ducation –

"The issue of limited high-use lots (in and around main classroom buildings) and resident students driving to them instead of walking or using our shuttle service. Solution: to issue parking tags that better delineate resident students -- students who live on the main campus who are permitted to use a specific lot -- and non-resident students who must drive to high-use lots. This, combined with an assertive, consistent, fair and reasonable tow policy to enable the solution for those who do not cooperate."

-- Ken Cooper, Director of Safety and Security, Bard College

"One problem we encounter stems from giving free permits to employees but restricting them to a specific lot that is somewhat farther away. Certain persons feel entitled to park where they please because of their employment status, but are told I will not give to them what our customers -- the students -- pay for. They can park closer if/when they purchase the same permit."

-- Paul Wilkins, Security Supervisor, Coconino Community College

"Biggest concerns:

"1) Communicating policy. It is on our Web site, in the Student Handbook and on an intercampus site, and it is still not read. I have no solution!

"2) Being fair in enforcement. Someone didn't see the sign, etc.

"3) Trying to satisfy all constituents -- visitors, commuters, faculty, and the students who pay to go here!"

-- Gerald Bruno, Manager/Campus Services and Security, Northland College

"Convenient parking is our biggest challenge. The only solution is educating the university community not to expect close, convenient parking."

-- Jenni Sparks, Coordinator, University of Delaware

Where They Focus in Austin, TX

1. Providing sufficient parking with dwindling supply.

2. Dealing with greater requirements for campus security and safety.

3. Holding down the costs of parking while increasing the services provided.

4. Balancing the demands of construction disruption with customer needs.

5. Balancing the requirements of special events and everyday needs.

6. Greater accountability -- this is a fiscal necessity and service requirement.

7. Wayfinding -- how do we get our staff, faculty, students and visitors around campus?

8. Handling parking for the disabled while removing surface parking in the core of campus.

9. More efficient use of the campus shuttle system.

10. Expansion of alternative transportation programs.

-- Gerald Robert Harkins, Director, Parking and Transportation Services, University of Texas at Austin

Parking in Higher Education – The Pros Speak Out

"The central issue surrounding parking for us right now is enforcement.

"Security is concerned about using 'boots' or towing vehicles -- in regard to liability if the car is damaged while being booted/trying to drive with the boot on/ damaged during towing.

"Also, as a private school, we don't have access to DMV records, so we may give the same car 10 tickets and never know whom it belongs to."

-- Jerry Schearer, Salem International University

"Rising percentage of students who have cars. Rising transportation costs because of oil prices. Increased expectations for convenient parking among students, staff and faculty. Security. I don't have any solutions."

-- Gene McAbee, Western Carolina University

"My department exists specifically -- although not exclusively -- to ensure the safety, accessibility and cleanliness of all university parking facilities. Our primary concerns are somewhat consistently related to patron and employee safety and liability reduction. This is an ongoing challenge that requires the constant observation/identification and to the extent possible given available resources, immediate rectification of potential problems. Slip, trip and fall prevention would likely top the list."

-- Art Kistler, University of Minnesota Parking and Transportation Services

"Expectations of students and faculty regarding parking on campus are often unrealistic. The 'need' to park as close as possible to the classroom/admin building is not met due to lack of space and use of available space that precludes parking slots. This is often the cause of negative comments and 'parking rage.' In actuality, there is ample parking space all within a 3- to 5-minute walk from the buildings. The solution: Get to school early enough to enjoy the short walk into the classroom building. Enjoy the fresh air and exercise. Very soon you'll be sitting through an hourlong lecture."

-- Ben Haskell, New England School of Communication

"The greatest problem is balancing the space requirements for visitors versus decal parking, so that you are not building facilities that may sit vacant for much of the time. You want to have enough parking so as not to drive your visitors away, but at the same time, you don't want to have people who could not purchase a decal seeing empty spaces on a daily basis."

-- L. Shuan Daniel, Public Safety/Parking, University of Cincinnati

"Supply shortage (especially in convenient locations). Generating enough revenue to fund construction of parking structures. Difficulty in getting students to use alternative access modes.

"Solutions: improved shuttle service to make more distant parking spaces more acceptable to students. Building our first structure."

-- Richard Wilson, Cal Poly Pomona

"The greatest issue we have is security of staff and faculty vehicles on or near our campus. Several break-ins have occurred, and there is a need for some solution in resolving the issue."

