Plan Validation Report

VAL

March 17, 2014

1 Domain and Problem

Domain: elevators-time
Problem: elevators-time-p8_7_1

2 Plan: /home/nirlipo/Sandboxes/RIO/repository/yandi/classicalPlanningModel/PDDLmodel/planners/popf/p

2.1 Plan

Plan size: 5

Time	Action
0:	(move loader_0 locloader_0 b_0_1) [12.51]
12.511:	(dig-block-b_0_1-build-0 loader_0 b_0_1) [11.048]
23.56:	(move loader_0 b_0_1 locloader_0) [12.51]
36.071:	(move loader_0 locloader_0 b_0_0) [12.51]
48.581:	(dig-block-b_0_0-build-0 loader_0 b_0_0) [11.048]

2.2 Plan To Analyse for Robustness

Time	Happening
0:	(move loader_0 locloader_0 b_0_1) - *start*

12.51: *Invariant for* (move loader_0 locloader_0 b_0_1)
12.51: (move loader_0 locloader_0 b_0_1) - *end*

12.511: (dig-block-b_0_1-build-0 loader_0 b_0_1) - *start*

23.559: *Invariant for* (dig-block-b_0_1-build-0 loader_0 b_0_1)
23.559: *Update of changing Primitive Numerical Expressions*
23.559: (dig-block-b_0_1-build-0 loader_0 b_0_1) - *end*

23.56: (move loader_0 b_0_1 locloader_0) - *start*

36.07: *Invariant for* (move loader_0 b_0_1 locloader_0)
36.07: (move loader_0 b_0_1 locloader_0) - *end*

36.071: (move loader_0 locloader_0 b_0_0) - *start*

48.581: *Invariant for* (move loader_0 locloader_0 b_0_0)
48.581: (move loader_0 locloader_0 b_0_0) - *end*

48.581: (dig-block-b_0_0-build-0 loader_0 b_0_0) - *start*

59.629: *Invariant for* (dig-block-b_0_0-build-0 loader_0 b_0_0)
59.629: *Update of changing Primitive Numerical Expressions*
59.629: (dig-block-b_0_0-build-0 loader_0 b_0_0) - *end*

2.3   Plan Validation Details with No Variation

Time   **Details**

0:   **Event triggered!**
              Activated process (crushing)

0:   Checking Happening... ...OK!
              Deleting (at loader_0 locloader_0)
              Adding (clear locloader_0)

12.51:   Checking Happening... ...OK!

12.51:   Checking Happening... ...OK!

(crusher_supply)$(t) = -50t + 300000$
Updating **(crusher_supply)** (300000) by 299374 for continuous update.

12.51: Checking Happening... ...OK!
Deleting (clear b_0_1)
Adding (at loader_0 b_0_1)

12.511: Checking Happening... ...OK!
(crusher_supply)$(t) = -50t + 299374$
Updating **(crusher_supply)** (299374) by 299374 for continuous update.

12.511: Checking Happening... ...OK!
Deleting (nodigging loader_0)

23.559: Checking Happening... ...OK!

23.559: Checking Happening... ...OK!
(crusher_supply)$(t) = 450t + 299374$
Updating **(crusher_supply)** (299374) by 304346 for continuous update.

23.559: Checking Happening... ...OK!
Deleting (not-digged-block-b_0_1-build-0)
Adding (nodigging loader_0)
Adding (digged-block-b_0_1-build-0)
Adding (clear-block b_0_1)

23.56: Checking Happening... ...OK!
(crusher_supply)$(t) = -50t + 304346$
Updating **(crusher_supply)** (304346) by 304346 for continuous update.

23.56: Checking Happening... ...OK!
Deleting (at loader_0 b_0_1)
Adding (clear b_0_1)

36.07: Checking Happening... ...OK!

36.07: Checking Happening... ...OK!

$$(\textbf{crusher\_supply})(t) = -50t + 304346$$

Updating **(crusher_supply)** (304346) by 303720 for continuous update.

36.07: Checking Happening... ...OK!
Deleting (clear locloader_0)
Adding (at loader_0 locloader_0)

36.071: Checking Happening... ...OK!
$$(\textbf{crusher\_supply})(t) = -50t + 303720$$
Updating **(crusher_supply)** (303720) by 303720 for continuous update.

