



PARKING SYSTEMS

- **Complex solution of the controlled parking systems**
- **Parking capacity optimisation**
- **Control terminals**
- **Information boards for direct communication with drivers in the real time**
- **Parking lot technological equipment**

General Description

AŽD Praha offers a complex solution of the controlled parking systems – integral part of Intelligent Traffic Systems ITS. Coupling of parking lot occupancy detection and variable information boards with dispatcher's workplace results in a compact automated navigation system informing drivers on number of free parking places in different parts of the city in the real time. Application of relevant technologies evaluating current traffic situation makes possible to



upgrade this information by an estimated time of arrival to available parking lots from a point of their current position.

Application of parking subsystems in ITS contributes to an increase of traffic effectiveness and decrease of negative ecological impacts of the road traffic, primarily by supporting the philosophy of using combined passenger transport by optimisation of integrated parking lot operation.

At the same time AŽD Praha offers a complete technological equipment of parking lots and garages especially automated barriers, automated vending machines for parking tickets and cards, automatic payment collection machines, video-camera surveillance systems, measuring system of carbon monoxide (CO) and additional accessories according to the customer's request.

Basic Technical Description

Technical solution of integrated system of controlled parking consists of three basic elements – central

control system, parking lot control terminals, information boards and other traffic signs.

Central system is an integration element of the entire parking system providing its complex control. The basic functions of the central control system includes gathering data from individual subsystems and dynamic evaluation of the occupancy state of individual parking lots, control and co-ordination of dynamic navigation system, gathering data for traffic statistics and other.

In the integrated system the parking lot control terminals are separate units used for traffic regulation within the own parking lot. Within the navigation system they can also fulfil some of the control unit functions. The terminal is coupled with the central data gathering system



which informs on current parking lot operation. The terminal basic technological element is a parking controller evaluating data from detectors of passing vehicles and control entry subsystem.

The task of system for vehicle navigation is to provide current, complete and accurate information on free capacity of the closest parking lots and optimal routes to them. System consists of steady and variable information boards of different sizes deployed at arrival routes to parking lots, arrival routes to a city, in important distribution points, in the front of entries to parking lots and at other suitable locations of the road network.



Dynamic information boards and signs are fitted by LED or LCD modules or by revolving prisms with FREE – OCCUPIED symbols. Displays can be upgraded by dimmer for adjusting luminous intensity of dynamic information according to the surroundings intensity of light.

AŽD Praha also offers technological equipment of parking lots itself. They include for instance automatic barriers, exit stands, automated vending machines, entry and exit signals, POS (point of sale) systems, camera surveillance and other.

For entry and exit control it is recommended, in some cases, to use the GateCon video-detection system.