

Progression Quick Reference

Version 4.0.6

Revision History

1/8/2010 Edited by AECOM Consult, Inc.
4/15/2010 Edited by RSG, Inc.

Syntax:

Progression [-flag] [control_file]

Purpose:

1. Sets phase offsets for fixed timed signals in progression groups.
2. Create progression groups based on thru movements between fixed timed signals.
3. Uses network travel times or user defined progression speed to calculate the offsets.
4. Sets different phase offsets for different time periods.
5. Optimizes based on percent thru, network speed, or vehicle hours of travel.
6. Can limit offset calculations to progression groups defined in a link equivalence file.
7. User can give priority to specific progression groups or fix the processing order.
8. Create an ArcView shape file with performance measures for each progression group.

Required Keys

NET_NODE_TABLE	[net_directory] <i>filename</i>
NET_LINK_TABLE	[net_directory] <i>filename</i>
NET_LANE_CONNECTIVITY_TABLE	[net_directory] <i>filename</i>
NET_SIGNALIZED_NODE_TABLE	[net_directory] <i>filename</i>
NET_TIMING_PLAN_TABLE	[net_directory] <i>filename</i>
NET_PHASING_PLAN_TABLE	[net_directory] <i>filename</i>
NEW_SIGNALIZED_NODE_TABLE	[net_directory] <i>filename</i>

Optional Keys

TITLE	text
REPORT_FILE	<i>filename</i>
REPORT_FLAG	FALSE {true/false/yes/no/1/0}
MAX_WARNING_MESSAGES	100,000
MAX_WARNING_EXIT_FLAG	TRUE {true/false/yes/no/1/0}
PROJECT_DIRECTORY	<i>pathname</i>
DEFAULT_FILE_FORMAT	VERSION3 {(4)}
NET_DIRECTORY	<i>pathname</i>
NET_SHAPE_TABLE	[net_directory] <i>filename</i>
NET_UNSIGNALIZED_NODE_TABLE	[net_directory] <i>filename</i>

NEW_DIRECTORY	<i>pathname</i>
LINK_DELAY_FILE	[project_directory]/filename
LINK_EQUIVALENCE_FILE	[project_directory]/filename
CLEAR_EXISTING_OFFSETS	FALSE {true/false/yes/no/1/0}
EVALUATE_EXISTING_OFFSETS	FALSE {true/false/yes/no/1/0}
PROGRESSION_TIME_PERIODS	All {time range (e.g., 0:00..6:00, 18:00..23:00)}
PROGRESSION_PERIOD_SPEED	0 mps {0.0..30.0} (2)
OPTIMIZATION_METHOD	PERCENT_THRU (1)
GROUP_PERIOD_WEIGHT_FILE	[project_directory]/filename
KEEP_LINK_GROUP_ORDER	FALSE {true/false/yes/no/1/0}
ARCVIEW_PROGRESSION_FILE	[project_directory]/filename.shp
LINK_DIRECTION_OFFSET	5 meters {0.0..15.0}
NET_DEFAULT_FORMAT	[default_file_format] {(4)}
NET_NODE_FORMAT	[net_default_format] {(4)}
NET_LINK_FORMAT	[net_default_format] {(4)}
NET_LANE_CONNECTIVITY_FORMAT	[net_default_format] {(4)}
NET_SIGNALIZED_NODE_FORMAT	[net_default_format] {(4)}
NET_TIMING_PLAN_FORMAT	[net_default_format] {(4)}
NET_PHASING_PLAN_FORMAT	[net_default_format] {(4)}
NET_SHAPE_FORMAT	[net_default_format] {(4)}
NET_UNSIGNALIZED_NODE_FORMAT	[net_default_format] {(4)}
LINK_DELAY_FORMAT	[default_file_format] {(4)}
NEW_DEFAULT_FORMAT	[default_file_format] {(4)}
NEW_SIGNALIZED_NODE_FORMAT	[new_default_format] {(4)}

Reports

PROGRESSION_REPORT_#	PRINT_LINK_EQUIVALENCIES
	GROUP_PERIOD_WEIGHTS

Notes

1	{PERCENT_THRU, NETWORK_SPEED, VEHICLE_HOURS}. By default, the process iterates through starting from each progression group and cascading through all of the other progression groups that intersect that group. A composite performance measure is calculated for each sequence and the sequence with the best performance measure is selected for output. This key defines the method of calculating the performance measure. The algorithm will attempt to maximize the percent thru bandwidth or the overall travel speed of the network, or minimize the vehicle hours of travel based on link volumes included in the link delay file.
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2	These fields accept a comma separated list of values (e.g., 0, 10, 0, 10) to define the progression speed value for each time period. A zero indicates that the travel times in the link delay file or free flow travel times will be used for the phase offset calculations. The example above uses the link delay times for periods 1 and 3 and 10 meters per second for all other periods. The last in the string is used for all subsequent time periods.
4	{VERSION3, BINARY, FIXED_COLUMN, COMMA_DELIMITED, SPACE_DELIMITED, TAB_DELIMITED, CSV_DELIMITED, DBASE, LANL, SQLITE3}