



ROBOTIC PARKING SYSTEMS, INC.

The
BIGGEST IDEAS
in Automatic Parking



ROBOTIC PARKING SYSTEMS, INC.

- Company
- Idea
- Technology
- Advantage
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Affiliations

Robotic Parking Systems is affiliated with key companies and organizations in high-tech automation, parking, fire safety and more.

The BIGGEST IDEAS in Automatic Parking

Established in 1994 Robotic Parking Systems Inc. (Clearwater, Florida, US) is recognized as the pioneer in the field of robotic parking. In fact, the company's founder coined the term "robotic parking" to describe this new parking technology and then adopted that name for the company. Decades later the term "robotic parking" is now being used industry-wide to represent any automated parking system.

The management team of Robotic Parking Systems Inc incorporates more than 60 years of cumulative competence in the development, construction and operation of automated transport systems. In the past, well known companies such as Mercedes, Volkswagen, Hitachi, ABB and Krupp have made use of the team's experience - including for the construction of the launch pad of the Ariane 4 carrier rocket.

Patents

The Robotic Parking Systems' technology is patented in the United States and in countries throughout the world.

The company blends German engineering, American innovation and the know-how from strategic partnerships – GE and other high-tech electronic and automation firms – to deliver *the biggest ideas in automatic parking*.

Robotic Parking Systems Inc, along with its subsidiaries and affiliated companies, handles all aspects of a green parking project:

- Design and manufacturing
- Turn-key build and installation
- Maintenance and 24/7 operations including hotline support
- As a developer of robotic parking facilities

Robotic Parking Systems Inc. has celebrated many "firsts" in the field of robotic parking:

- First to build and operate simultaneously operating robots for parking.
- Built the first automated parking system in the US.
- Founding member of AMPA (Automated and Mechanical Parking Association).
- Initiator and contributor to the *Guide to the Design & Operation of Automated Parking Facilities* published by the National Parking Association in Washington DC.
- Played a key role in getting first-time definitions and requirements for automated mechanical parking structures included in the 2011 NFPA (National Fire Protection Association) code 88A. Also worked with UAE Civil Defense to develop a new code that serves as a guideline for future robotic parking projects in the region.
- Built and has successfully operated the first automated car park in the Middle East since 2009.
- Robotic Parking Systems' 1200 space parking facility was awarded the Guinness World Record for the *Largest Automated Parking Facility*.
- Listed as the most luxurious automatic garage in the world by the *World's Luxury Guide*. And, the list continues ...

