

## PROCEDURE FOR OPTIMIZING ROAD TRAFFIC AT AN INTERSECTION

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**Rezumat.** Prin optimizarea capacității unei intersecții, specialiștii de trafic pot reduce congestiile economisind timp, reduce numărul accidentelor grave sau pot reduce comportamentul agresiv de conducere, cum ar fi trecerea pe culoarea roșie a semaforului. În lucrare sunt prezentate patru intersecții din orașul Halle, Germania asupra cărora au fost realizate modelări astfel încât traficul rutier să fie optimizat. Modelele de simulare a traficului joacă un rol vital în modelarea traficului permițând inginerului de trafic posibilitatea de a evalua situații complexe de trafic ce nu pot fi analizate direct prin alte mijloace directe. Modelele oferă oportunitatea de a evalua strategii de control și planificare a traficului la anumite ore și pe anumite artere fără a folosi resurse costisitoare și consumatoare de timp necesare pentru implementarea strategiilor alternative din domeniu.

**Abstract.** By optimizing the capacity of an intersection, traffic specialists can reduce congestion by saving time, reduce the number of serious accidents, or reduce aggressive driving behavior, such as passing a red light. The paper presents four intersections in the city of Halle, Germany on which modeling has been done so as to optimize road traffic. Traffic simulation models play a vital role in traffic modeling by allowing the traffic engineer to evaluate complex traffic situations that cannot be analyzed directly by other direct means. The models provide the opportunity to evaluate traffic control and planning strategies at certain times and on certain arteries without using costly and time-consuming resources required to implement alternative strategies in the field.

**Keywords:** Visum , traffic, crossroad, optimization

### 1. Introduction

Congestion on urban streets and arteries (Fig. 1) leads to long delays, losses in the economy, increased air pollution and increased potential for accidents. We all know that the growing demand for transportation around the world has led transportation systems to reach their existing capacity limits.

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