Questions

Which algorithm or algorithms would be most appropriate for planning in a very restricted domain (i.e., one that has only a few actions) and needs to operate in real time?

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greedy_best_first_graph_search h_unmet_goals
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Which algorithm or algorithms would be most appropriate for planning in very large domains (e.g., planning delivery routes for all UPS drivers in the U.S. on a given day)

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greedy_best_first_graph_search h_unmet_goals
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Which algorithm or algorithms would be most appropriate for planning problems where it is important to find only optimal plans?

For restricted domains, I would not use depth_first_graph_search. The other algorithms all seem to have different strengths so I would choose one based on what metric was important to me.

For large domains, I would use astar search h unmet goals.

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Air Cargo Test Problems	blem	S				
			Air Cargo Prob	Problem 1		
	# Actions	Expansions Goal Tests New N	Goal Tests	New Nodes	Time	Plan length
breadth_first_search	20	43	56	178	178 0.004425517	6
depth_first_graph_search	20	21	22	84	84 0.002810969	20
uniform_cost_search	20	60	62	240	240 0.009206513	6
greedy_best_first_graph_search h_unmet_goals	20	7	9	29	29 0.001263654	0
greedy_best_first_graph_search h_pg_levelsum	20	6	8	28	28 0.251574422	0
greedy_best_first_graph_search h_pg_maxlevel	20	6	8	24	24 0.188282471	6
greedy_best_first_graph_search h_pg_setlevel	20	6	8	28	28 0.324637618	6
astar_search h_unmet_goals	20	50	52	206	206 0.007290587	0
astar_search h_pg_levelsum	20	28	30	122	122 0.598175485	0
astar_search h_pg_maxlevel	20	43	45	180	180 0.661728302	6
astar_search h_pg_setlevel	20	33	35	138	138 0.718829199	6

			Air Cargo	Air Cargo Problem 2		
	# Actions	Expansions	Expansions Goal Tests New Nodes	New Nodes	Time	Plan length
breadth_first_search	72	3343	4609	30503)503 1.396721271	9
depth_first_graph_search	72	624	625	5602	5602 2.194277348	619
uniform_cost_search	72	5154	5156	46618	46618 2.723929278	9
greedy_best_first_graph_search h_unmet_goals	72	17	19	170	170 0.013032127	9
greedy_best_first_graph_search h_pg_levelsum	72	9	11	86	86 6.003312876	9
greedy_best_first_graph_search h_pg_maxlevel	72	27	29	249	249 11.24422633	9
greedy_best_first_graph_search h_pg_setlevel	72	9	11	84	84 7.538850466	9
astar_search h_unmet_goals	72	2467	2469	22522	22522 1.754493083	9
astar_search h_pg_levelsum	72	357	359	3426	3426 140.3935985	9
astar_search h_pg_maxlevel	72	2887	2889	26594	26594 767.1742883	9
astar_search h_pg_setlevel	72	1037	1039	9605	605 683.1555048	9

			Air Cargo	Problem 3		
	# Actions	Expansions	Goal Tests	New Nodes	Time	Plan length
breadth_first_search	88	14663	18098	129625	129625 8.531778877	12
depth_first_graph_search	88	408	409	3364	3364 0.728504438	392
uniform_cost_search	88	18510	18512	161936	10.51343857	12
greedy_best_first_graph_search h_unmet_goals	88	25	27	230	230 0.027147726	15
greedy_best_first_graph_search h_pg_levelsum	88	14	16	126	11.68567141	14
greedy_best_first_graph_search h_pg_maxlevel	88	21	23	195	15.97737023	13
greedy_best_first_graph_search h_pg_setlevel	88	35	37	345	345 39.79208618	17
astar_search h_unmet_goals	88	7388	7390	65711	65711 5.658423956	12
astar_search h_pg_levelsum	88	369	371	3403	3403 230.0419798	12
astar_search h_pg_maxlevel	88	3423	3425	31596	31596 3709.065042	12
astar_search h_pg_setlevel	88	9580	9582	86312	86312 3988.972573	12
			Air Cargo Prob	Problem 4		
	# Actions	Expansions	Goal Tests	New Nodes	Time	Plan length
breadth_first_search	104	99736	114953	944130	64.3282784	14
depth_first_graph_search	104	25174	25175	228849	2271.129509	24132
uniform_cost_search	104	113339	113341	1066413	1066413 83.06901273	14
greedy_best_first_graph_search h_unmet_goals	104	29	31	280	0.047746101	18
greedy_best_first_graph_search h_pg_levelsum	104	17	19	165	22.93438395	17
greedy_best_first_graph_search h_pg_maxlevel	104	56	58	580	51.85821095	17
greedy_best_first_graph_search h_pg_setlevel	104	107	109	1164	1164 206.8114254	23
astar_search h_unmet_goals	104	34330	34332	328509	328509 40.81601865	14
astar_search h_pg_levelsum	104	1208	1210	12210	1303.829082	15
astar_search h_pg_maxlevel						
astar_search h_pg_setlevel						