E - Garage

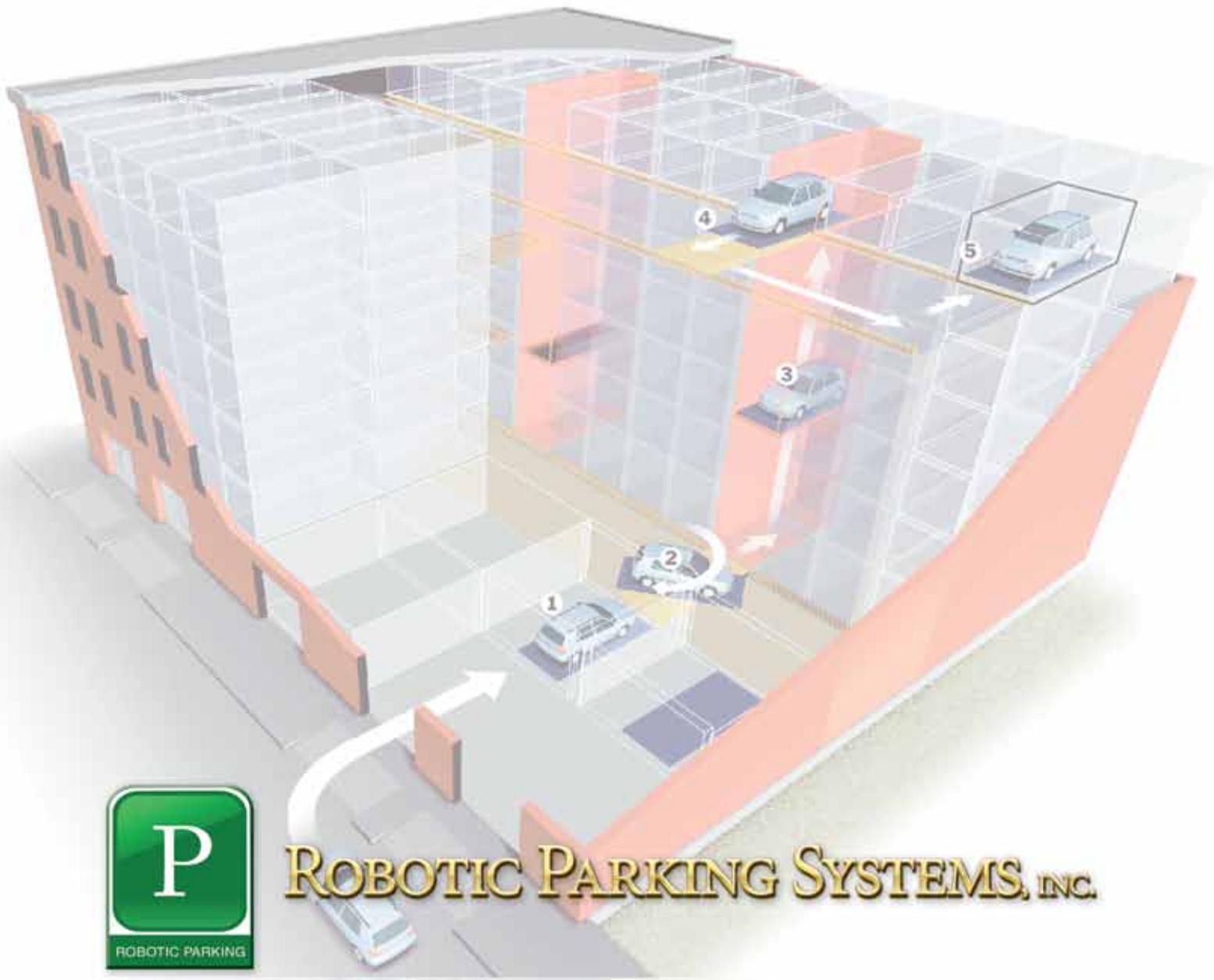
E - Park

CONCLUSION

"Highly redundant, cleverly designed system with good traceability"

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We believe man deserves better ...



Premium valet service ... you keep your keys ... no strangers in your car.

- Better parking experience – premium valet without the tip.
- Better safety and security for individuals and their cars.
- Better environment – more green space – less pollution.
- Less congestion.
- Better use of land and development space.
- Better revenues and profits.

These are the driving principles behind Robotic Parking Systems' patented, high-speed automatic parking facilities.

The premium valet service of robotic parking reduces the risk of personal injury. Just pull into the entry terminal, keep the keys and let automation park the car. No walking to and from the car through a parking garage. And, since no public are allowed inside the facility, dings, dents, theft and vandalism of cars are virtually eliminated.



Ferris Buehler: "... it could get wrecked, stolen, scratched, breathed on ..." or taken on a joy ride ...

The need for a better parking solution is acute. Studies⁽¹⁾ report that up to 50% of traffic congestion is generated by drivers searching for parking. This unnecessary cruising contributes substantially to pollution and increases carbon footprint. The cost of congestion in the US is estimated to be \$133 billion dollars by 2015⁽²⁾. *Networked Urban Environment* states that "traffic congestion-related expenses represent between 1 percent and 3 percent of most cities' GDP."

A Robotic Parking System is a space saving and cost-effective alternative to conventional parking facilities. The technology offers a better use of development space that results in more revenues and profits.

(1) Studies by DOT, Boston College, MIT and others

(2) Texas Transportation Institute



"I'd rather go without food than without this garage." (Ellen Harris)



CONCLUSION

"Traffic congestion is a problem of space. Space can be better utilized and increased using Robotic Parking, the automated, high-tech parking solution."

