



Space odyssey

Up to 70% of city centre traffic is created by drivers looking for a place to park. With a dwindling amount of space for them to do so, cities must take a new path. It's time to begin the journey to automatic parking

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Modern car parks are becoming ever-more complex structures. Growing numbers of storeys coupled with increasingly complicated layouts means such facilities can be both confusing and frustrating for motorists. We've all probably driven around several levels of a car park looking in vain for a free space at some point.

Nowadays, cities face a growing need to handle and control increasing traffic efficiently, safely and in an environmentally friendly way. Cities that are not planning and investing now will face massive traffic jams, spiralling pollution and a significant negative impact on business growth. Besides extending the traffic network, parking facilities need to have a key role in those plans. It must be remembered that up to 70% of the traffic in city centres is created by drivers looking for a space to park! As there is usually no space available for the growing number of cars in suburban areas, automatic parking systems (APS) will be part of the solution. They use only a fraction

of the space of conventional parking, can be easily integrated into many locations, and reduce CO₂ emissions.

How automatic parking works

APS can be adapted to spatial conditions in a more compact and flexible way than conventional parking infrastructure. Within the same volume, they typically contain two to four times the number of parking spaces. In dense areas in Asia there are already many automatic parking installations in operation. Europe and the USA are lagging behind because until now enough space for car parks has been available. However, the performance and comfort level of such parking installations have been unsatisfactory. Given new technology, which is not only very compact but also fast and reliable, their image can change quickly. The performance gap of APS is no longer an issue, as modern automatic systems can be configured to the requirements of the target audience. Communities and investors are now considering automatic solutions

because they realise that such systems offer a huge traffic-flow benefit through having profitable parking exactly at the right spot.

The new technology brings out its best where space is scarce, expensive or too limited for conventional systems, such as in city centres and at airports, railway stations, park-and-ride facilities, hotels or hospitals. With patented innovations such as high-speed car transport with redundant conveyors, computerised measuring technology and multiple lift systems, Skyline Parking offers several technologies for different applications and space utilisation improvements of up to 400% compared with conventional multistorey car parks.

Why are APS so space-efficient? In conventional car parks, only 10% of the enclosed space is used for cars. Entry and exit ramps, manoeuvring areas, lifts, staircases and ventilation need space and energy. A plot measuring just 20x20m enables the construction of a Skyline parking tower or an underground shaft with up to 320 parking spaces. For underground



Skyline L-Park in operation: the parking procedure with conveyor belts at an installation in Switzerland



systems, the cost of excavation is only a fraction of that for conventional car parks and the emissions for the construction works are much lower, which reduces the construction costs per parking space by up to half.

Automatic parking with Skyline Parking greatly simplifies the process for the end-user. Drivers simply drive their car onto one of several spacious entry stalls in the car park and are then free to leave the facility. The fully automatic parking machine does the rest.

While the car is being driven onto the entry ramp, the high-precision scanner measures the dimensions and shape of the vehicle. Then the driver is instructed in modern sign language and in a pleasant computer voice to switch off the engine and apply the brake, both of which are immediately verified by the sensors. When the process is confirmed, the driver is then asked to leave the entry stall along with any passengers. The car occupants can now watch from outside how the vehicle is carefully taken hold of under the tyres and conveyed onto one of the high-speed lifts. Then, the lift takes the vehicle to the computer-assigned parking space. As the cars are not all the same size, parking spaces are naturally not the same size either – which is an additional space-saver. This ensures that the least possible amount of costly space is wasted.

An automatic parking system can contribute to making towns and cities safer with open, transparent and well-lit entry stalls. The parked cars can only be accessed by maintenance staff. Break-ins, theft and damage are therefore impossible and everyone can park without fear. Every space in a Skyline system enjoys the same security. Parking has become child's play and a comfortable, pleasant experience.

Architectural versatility

The Skyline Parking system's integrated building support structure offers architects and city planners more options and styles than conventional multi-storey car parks. The system can be designed to fit almost invisibly in backyards, gaps between buildings and underground constructions or as attractive high-rise buildings with an eye-catching appearance. As the façade is not a component of the supporting structure, creativity can be exercised in its design and in the choice of material: glass, plastic, metal and even textiles are conceivable. The façade can be clad in solar cells or advertising screens that can be mounted on it, which will provide the operator with additional income. This means that car parks no longer have to disappear from sight; they can be integrated into the cityscape just about anywhere. ■



Underground lateral solution