-- Vincent Reese, Assistant Manager of Public Safety, California College of Arts

"Space. Funding. The state will not pay for parking garages. Access/Lack of security. Too much access by the bad guys, resulting in break-ins."

-- John C. Nestor, Assistant Director of Public Safety, Columbus State Community College

"Our greatest issue is land that can be developed. Although we have a campus of over 1,600 acres, only a small portion can be developed. The college is located within the state's Pinelands Reserve, whose commission regulates all development within it."

-- Jor Mangiello, Richard Stockton College

"At the Art Institute of Colorado, there isn't a parking problem since we installed the pay-and-display pay station! There is accountability, coupons, printed receipts, prepaid parking cards, and a variety of ways to pay for parking. (debit/credit card, cash, coin, and SmartCard). Makes parking and ticketing cut-and-dried. No gray areas."

-- Justin Hess, Art Institute of Colorado

"Our three main concerns are space, space and space! We need about 500 additional spaces; but as an agency of the federal government, can't seem to get our project to build a parking garage approved. Our veteran patients spend a lot of tine driving around the lots waiting for an open parking space."

-- Michael J. Schneider, P.E., Iowa City Veterans Affairs Medical Center

"Our greatest issue with parking is finding a garage with affordable rates. Our students and staff have had a difficult time finding affordable options since a lot closed for the new college dorm facility. As a result, nearly all of our students and staff take public transportation."

-- Jeffrey Jarmes, President, Illinois School of Health Careers

A reader is suspicious of validity of article

To: Patrick Ryan
Subject: On-Street Parking article in February 2004 Parking Today magazine

I wanted to find out more information about the Combined Parking and Revenue Model (COPERM) that was referenced in your article. Do you have a source (manufacturer) for that software? Who developed the software? Since the source of the mathematical model is not revealed, it raises questions as to the validity of the statements made in your article.

Please respond. Thank you.

Donald R. Monahan, P.E.
Vice President
Walker Parking Consultants

The Author responds:

Don,

Thanks for your email. The COPERM is a fairly straightforward mathematical model that has been independently audited and verified by Ernst and Young.

The results, of course, depend on the accuracy of the input, and like all these things, there is some interpretation to be made that will vary city to city. This is really why we believe that it is best used in a consultative manner with a customer, in the hands of experts like yourselves.

An 800-word article designed to appeal to readers is simply not going to cover all the available outcomes. Still, we find that for a city's on-street program, it gives our customers a sensitivity analysis that they would otherwise have no visibility of. For cities looking at on-street technology for increased revenue or control, it is an invaluable tool.

I believe that you would also find it very helpful for your own city on-street customers, and I would be very happy to take you and your team members through it.

Thank you for taking the time to write. Cheers.

Patrick Ryan
President
Reino Parking Systems

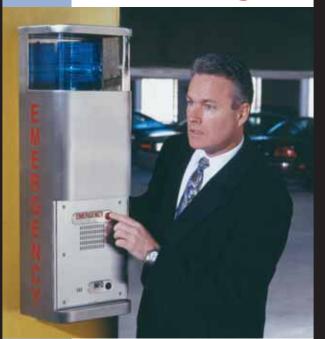(Above letters printed with permission.)

Problem with October PT Cover? Never!!!

Editor, Parking Today:

I was sitting on a plane and took a good look at the cover of the October PT issue. In the center is a stadium full of people attending an event. The upper portion shows a

Sharing Data...Evolving from "Thick" to "Thin"

By Blake Laufer

Campus parking offices are focused on delivering timely and efficient solutions that address on-campus parking needs by creating comprehensive systems that are dynamic enough to be viable today — and forward-thinking enough to last long into the future.

The Evolution of Campus Parking Operations

The parking industry has experienced dynamic changes since the first parking meter was introduced seventy years ago. But many of the pressing issues remain the same. How can campuses manage limited parking spaces while the number of vehicles continues to increase? What's the most efficient way to process citations? How can we track out-of-state student and visitor plates? What can we do to improve customer service and increase revenue at the same time? How can our understanding of current parking trends improve master planning?