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FOR YOUR NOTES:



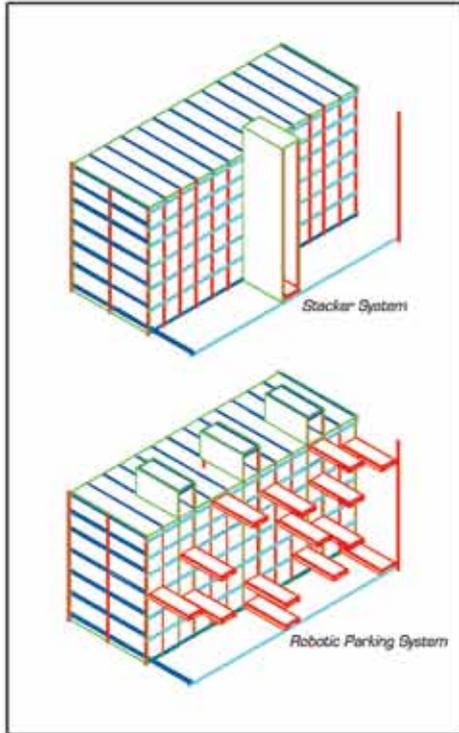
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The BIGGEST IDEAS in Automatic Parking



Parking does not need more space; just more intelligence.

The compact Robotic Parking System offers a more intelligent use of space. The concrete, ramped garage now becomes a state-of-the-art, computer-controlled and fully automatic storage facility that can park up to 4 times the amount of cars on the same land.

The philosophy behind the technology was formulated in 1990 and codified in *Basics in Automation* available on our web site – that if any machine fails there is always another machine(s) that can take over the function and ensure that the facility never stops operating.

The technology of Robotic Parking Systems has been audited by independent European technology experts and features:

- New and optimized storage logistics processes.
- Modern technology for the movement and storage of vehicles.
- Patented Human Machine Interface (HMI). Sophisticated diagnostics and high level warning systems provide alerts well in advance of any failures to ensure maximum performance and uptime.
- Modular system capacity from 100 to more than 10,000 cars.
- Secure pallet system protects cars from overhead drips and guarantees that no machinery or people ever touch the car.
- State-of-the-art electronic and mechanical transmissions and controls – no hydraulics.
- Impressive number of simultaneous, rapid movements of cars.
- Highest peak traffic capacity in the industry.
- Flexible definition of Entry / Exit Terminals indicated by a traffic light that changes on the fly.
- Extremely high redundancy by using at least two identical machines per area of the facility.
- Machine redundancy is complemented by other fail-safes such as redundant computer servers, universal power supply and back-up power generator to ensure continual operation.
- Automation is powered by GE's Cimplicity® software used worldwide by companies such as GM, Ford and others.
- The system is not dependent on a single retrieval mechanism. If any single robot fails another identical machine takes over.
- Service plan based on threshold values for each component.
- Operational safety two fold on each logical level: software and hardware.
- Mature, extensible system: over 15 years of experience with the same system design and operations.
- Historical performance over 10 years is 99.9% uptime.
- Patented (or patents pending) throughout the world.
- Best practice compliance.

HMI is the first patent of its kind ever awarded in the US for industrial use. This technology applied to parking accomplishes a previously unknown degree of efficiency in the use of space and resources. All at lower total costs.

CONCLUSION

"The Robotic Parking Systems, technology sets highest industrial standard on peak traffic."

