



Wisconsin Parking Association

An Allied Association of the International Parking Institute



THE FUTURE OF PARKING TECHNOLOGY

Carmen Sevrens

Digital Payment Technologies

Wisconsin Parking Association 2013

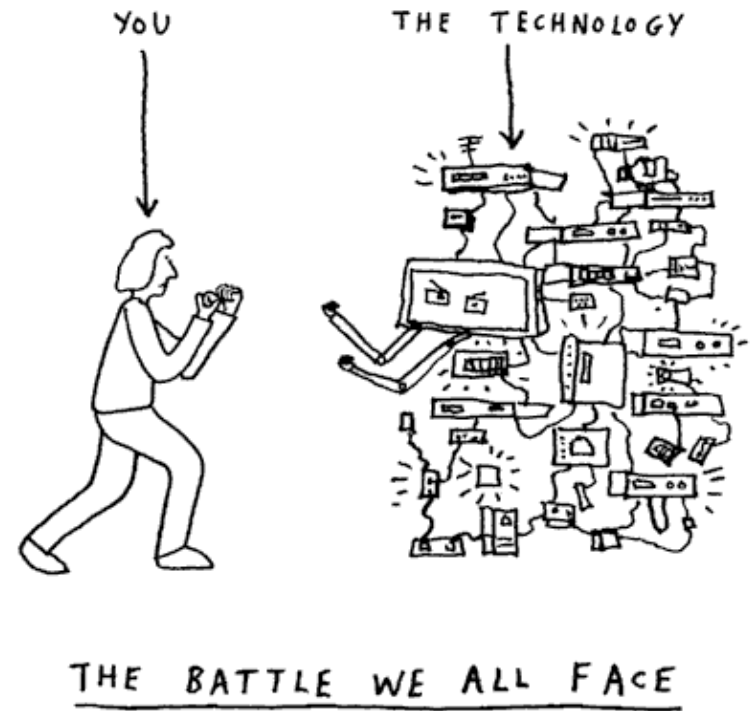


Wisconsin Parking Association

An Allied Association of the International Parking Institute

Agenda

- Current Parking Methods
- Top Trends
- License Enabled Parking
- Case Study





Wisconsin Parking Association

An Allied Association of the International Parking Institute



Do we care?

- May 2013 IPI Survey “Emerging Trends in Parking”
- Launched 2013 “Global Parking Survey” by GPAL
- 13 Parking Associations participated
- 21 Countries had respondents
- 5 different languages



Wisconsin Parking Association

An Allied Association of the International Parking Institute

Yes, we do!

- 4 of 5 top trends were technology related
- 10 countries out of 13 had 'Innovative Technology' as #1 trend
- Greatest Impact – 33% Technology
- The answer is clear...





Wisconsin Parking Association

An Allied Association of the International Parking Institute

Why?

- Technology is more present in our daily lives
- Consumers demand more services
- Business is changing
- Pressure to do MORE with LESS



"All I'm saying is now is the time to develop the technology to deflect an asteroid."



Wisconsin Parking Association



An Allied Association of the International Parking Institute



CURRENT PARKING METHODS



Wisconsin Parking Association

An Allied Association of the International Parking Institute

Traditional Parking Methods

- Traditional Payment and Enforcement Models
 - Single Head Meters – coin only
 - Single Head Meters – coin and credit card
 - Multi-Space Pay Stations
 - Attended and Unattended Gated Facilities
 - Permit Parking Management

Primarily driven by visual enforcement and centralized payment methods



Wisconsin Parking Association

An Allied Association of the International Parking Institute

Current Parking Methods

- Changes in the parking industry
 - Increase usage of Pay by Cell causing a shift in enforcement models
 - Increased reliance on technology in parking, especially wireless communications
 - Technology is interested in parking
 - Consumer desire for greater convenience
 - Public-private partnerships putting even greater emphasis on cost model



Wisconsin Parking Association



An Allied Association of the International Parking Institute



TOP TRENDS



Wisconsin Parking Association

An Allied Association of the International Parking Institute

Top Trends

- Improve Parking Management
 - Data Visualization
 - ‘Big Data’
 - Relevant and usable
 - Mobile phone apps
 - Maintenance Applications
 - Logging
 - Enforcement Applications
 - Space and payment
 - LPR





Wisconsin Parking Association

An Allied Association of the International Parking Institute

Top Trends

- Mobile Phone Ap's con't
 - Consumer Ap's
 - Direct to appropriate parking
 - Reduce congestion/emissions
 - Improve parker experience
 - Operational Guidance
 - Accomplish more with less
 - Redirect resources to more meaningful activities





Wisconsin Parking Association

An Allied Association of the International Parking Institute

Top Trends

- Electronic/alternative payment
 - Contactless Payment
 - Improved convenience
 - Mobile phone payment through NFC
 - Contactless Transit Cards





Wisconsin Parking Association

An Allied Association of the International Parking Institute

Top Trends

- Mobile payments
 - Single enrollment – multiple parking organizations
 - Gated access through QR codes
 - Merchant validation
 - Promo codes
 - Local area merchant coupons
 - EV charging station payments





Wisconsin Parking Association

An Allied Association of the International Parking Institute



Top Trends

- Sustainability
 - Increased ability to successfully run solar equipment
 - Virtual permits
 - No receipt required for enforcement – PBL and PBS
 - Energy efficient lighting
 - Dimmers and timers
 - Increasing number of EV stations in parking areas
 - Premium parking areas – premium rates