Unifying Systems, Sharing Data and Improving Efficiency

The biggest challenge facing today's campus parking offices is managing multiple tasks through multiple systems. The most pressing need, according to many campuses, is the capability to bring these systems together into one platform. With input from campuses and municipalities, the vendor community needs to develop solutions with common fields for the congruent management of permits, collections, processing, signs, off- and on-street parking and gates.

> **When it comes to sharing data, the buck doesn't stop with the parking office**

With common fields, multiple databases can share information making operations more efficient across the board — because when it comes to sharing data, the buck doesn't stop with the parking office. From small campuses to large universities, most parking departments have much more than parking to worry about. Integration with other departments, P&L, legislative issues, IT, zoning, signage, maintenance, human resources...the list is endless.

In many campus parking offices, integration between databases and operating systems has become a full-time job in itself. It is common for a medium-sized parking department to have a full-time Information Technology professional on staff to build and maintain efficient and seamless interfaces; larger operations may require multiple IT technicians.

Trending Toward Hosted Systems

How else will technology impact the parking industry in the near future? Operationally, it will have a profound effect on how parking management is both structured and accessed. Let's take a look at the evolution from "thick" to "thin" operations and how it might affect the world of campus parking.

Thick systems are those with software loaded onto each PC while Thin systems are typically browser based and allow data and functionality to be accessed from any computer with a browser. Thick systems involve a massive amount of data transfer between the server and individual workstations while Thin systems allow data searches to occur on the host server so that only needed informa-

tion is transferred to the user's PC interface.

What's more, thin system applications are easier to maintain because any upgrading is done at a system level, not at PC level, which lowers the total cost of ownership over the life of the system.

One main benefit of a thin-system architecture is accessibility. Numerous departments can securely tap into the same backend database with an Internet connection, while remote users (i.e. officers writing citations) can access information via wireless devices or computers with wireless fidelity (WiFi) technology.

In short, new, hosted solutions address the features campus parking offices have been asking for:

Flexibility. Whether you're a huge university or a small community college where all parking is contained within a single parking garage, the parking database nucleus needs to be flexible enough to address each organization's operational rules and goals.

Keeping Up With The Rest of the Class

- Are your registrar and parking office databases able to talk to one another?

- Better yet, is there any way to streamline databases so there is no duplication of data?

- How easily is information accessed from the field?

- How user-friendly and intuitive is the user interface for faculty and staff?

Reliability. Downtime is not an option. Loss of functionality means loss of revenue, not to mention some very unsatisfied students and faculty.

Security. Secure data transfer is a must when managing proprietary customer information.

Interoperability. This is a fancy term for making sure different systems are "open enough" to easily and safely share data without causing undue expense.

Scalability/Extensibility. Parking offices are looking for solutions that grow as they grow and systems that don't have to be replaced every few years. The technical term is "extensibility," which means a system can be modified by changing or adding features.

Parking offices have been asking for a unified platform for parking management for many years, and their day has finally come. With parking managers continuing to juggle multiple tasks, seamless, integrated solutions will bring forward-thinking parking offices to the top of the class.

Blake Laufer is Vice President of Research and Development for T2 Systems, Inc. He can be reached at 800-434-1502

PT

Letters

lot packed with vehicles and RV's. However, the lower lot shows vehicles, but not a one is parked between the lines. This appears to be a most inefficient use of a parking resource. My guess is there is a good reason for the way the lot is set for the event, but I can't figure out what the better and higher use would be! Please, Obie Wan! Enlighten this poor muddled mass on why this is contrary to the intended parking pattern.

Dennis Cunning, DLC Parking

The Editor responds

To my young apprentice:
If you look close, I think you will see that those cars at the bottom are "tailgate party" vehicles. You can actually see the parties going on at some of the vehicles. My guess, young Luke, is that these folks pay extra for the room and location. I have forwarded this to Diana Perey at Udubya for her input.

Obie Wan
Editor

And from the person who really knows:

Dear Dennis,
PT's Editor is correct! The parking lot you describe is in fact a Husky football "Tyee" contributors' lot, and the permit to park there is part of their ticket package. It is stack-parked, unfortunately, albeit loosely. Since the game is in progress in this picture, what you are not seeing are the tailgating canopies set up in front of and behind many of the vehicles -- most of which were taken down before the game started.

This lot is also used for charter bus parking, and we have no way of predicting the number of buses to expect on any game day. Since we are always short on space, the Transportation staff would like to see cars parked closer together. But since the athletic department sanctions tailgating, we are not always able to get cars closer together, as we are advised by ICA not to be confrontational.

