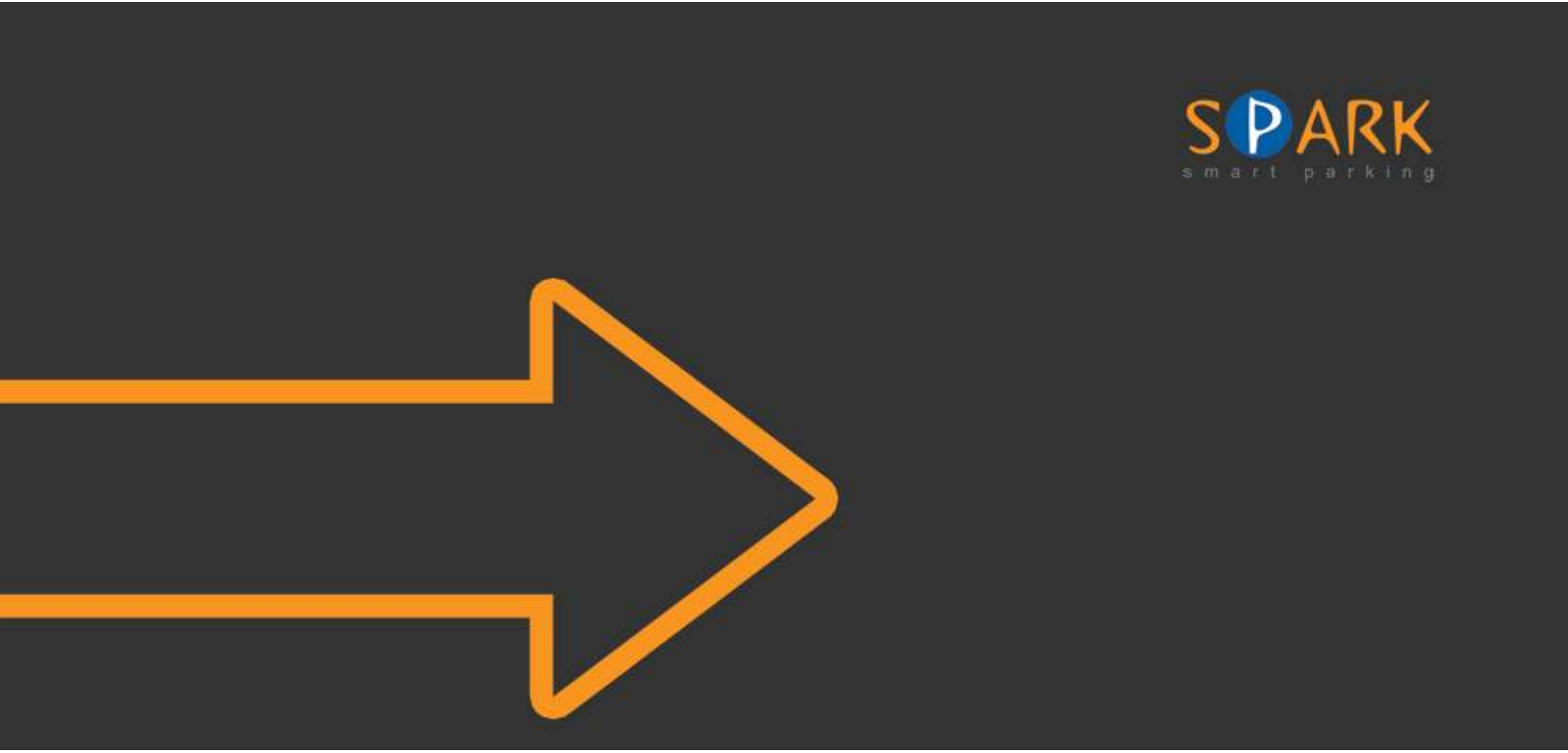

SPARK
smart parking

ABOUT SPARK

Parking is an ever-growing challenge in major cities. Increasingly, availability of parking is one of the more significant issues that city commuters face. As part of the National Ubiquitous Computing Research Center, we have developed a Smart Parking (SPARK) system. This system is currently deployed at GHMC
Parking Complex, Abids, Hyderabad.

Smart Car Park Management systems operate by monitoring the availability of car parking spaces and making that information available to customers and facility administrators. Sensor networks are a natural candidate for car park management systems, because they allow status to be monitored very accurately for each parking space if desired. Customers use it for guiding them in their choice of parking space andadministrators use it to aid overall management & planning

"WE NEGLECT OUR CITIES AT OUR PERIL. FOR, IN NEGLECTING THEM, WE NEGLECT THE NATION"
- JOHN F. KENNEDY

DESIGN GOALS

- Automation of the existing parking systems to reduce the staffing requirements
- Guiding the driver to find a parking space in a more & convenient way
- Reservation of the parking lots whenever or wherever for the customers
- Parking lot statistics/report generation made easy for the parking administrators
- Provide a long term car parking solution for users & operators

BENEFITS

Customer Loyalty

Finding a parking lot effortlessly increases customer satisfaction and builds customer rapport with the parkingmanagement, thereby stimulating positive responses from customers to return and reuse the facility

