while revealing only a small portion of the dependencies?

2. Methods

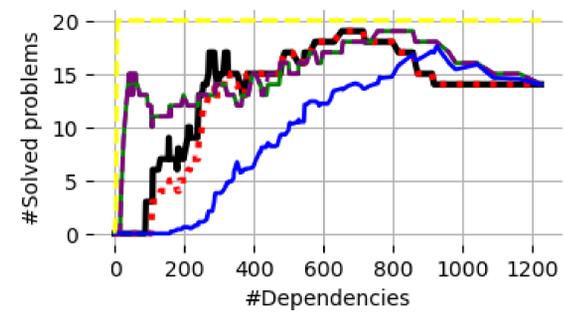
1. Creating the dependencies graph.
2. Computing 4 heuristic dependency revealing rankings over the graph.
3. Applying the heuristics to MAFS and the Joint Projection planners.

3. Example

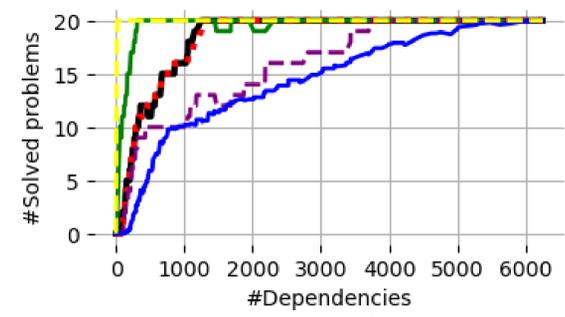


To drop package p_1 at E , truck t_4 must pick p_1 from (e.g.) C

4. Key Results

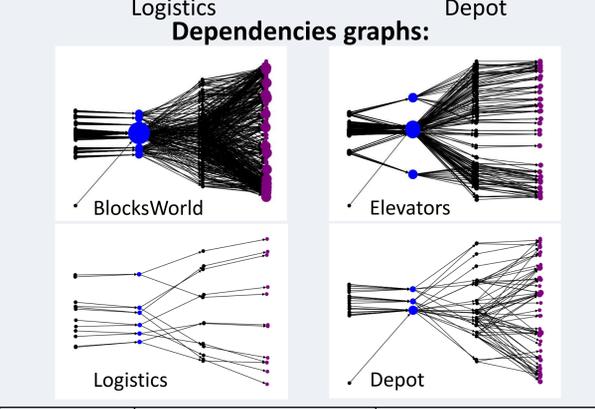
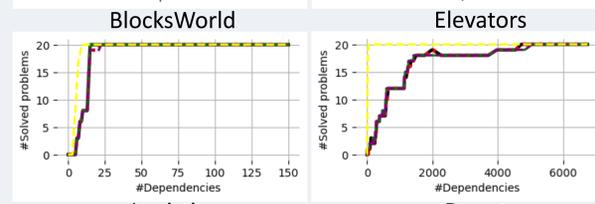
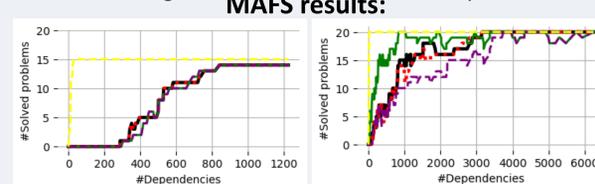
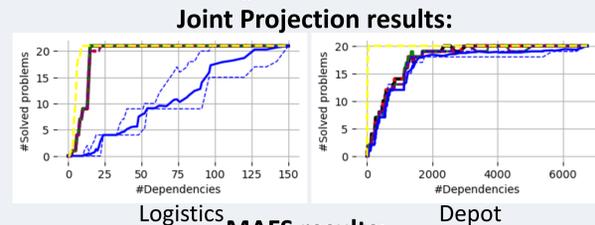


BlocksWorld domain



Elevators domain

— m1 —••• m2 — m3 — m4 — Random — Hindsight



Domain	Joint Projection			MAFS		
	Min	Min. dep	Imp.	Min	Min. dep	Imp.
BlocksWorld	48.78	84.10	41.83%	28.95	29.82	2.45%
Depot	21.40	28.55	20.20%	21.20	21.26	0.82%
Driverlog	28.19	51.08	28.80%	21.26	22.31	5.96%
Elevators	33.70	38.33	12.58%	36.94	39.89	8.03%
Logistics	25.02	27.02	5.97%	25.15	27.60	7.41%
Rovers	50.75	58.71	12.57%	58.50	70.32	16.09%
ZenoTravel	46.52	49.16	9.13%	48.52	51.17	9.02%
Average	36.34	48.13	18.73%	34.36	37.48	7.11%

Imp = the improvement from the first solution cost to the best solution cost