Hope this answers your question.

Diana Perey
Director of Parking and Transportation
University of Washington

PT

With more than 60,000 students, the University of Minnesota is one of the largest universities in the country. However, only about 14 percent of the student population lives on campus. The remaining 50,000 students join 30,000 employees who commute each day.

Of the 80,000 people who make the journey to campus each day, many choose to drive. This poses a problem because only 21,000 parking spaces are available. You can imagine the frustration drivers feel and the pressure they put on the university to improve the situation.

Compounding the parking squeeze, the university's Parking and Transportation Services has lost several surface lots over the past decade to new building construction on campus. To maintain the same number of parking spaces, the department has been forced to replace lost surface parking with ramps and garages. Because it costs considerably more to build and maintain those facilities, parking costs for commuters have increased.

University of Minnesota officials have responded to the situation with several initiatives aimed at encouraging commuters to bike, take the bus and carpool. The university provides carpool parking for vehicles with two or more passengers, thereby encouraging ridesharing. Buses running near campus have bike racks on the front, allowing commuters to bring a bicycle with them from remote locations.

Officials realized early that an effective bicycle program would require more than the installation of a few bike racks. Students wouldn't make the switch from gas power to pedal power unless they were guaranteed peace of mind. They needed to know that their bikes would be safe when left unattended.

The university needed secure, dependable, easy-to-use bike parking. Students got all of this and more in 1995 when the university purchased six bicycle lockers. Impressed with the durability, security and quality of the units and gratified by student acceptance of them, officials installed 12 more lockers a year later. There was a waiting list in most locations for lock-

arking Crunch

By Richard Hartger

ers. This, coupled with the university's continued enrollment growth, led officials to install an additional 134 lockers.

The lockers helped reduce bike theft on campus. Like most universities, the U of M had become a shopping mall for bikes. Students who chained their bikes to racks, lamp posts or trees could never be sure the bikes would still be there when they returned. The number of thefts hovered around 275 per year. This figure has declined significantly, thanks to the lockers' theft- and vandalism-resistant design.

Steve Sanders, Executive Assistant and Facilities/Campus Bicycle Coordinator for the university's Parking and Transportation Services, said there has been a great response to the lockers, which are now installed in 15 different locations across three separate campuses. The lockers are available to students and faculty members for $75 per year, plus a $25 key deposit.

The university's decision to provide secure bicycle parking strengthens local transportation initiatives. "The university is the third largest traffic generator in the state," Sanders said, "so the more people we can stop from driving, the better."

Richard Hartger is president of Cycle Safe. He can be reached at info@cyclesafe.com.

The lockers are now installed in 15 different locations across three separate campuses.

PT

Emergency In Parking

Whether to have emergency phones on a university campus, including its parking facilities, has ceased to be an issue. The question now is how best to plan and deploy a system that is consistent with the university's overall communications network; that meets statutory and regulatory requirements; and that enhances the integrated service and security needs of the facility.

There are several critical factors in making these determinations.

What is the communications backbone on campus? Is it traditional analog lines (perhaps POTS or Centrex, but more likely analog extensions on the campus PBX)? Or has the campus converted to VoIP (Voice over IP)? What func-

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Universities have a mission of service to their students, faculty and employees.

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tions must the system provide within the parking facility, such as security assistance, access control and elevators? Are any of these affected by legal requirements, such as the ADA (Americans with Disabilities Act) and the new A17 Elevator Safety Code? These legal requirements may affect not only where you need to deploy equipment (e.g., Area of Rescue Systems), but also how that equipment must perform (e.g., the new elevator code).

VoIP Is Here To Stay

Voice over IP is probably today's most talked-about telecommunications development. The implications for security issues are numerous. The bottom line, however, is that regardless of what difficulties may exist in conversion from traditional analog systems, Voice over IP will continue to spread at an ever increasing rate. Many college campuses and corporate centers have converted over, and many more have plans in the process.

VoIP, or ethernet connectivity, provides many advantages in deploying emergency phone systems. You do not have to run separate analog "home-runs" back to a head-end frame, but rather can connect "ethernet drops" wherever you need them. You can also connect IP CCTV cameras to these same "drops," easily installing and integrating these two security elements that are so often found together.