36.071: Checking Happening... ...OK!
Deleting (at loader_0 locloader_0)
Adding (clear locloader_0)

48.581: Checking Happening... ...OK!

48.581: Checking Happening... ...OK!
$$(\textbf{crusher\_supply})(t) = -50t + 303720$$
Updating **(crusher_supply)** (303720) by 303095 for continuous update.

48.581: Checking Happening... ...OK!
Deleting (clear b_0_0)
Adding (at loader_0 b_0_0)

48.581: Checking Happening... ...OK!
$$(\textbf{crusher\_supply})(t) = -50t + 303095$$
Updating **(crusher_supply)** (303095) by 303095 for continuous update.

48.581: Checking Happening... ...OK!
Deleting (nodigging loader_0)

59.629: Checking Happening... ...OK!

59.629: Checking Happening... ...OK!
$$(\textbf{crusher\_supply})(t) = 450t + 303095$$

Updating **(crusher_supply)** (303095) by 308067 for continuous update.

59.629: Checking Happening... ...OK!
Deleting (not-digged-block-b_0_0-build-0)
Adding (nodigging loader_0)
Adding (digged-block-b_0_0-build-0)
Adding (clear-block b_0_0)

Plan executed successfully - checking goal
Goal satisfied
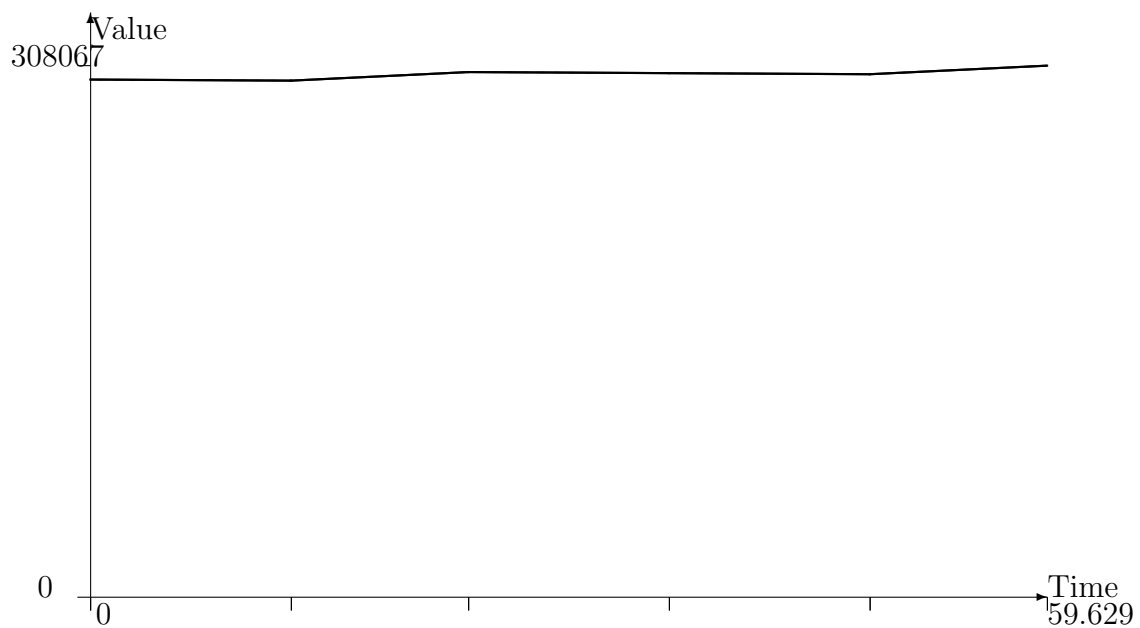Final value: 0

2.4 Primitive Numerical Expression Graphs

Figure 2.1: Graph of (crusher_supply).

2.5 Gantt Chart

Gantt Chart Key
Row 1

No	Time	Action
1	0	(move loader_0 locloader_0 b_0_1) [12.51]
2	12.511	(dig-block-b_0_1-build-0 loader_0 b_0_1) [11.048]
3	23.56	(move loader_0 b_0_1 locloader_0) [12.51]
4	36.071	(move loader_0 locloader_0 b_0_0) [12.51]
5	48.581	(dig-block-b_0_0-build-0 loader_0 b_0_0) [11.048]

2.6 Plan Robustness Report

- The plan has an action timestamp robustness in the range 4.44271e-07±4.44271e-07.

