

## Feedback for estimated Ordination Destination Matrix by expert and simulation.

Zoltan Ács, Zoltán Vincellér, Árpád Nyilas

Eötvös Loránd University

acszolta@inf.elte.hu vzoli@inf.elte.hu anyilas@caesar.elte.hu

The Origin/Destination (OD) matrix [1] is an essential input for all traffic simulations. This matrix determines how many vehicles traveled from point X to point Y, where X and Y can be either a whole city or some kind of traffic zone. We can use different algorithms to estimate the OD matrix. But, generally, the calculations of these estimations are very difficult, because we don't have the sufficient amount of information for a precise prediction. As an improvement, we ask the experts about the correctness of the result, and then we are able to add this feedback information to the estimation process. So, we are going to extend the estimation process with this validation step as a part of an iteration in order to improve the results for the next iteration with information from feedbacks.

In most cases, an expert can't discover all errors within an OD matrix, because the matrices are usually too large to handle by one person. So, we have to ensure a possibility for experts with which one can point to some crossroads, and can add some hint about quantity and direction of traffic. In this paper, we will introduce a solution for expert's feedback handling. We use a probability based estimation for generating an OD matrix in each iteration, we ask some question from the expert, and then we will use probabilities of estimation to choose some values from OD to questions.

In cases, when we have some information over the real traffic flows, for example traffic counting [2] or FCD data, we can also use these as a feedback. In these cases, we get the sufficient feedbacks from questions over the available real data set. With them, the OD may show more realistic picture over the traffic. We will show how we should use few information for modifying a whole matrix. We will show, that we need at least three value to change for significant changes in OD matrix. So, as a summary, we worked out a new method to improve the correctness of an estimated OD matrix. This method is define an easy way to get feedback from expert or from queries over quantitative traffic data.

## References

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