Phones
Facilities

By Samuel Shanes

Therefore, in selecting emergency phone equipment, whether you have VoIP capability now or are planning for it in the future, make sure that the emergency phones you select have VoIP capability. Otherwise, you will be forced to run supplemental analog lines to support these units, and possibly these units will become obsolete when your facility goes totally VoIP.

An additional benefit of VoIP is that if your campus has established campuswide Wi-Fi "hot spots," you can easily connect VoIP/RF-enabled Emergency Phones.

Quite simply, as VoIP becomes the new standard, make sure your emergency phone system and network can keep up with it.

Functions and Regulations

Increasingly, universities have come to view their parking facilities in much the same way that the commercial parking industry does. There have been numerous lawsuits over crime in parking facilities, and multimillion-dollar judgments are no longer unusual. For that reason alone, it is prudent to provide emergency phones with blue light/strobes, as well as CCTV, in parking locations.

Beyond that, however, universities have a mission of service to their students, faculty and employees. In this

sense, this mirrors the attitude of shopping centers and airports, which view emergency phones as a way to provide service to their users, whether it is finding a car, jumping a dead battery or reporting a minor accident. Wall-mounted emergency/information phones with integrated blue light/strobes are particularly well-suited for this application.

There is also an expanding role for emergency/information phones in the area of access control (e.g., a controlled entrance vehicle gate). These locations usually have card access systems. However, what if the card does not work? The ability to quickly and easily call in to gain authorized entrance is essential. Units are now available that integrate the card access system and the emergency phone in one pedestal, making the operation of the system simple and reliable.

Emergency communications in parking facility elevators must comply with numerous codes, including both the ADA and the A17 Elevator Safety Code.

Until recently, the requirements for emergency communication in an elevator had remained unchanged since the 1960s. The code (ASME A17.1) simply required a way for emergency personnel outside the hoistway to be able to call into the elevator. That has all changed now. The new safety code significantly expands the role and requirements for an ADA emergency phone in the elevator (see ASME A17.1a-2002, Sec. 2.27).

All facilities should re-examine their elevator emergency phones to make certain that they meet all applicable codes and regulations.

Planning for the proper configuration of an emergency phone system has become more involved than it once was. However, expanding technology has made more products available for each need, as well as making it easier and more cost-effective to deploy these systems.

Samuel Shanes is Executive Vice President of Talk-A-Phone Co. He can be reached at sshanes@talkaphone.com

PT

Two Higher Ed Pros Expand on the Topic

Two of the respondents to our survey expanded on a theme. Jennifer Tougas at Western Kentucky summarized about 90% of the issues and addressed some solutions. Thomas Soulliere at Southern Alberta Institute of Technology in Calgary appreciates the opportunity to vent after installing new parking equipment.

Western Kentucky's Problems:

Limited Supply, Infinite Demand

At Western Kentucky University, we face the same problems as many other institutions with a limited supply of parking spaces and seemingly infinite demand. Permit holders have the expectation that "because I bought a parking permit, I deserve a parking space."

At the moment, Western sells an unlimited number of permits with no guarantee of finding a parking space.

Customers are very disappointed when the available parking spaces are not convenient or when they are displaced from their preferred parking lots by special events or construction projects. Rather than use an available park-and-ride lot that remains half empty, they prefer to park illegally; or circle a parking lot until a space opens (often 45 minutes to an hour); or park on the city streets, much to the dismay of the local residents.

The most universal solution is to set realistic expectations in the minds of the customers with an aggressive educational campaign. Let the customers know upfront what they are getting. At every opportunity (permit sales, registration information, Web sites, telephone conversations, etc.), remind the customer that a permit does not guarantee a parking space and that parking availability is subject to change. Also, encourage them to

use the park-and-ride lots that have plenty of parking.

A second solution is to increase the frequency and reliability of the shuttle service to and from the park-and-ride lot to make it a more palatable option for the customers.

A third solution is to change the policy of unlimited permit sales so that the expectation of the customer is satisfied. This requires the availability of safe alternative transportation methods -- such as carpools, buses, biking and walking -- so that the students can still come to class. (Bowling Green has a limited public transportation system, so this option is limited for Western.)