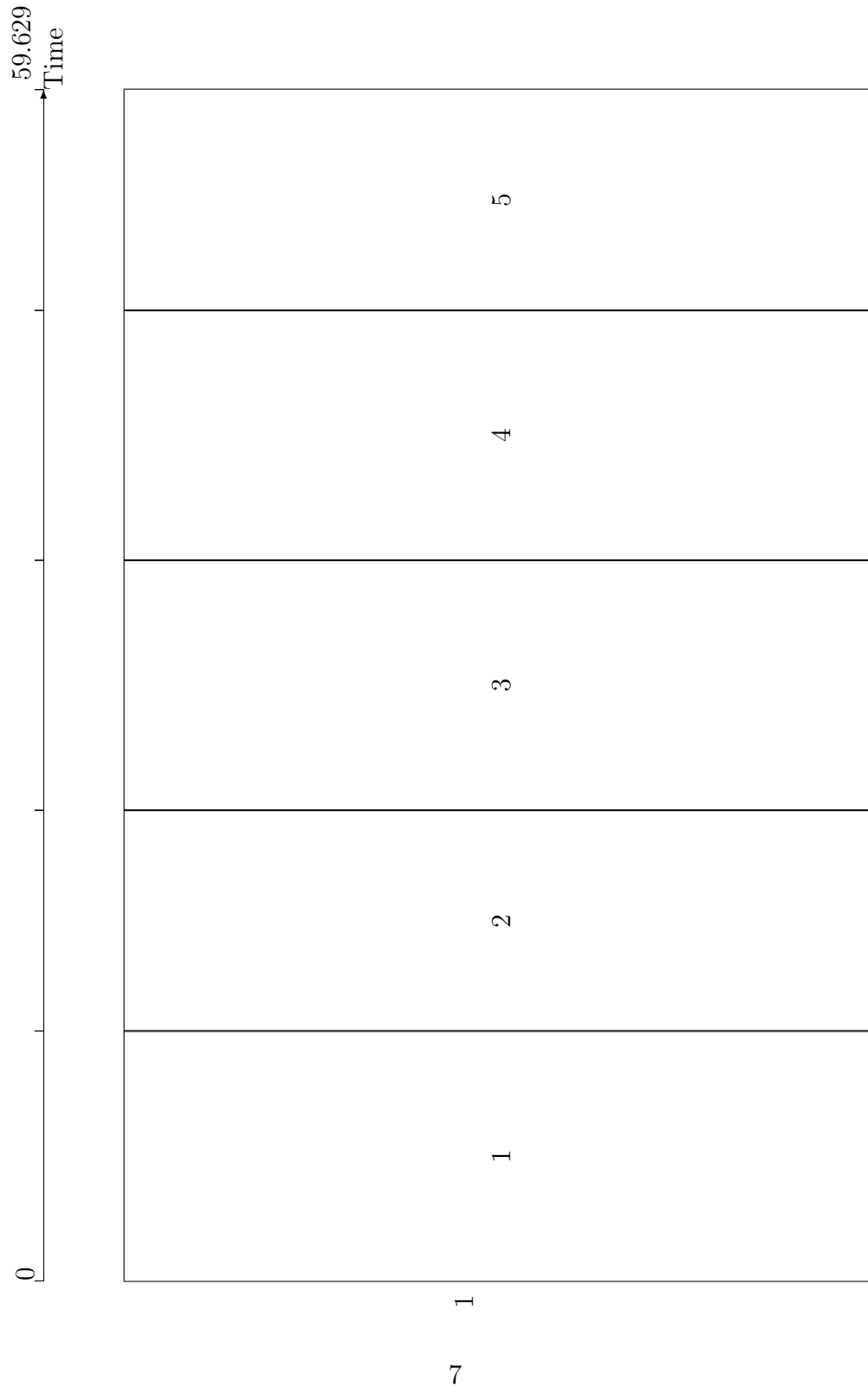- The plan has a PNE robustness in the range 160±0.

- Plan-tube: Max

Figure 2.2: Gantt Chart