

## Propositions

attached to the thesis

### Time Window Assignment in Distribution Networks

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# I

The precedence inequalities introduced in Chapter 2 can be used to speed up solution algorithms for the Time Window Assignment Vehicle Routing Problem.

*(Chapters 2 and 3)*

# II

Using a branch-price-and-cut algorithm to solve the Time Window Assignment Vehicle Routing Problem is competitive with the state-of-the-art, but only if orientation-symmetry is properly addressed.

*(Chapter 3)*

# III

The main ideas presented in Chapter 3 are not specific to the Time Window Assignment Vehicle Routing Problem and can be applied to other vehicle routing problems with consistency considerations or synchronization requirements.

*(Chapter 3)*

# IV

Dynamic time window adjustments have the potential to improve customer satisfaction by effectively communicating delays to the customers.

*(Chapter 4)*

# V

There is no single best algorithm for optimizing dynamic time window adjustments, as different models benefit from different solution approaches.

*(Chapter 4)*

## VI

Providing real-time information to customers does not necessarily improve customer satisfaction.

## VII

In the game of Tower Bloxx, the goal is to build a city that gives the highest possible score. Because different plans can lead to the same result, addressing symmetry as in Chapter 3 is highly effective for solving this problem.

## VIII

Universities have a responsibility to provide high quality education. In light of this responsibility, teaching skills are not sufficiently appreciated in academia.

## IX

It is more effective to explain advanced methods in simple terms than to resort to complicated mathematics.

## X

Spending time to help others with their research is an efficient use of time.

## XI

Researchers should celebrate when they submit a paper to an academic journal, rather than wait until the paper is accepted for publication.