The most costly solution is to increase availability of parking. At Western, our ability to expand parking capacity on campus is limited because we are land-locked and because of the terrain (we are, after all, the "Hilltoppers"). The only choice for us is to build up, and we are in the process of building a deck that will be open for the Fall 2005 semester. We currently do not have the financial resources to explore the possibility of building additional decks.

There's more to be told, as is always the case in the parking industry, but I hope these comments are helpful to you.

-- Jennifer Tougas, Ph.D Director ,
Western Kentucky University,
Bowling Green

Ahh, a Chance to Vent to Colleagues ...

Nearly four months ago, we transformed our operation from one using booth attendants in a pay-on-entry system to an automated pay-on-exit system. While we certainly researched in advance and prepared with new policies, signage, etc., a number of issues have come up that we were not completely ready for.

For example, the lack of personnel in the lanes resulted in an unprecedented amount of vandalism -- gates being broken off or pushed up, terminals being tampered with, and drivers tailgating out to avoid having to pay.

This situation has forced us reconsider our means of securing the equipment. We now post staff in the lanes during the rush periods for the purpose of monitoring customer usage

and have enlisted Campus Security assistance with the installation of additional cameras.

Meanwhile, we initially thought the break-away barrier feature was going to help us save on replacement costs when faced with the occasional barrier crash. However, it now seems that the ease with which the gates may be lifted for a "free exit" is just too tempting for our customers to resist.

Therefore, our greatest concerns at the moment appear to be customer misuse and vandalism of our recently installed automated parking equipment. Our responses have included an increase of staff and video surveillance, wherever possible given our limited expense budget, and coordination with the Registrar's office on disciplinary measures for those found guilty of such actions.

-- Thomas Soulliere, Manager,
Transportation and Residence Operations,
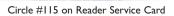*Southern Alberta Institute of Technology,*
Calgary, Canada

PT

Industry Notes

Advanced Parking Solutions has been certified as a business owned and controlled by women by the National Women Business Owners Corp. The goal of the program is to streamline the certification process and increase the ability of women business owners to compete for contracts at a national level.
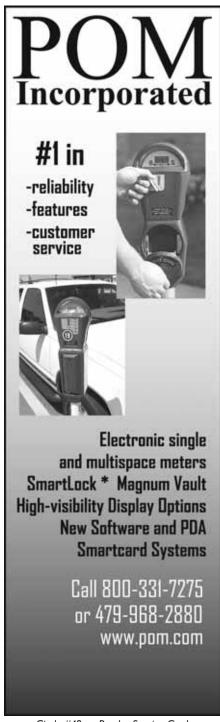
"Certification provides a marketing opportunity for women business enterprises to participate in outreach programs," said **Kirsten Dolan** and **Lynne Schumal**, Principals of Advanced Parking Solutions. "In addition, this program will enable us to develop relationships with larger companies and create opportunities for future partnerships with them and public and private companies."

Signal Park USA recently announced that Baltimore Washington International Airport (BWI) has completed installation of its Smart Park system in more than 12,000 parking spaces in two of the airport's primary parking facilities. Today, BWI's parking patrons enjoy the convenience and reliability of the world's leading parking guidance/management system. BWI's management also has realized the extensive benefits of operating its parking facilities with the accuracy, dependability and real-time data of Signal Park's single-space monitoring system

High Concrete Structures, the nation's largest producer of precast parking garages and a leading precast innovator, is adding capacity at two new locations in Williamsport and Lebanon, PA. Additional capacity is required to support High Concrete's successful market expansion into Upstate New York, western Pennsylvania, Ohio and further expansion into Virginia, as well as the company's recent successful introduction of products made with patented CarbonCastT technology.

DriveCam Video Systems, the leader in knowledge-based systems designed to improve driving behavior, has won the 2004 High Tech Award from the San Diego Council of AeA, the nation's largest high-tech trade association. DriveCam won the top award in the category of Computers/Related Products for its leadership in creating feedback systems that lower operating costs for fleets by identifying and correcting risky driving behaviors.

The **Wilson Group**, SkiData's partner for Australia and New Zealand, has opted for **SkiData** parking solutions in implementing a project that involves setting up reliable data links and communication channels between facilities, which are spread across the entire continent. In a first stage, 75 SkiData-equipped parking facilities in Perth (Western Australia), Melbourne (Victoria) and Sydney (New South Wales) will be networked for central administration from Wilson's main control center in Melbourne.

PT