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FOR YOUR NOTES:



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*Parking does not need more space
but more intelligence*

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The innovative parking solution — premium advantages

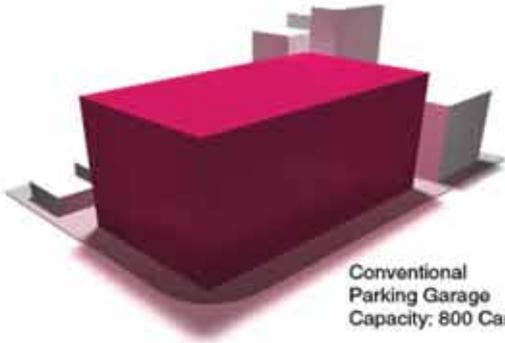
Whether planner, developer, owner, operator or driver — a Robotic Parking System offers decisive advantages for everyone:

For users:

- Increases individual safety and reduces the risk of injury.
- Premium valet service without the tip.
- Virtually eliminates dings and dents as well as theft and vandalism.
- Protects cars from the elements.
- Average time for storing or retrieving the car is 150 seconds.
- Cars are transported free of touch on separate pallets.
- Easy to use. Drive forward to enter and forward to exit the facility.

For planners, architects, developers and owners:

- Creates more space for design and development.
- Can be constructed in every form — above ground, underground, on roofs or inside a building complex — in steel or concrete.
- Increases return on investment.
- Space gained can be used for green space and open areas to meet LEED standards.
- Modular and flexible capacity for hundreds to thousands of cars.
- Can be designed for every level of traffic density.
- Lower development costs.
- More than 4 times the parking capacity on the same land.
- Ideal solution where space is limited or land cost is at a premium.
- Reduces operating costs — less personnel, less ventilation and lighting, etc.
- Flexible design and façade allows the robotic parking garage to fit into any neighborhood or project.
- Reduces liability. No public enter the area where cars are stored.
- Not dependent on a single retrieval mechanism.
- Full redundancy and fail-safes. No single failure will ever result in the system being inoperable. If a single robot fails another identical machine takes over.
- Lower insurance costs.

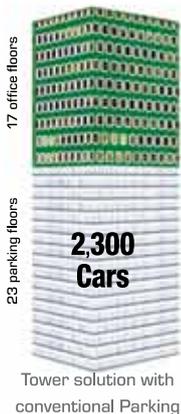


Conventional Parking Garage
Capacity: 800 Cars



Automated Parking Garage
Capacity: 724 Cars

A Robotic Parking Economic Model



Tower solution with conventional Parking



Tower solution with Robotic Parking

+ 47% office space
+ 48% parking space

For everyone:

- No exhaust fumes.
- No noise.
- Reduces CO2 emissions, other pollutants and greenhouse gases.
- Reduces carbon footprint.
- Eliminates tons of highly toxic tire and brake dust every year.
- Relieves traffic congestion.
- Valet ease, but you keep the keys.

ADVANTAGE

CONCLUSION
"The advantages of Robotic Parking are every bit as versatile as they are unique."
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FOR YOUR NOTES:

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ROBOTIC PARKING SYSTEMS, INC.



PARK YOUR CAR



1. Drive up to the automated parking garage. The Robotic Parking System offers complete design flexibility and can blend with any neighborhood or project.



2. Drive into one of the convenient parking terminals indicated by a green light. Multiple automatic sensors ensure that the car is properly positioned for parking. Robotic Parking Systems offer more safety and security.



3. Get out and lock the car. There is no need to drive through the garage to find a parking space. Robotic Parking Systems offer a greater level of convenience.



4. Take the parking ticket from the kiosk and walk away. You get premium valet parking in less than 15 seconds without the tip. And, you keep the keys.



5. Robotic Parking Systems does the rest. The car is picked up by the computerized machinery and lifts that safely place it inside the building on a shelving system. The Ibn Battuta Gate facility handles 250 cars per hour with up to 32 cars in motion at any time.

PICK UP YOUR CAR



6. Enter the well lit and secure ground floor lobby and put the parking ticket into the kiosk. The Robotic Parking System provides the highest possible level of security and convenience for individuals.



7. Screens display the exit terminal where the car can be picked up. The Robotic Parking System swiftly delivers the car within 3 minutes or less.



8. The Robotic Parking Systems' machinery delivers the car facing forward so that it is safe and easy to exit the garage.



9. Get into the car in the exit terminal. It is not necessary to wander around inside the garage to retrieve the car.



10. Drive away. The Robotic Parking System makes parking safe and hassle free.

CONCLUSION

"Robotic Parking garages are 'easy' to use-as simple as valet parking."

