

An Approach to Nomination Validation in Gas Networks

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Abstract: This talk presents the state we achieved with our approach within a project concerning stationary state gas transport. Our focus was the detection of feasibility of transportation orders (nominations). At HPSC 2012 we presented the problem and some of its structural properties.

On the one hand the reduction and heuristic ideas we used are quite successful in finding feasible solutions for two of the real-world networks of our industrial partner within short computing times. On the other hand infeasibility of nominations cannot not be proven by this approach and have to be decided by the approaches developed by other partners within the project, which in several cases take longer to prove feasibility. A parallel run of the models and methods combines their respective advantages.

The situation changed when it finally became clear that some of the axioms adopted in the beginning of the project were inadequate to answer the advanced question of booking validation.

In this talk we report the positive aspects as well as the consequences of the changes in the suppositions for our approach.

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