Congestion Control

Possible jams can be minimized and controlled, especially at peak hours, using entrance displays, updated in real time, with the available parking status. This facilitates the customer with prior knowledge about parking vacancies even before entering the facility

Time Saving

Customers can access vacant parking lots without wasting much time driving around looking for a place to park. Guiding displays within the facility prompt the driver, with parking information in each of the parking bays therefore allowing him to steer to the optimal parking lot

Parking Administration

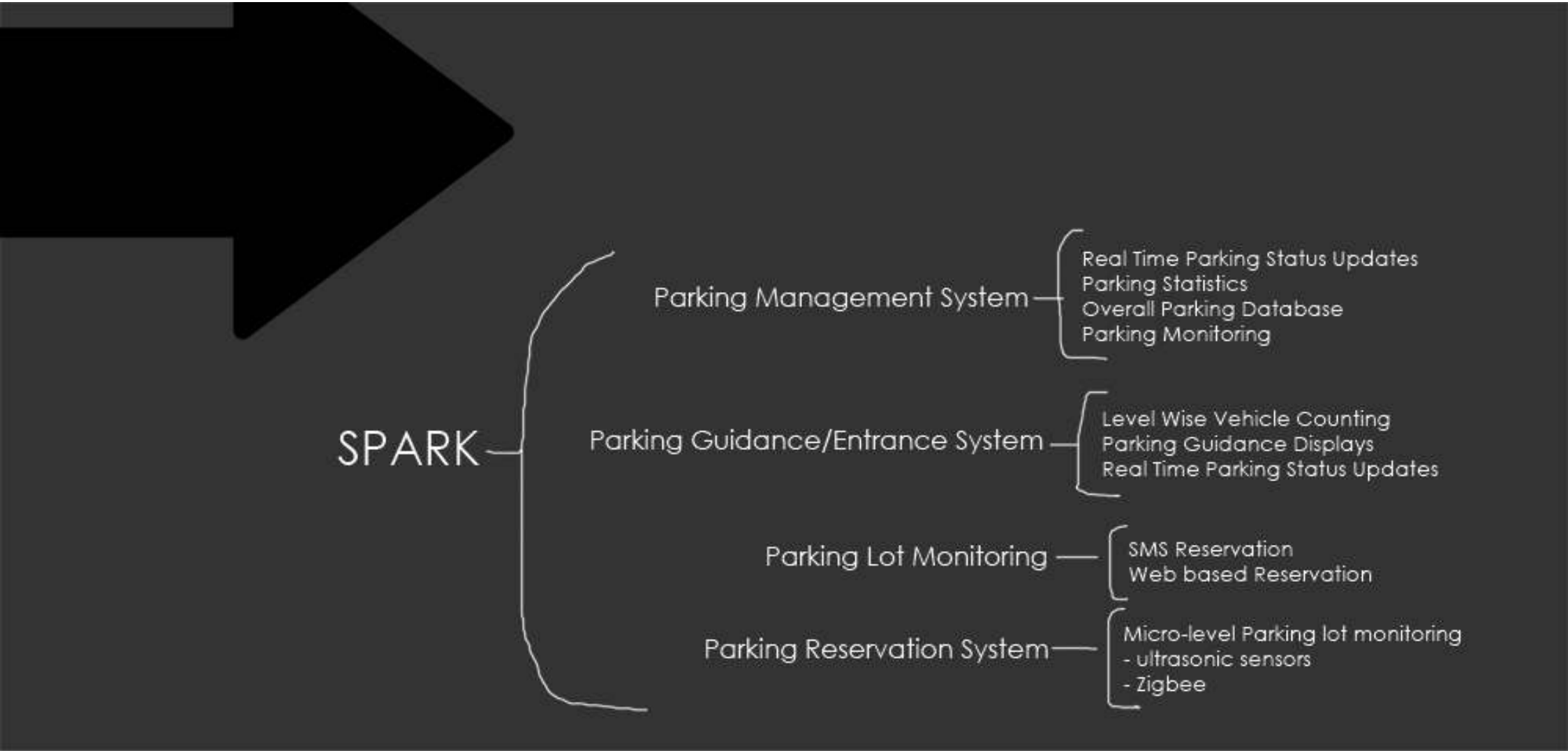
A user friendly graphical interface enhances parking administration for the administrator of the system. It updates the administration about the occupancy status of the parking facility

Parking Reservation

Customers can reserve their parking lots for specific durations of time on any given date. the reservation can be
booked well in advance through either mediums of online Internet or SMS reservations

Multi Faceted Savings

Reduced fossil fuel emissions due to smother commuting within the parking facility, optimal revenue generation schemes and reduced manpower within the facility


SPARK
Parking Management System
Real Time Parking Status Updates
Parking Statistics
Overall Parking Database
Parking Monitoring
Parking Guidance/Entrance System
Level Wise Vehicle Counting
Parking Guidance Displays
Real Time Parking Status Updates
Parking Lot Monitoring
SMS Reservation
Web based Reservation
Parking Reservation System
Micro-level Parking lot monitoring
- ultrasonic sensors
- Zigbee

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