

# **From information to central navigation - Development stages of intelligent parking information systems**

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Abstract: Route planning of trucks includes also planning the use of parking facilities. Researches have already been shown that parking demands often exceed capacities at several facilities. Its main reason is lack of information about free parking places. This problem is also discussed within European strategic documents - ITS Directive and ITS Action Plan – as priority assignment. Intelligent parking management system for trucks – planned and partially installed systems – provides real-time information and - on higher service level - central (system optimum based) navigation with automatic parking place booking. This system can maximize the capacity utilization of parking facilities. Nowadays such complex systems are not available - only some part-functions - however, modern information and communication technology offers new opportunities in transportation applications. The article classifies the planned and developed parking information systems into five plus one service levels based on their functions. On the highest service level, the information system offers individual route plans for every user while it takes drivers' working hours, actual traffic conditions and personal preferences into consideration. In the future, mobility and parking demands can be influenced by real-time and interactive information management via smartphones and personal mobile devices that are becoming personal intelligent travel assistants.

Index Terms: intelligent parking, truc parking, parking demands, parking management, motorway parking

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