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Green Parking — most environmentally friendly

5750 trees can be saved with one 1000 space Robotic Parking facility.

Architects and developers want to build projects that improve people's lives. And, with the emphasis today on green building and sustainable development that means projects must be environmentally friendly.

LEED® – Leadership in Energy and Environmental Design – is a certification program of the U.S. Green Building Council and the nationally accepted benchmark for green buildings. This program has been adopted in principle by organizations around the world.

A review of LEED codes shows that robotic parking could receive at least 10 points and as many as 17 points. "Innovation in Design" can earn additional bonus points.

The decision to build a Robotic Parking System can supply about 50% of the points needed for certification.

Robotic Parking Systems are "green" products that conserve fuel and reduce pollution for a clean parking facility. Here is an example of emissions reduction and energy saved in a 1,000 space Robotic Parking System:

- Saves 13,750 gallons of gasoline annually in the parking process.
- Quantity of toxic emissions eliminated are:
 - 2,001 lbs of Hydrocarbons (HC) per year.
 - 1,031 lbs of Nitrogen Oxides (NOx) per year.
 - 15,463 lbs of Carbon Monoxide (CO) per year.
 - 138 tons of Carbon Dioxide (CO2) per year.
 - 49 tons of tire dust per year.
 - 4.95 tons of brake dust per year.



CONCLUSION

"Robotic Parking Systems earn substantial LEED points and reduce carbon footprint."

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Imagination is the limit

The Façade of a Robotic Parking Garage Can Blend Seamlessly into Any Project or Neighborhood.

Creative freedom has arrived! Architects and developers can hang any type of façade onto the clean outside structural support system of a Robotic Parking facility. The industrial lifts, machines, pallets and the computer control systems are installed inside the supporting structure and never interfere with the façade.

This gives architects a free hand in designing the external appearance of the building. Whether choosing a half-timbered, brick, aluminum, concrete or glass façade, the decision is yours. The garage can be designed to fit harmoniously into its environment. Entry / exit terminals can also be integrated into the façade environment, while observing both visual as well as functional criteria.

The Robotic Parking System can be constructed in every form — above ground, underground, on roofs or inside a building complex.

Here are a few project designs that incorporate robotic parking.



CONCLUSION

"Planners and architects have a free hand in designing the external appearance of the garage."

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Manufactured in the USA.



Robotic Parking Systems, Inc. has a full scale manufacturing facility in Clearwater, Florida to design and build custom automated parking garages. We are not an OEM or distributor. Our machines are manufactured from raw steel to finished product using off the shelf components from US and German producers.

Quality control is maintained using our 114 car research and testing garage located within our production plant. This facility allows us to test and certify every machine before it's shipped to the customer's job site.



With 100,000+ sq ft of manufacturing floor space, Robotic Parking Systems can build projects of any size, and deliver quality products on time that meet even the most unusual demands.

Factory personnel are highly trained, motivated and have all certifications necessary for the highly specialized processes.

Come and see it for yourself. Contact us to schedule your tour.



MANUFACTURE

CONCLUSION

"Robotic Parking maintains complete control over the entire manufacturing process from raw steel to completed and certified machines."

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Designed, implemented and operated the 314 space automated parking facility. The Robotic Parking System was operated 24 / 7 for four years with 99.9% uptime over 750,000 vehicle transactions and approximately 34,000 hours.



Turnkey system design, start up of operations and maintenance for a 765 space automatic parking garage for the Ibn Battuta Gate project in Dubai, UAE. Operations began in August 2009.



Design and delivery of machinery and automation for 320 spaces for Traders Hotel in Abu Dhabi, UAE.



Turnkey design contract and delivery of machinery for a 1200 space Robotic Parking System for the Emirates Financial Tower in Dubai, UAE. This car park holds the Guinness World Record for largest automated parking facility.



Turnkey design and machinery built for a 220 space automatic parking garage for the Hollywood Grande project.



Design, manufacture, installation, maintenance and 24 / 7 operation for 2,376 spaces for Al Jahra Court Complex in Kuwait. Construction: M. A. Kharafi and Sons.

CONCLUSION
 "Robotic Parking Systems has built systems for close to 3000 spaces."
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FOR YOUR NOTES:

THE WALL STREET JOURNAL.

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WEDNESDAY, FEBRUARY 3, 1998

DEVELOPMENTS

New Parking Garage Features Shelf Service

Newsweek

WHAT DOES SHE KNOW?

TIME

AUTO PARK

Robotic parking systems are being used in a variety of applications, from parking garages to parking lots. The systems are designed to maximize space and provide a safe and secure parking environment.



Construction Digest

Robotic Parking: A Space-Saving Solution



ROBOTIC PARKING SYSTEMS, INC.

Engineering TIMES

Robotic Parking: A Space-Saving Solution



PARKING TODAY

Robotic Opens Automatic Garage Test Site in Ohio



UrbanLand

Robotic Parking Comes to America

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COMPUTERWORLD

Robotic valet parking



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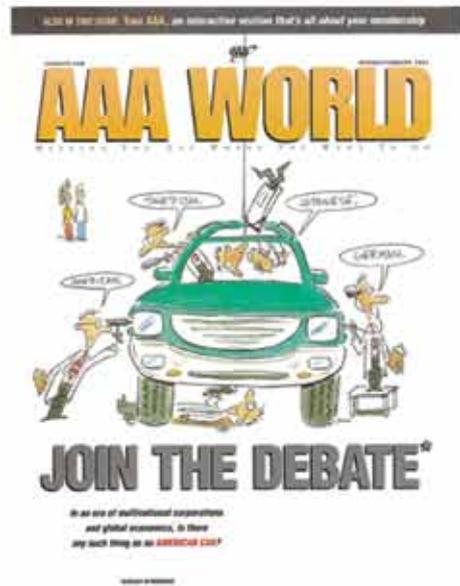
Guinness World Record

Robotic Parking Systems' 1200 space facility earned the Guinness World Record for the *Largest Automated Parking Facility*.



Straight from the press.

- "One of the most intelligent inventions of the 20th century." - *AAA World Magazine*
- "... One of the Top Ten Garages in the world." - *BMW Magazine*
- "... the Robotic garage displays a stunning agility - it lifts and carries cars about on computer-controlled steel pallets as if they were delicate ballerinas, moving with precision and speed inside a structure that is remarkable compact ... we appreciate the articulateness of the eloquent parking architect." - *New York Times*
- "The pioneer and US expert in automated parking." *Parking Symposium at the Texas A & M March 2002*
- "It could put to rest a car owner's worst parking nightmare." - *Jeanne Moos, CNN*
- "... when you return ... no guesswork about where you parked it, no strange nicks, dents or scratches ... and no parking attendant to tip." - *Peter Jennings, ABC World News Tonight*
- "... For drivers leaving or retrieving their cars at a parking garage, it's a dream; no exhaust fumes, no strange nicks or scratches appearing ..." - *Wall Street Journal*



A property manager says ...

"Since the automated car park opened three and a half years ago, you and your staff have provided excellent operations service and ensured that the automated car park is well-maintained and running flawlessly." - *Anne Marie Shein, Senior Property Manager Ibn Battuta Gate*



The *World's Luxury Guide* listed the Robotic Parking System at Ibn Battuta Gate as the most luxurious automated garage in the world. We are proud to be companions in the publication with John Travolta, Oprah Winfrey, Will Smith and others!



The New York Times



CONCLUSION
 "Robotic Parking Systems was recognized by TEXAS A & M as the pioneer in automated parking."
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Call us to find out how you can park more cars in less space!



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REPRESENTATIVES

For a representative in your region, go to:
www.roboticparking.com/robotic_parking_representatives.htm

CONCLUSION

"Robotic Parking Systems offer more cars, less space, cleaner environment and less development cost."

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FOR YOUR NOTES:



- **Green** Space & **Common** Areas
- Create Space For **Design, Development & Community**

... Changing The Dynamics Of Land Use

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