Wisconsin Parking Association

An Allied Association of the International Parking Institute

Top Trends

- Garage Automation
 - Moved from cashier to Pay in Lane or Pay on Foot
 - Sophisticated guidance/count systems
 - Single card for parking and building access
 - Vehicle recovery through LPR





Wisconsin Parking Association



An Allied Association of the International Parking Institute



LICENSE PLATE ENABLED PARKING



Wisconsin Parking Association

An Allied Association of the International Parking Institute



License-Plate-Enabled Parking

- An ecosystem of technologies using the license plate as a key identifier to access an enhanced parking experience
- Uses Pay-by-License Plate (PBL) as a foundation
- Combines parking data from multiple payment options (pay station, mobile payment, permits)
- Consolidates this information into a common database
- Provides enforcement officers with real-time accuracy to handle their duties



Wisconsin Parking Association

An Allied Association of the International Parking Institute





Wisconsin Parking Association

An Allied Association of the International Parking Institute



License-Plate-Enabled Parking

Pay-and-Display



Pay-by-Space



Pay-by-License Plate





Wisconsin Parking Association

An Allied Association of the International Parking Institute



Integration with Pay-by-Cell

- PBL and Pay-by-Cell are both license plate-based systems
- Integration benefits:
 - Remotely add time to an existing parking session by phone
 - Consolidated reporting and efficient enforcement
 - Receive notifications on phone as parking expires
 - Stop an existing parking session if time remains



Wisconsin Parking Association

An Allied Association of the International Parking Institute

License Plate Recognition – Photo Radar

- LPR Integration
 - License plate cameras
 - Unpaid vehicles are issued a citation
 - Photo used for citation adjudication



APIDS Office

Login Search Policy Sync User

Plate:

Address:

September 27, 2006


Search

Date	Citation#	Address	Plate	Ticket ...
2006/09/27 13:15:13	E06092701	9546 103a	YZC092	<input type="checkbox"/>
2006/09/27 13:21:38		9547 106		<input type="checkbox"/>
2006/09/27 13:37:48	E06092702	9667 Jasper	UDD338	<input type="checkbox"/>
2006/09/27 13:51:48	E06092703	9552 103a	FGU390	<input type="checkbox"/>
2006/09/27 13:51:49		9556 103a		<input type="checkbox"/>

Citation#: Date: Wed Sep 27 2006 13:51:48 Policy Duration: Status: **Complete**


License Plate: Issued By: BF Duration: 00:40:29 **Unsent**

First Seen
Address: 9552 103a
First seen at: Wed Sep 27 2006 13:11:19



Wed Sep 27 2006 13:11:19

Last Seen
Address: 9552 103a
Last seen at: Wed Sep 27 2006 13:51:48



Details Print Save



Wisconsin Parking Association

An Allied Association of the International Parking Institute

License Plate Recognition

Vehicle Base LPR

- Scans 100's of License Plates per hour
- 7 -10 x improvement in operational efficiency
- Checks for scofflaw violators & stolen vehicles
- Payback within weeks

Handheld LPR

- Empowers enforcement officers on foot
- 2 -3 x improvement in operational efficiency
- Also checks for scofflaw violators & stolen vehicles
- Maintains situational awareness



Wisconsin Parking Association

An Allied Association of the International Parking Institute

ROI Example – Fort Collins, CO

City of Ft. Collins, Department of Parking	Manual Enforcement	LPR	Increase
Boots over a 20-day period	20	60	300%
Revenue (average \$150/boot)	\$3,000	\$9,000	300%
Anticipated annual revenues	\$39,000	\$117,000	\$78,000

- 300% increase in booting revenues
- Payback in less than 12 months



Wisconsin Parking Association

An Allied Association of the International Parking Institute

ROI – Beyond Increased Citation and Booting Revenue

- Increased compliance and permit sales as a result of improved enforcement
- Reduced costs as municipalities do away with physical permit decals and hang tags
- Do more with less: enforcement officers repositioned as productivity increases
- Improved utilization of street space
- Improved consumer service: parking policy is enforced so that spaces are available on an equitable basis



Wisconsin Parking Association



An Allied Association of the International Parking Institute



CASE STUDY



Wisconsin Parking Association

An Allied Association of the International Parking Institute

City of Miami Beach, FL

- Background
 - Seven square mile barrier island
 - 2nd highest density next to NYC
 - Historic Districts – Art Deco
 - Film and Production Industry
 - Population – Seasonal/Events
 - Paper consumption/litter
 - Counterfeit tickets in PND
 - No ability to remote rate change
 - Huge enforcement staff – needed to resolve inefficiencies



"Can I interest you in fake Rolexes, pirated DVDs or validated parking receipts?"

© T. McCracken mchumor.com



Wisconsin Parking Association

An Allied Association of the International Parking Institute



City of Miami Beach, FL

- Solution
 - Multi-space meters
 - LPR solution
 - Tickets and handhelds
 - Pay by Cell
 - Guidance – meters and garages
 - Paperless Permits



Wisconsin Parking Association

An Allied Association of the International Parking Institute



City of Miami Beach, FL

- Outcomes
 - Enhanced financial controls
 - Accepted technology
 - Cost savings with paper and permit reduction
 - Maintenance and collection cost savings
 - Enforcement efficiencies - redeploying
 - Parking availability – hot zones
 - Customer satisfaction – ease of use/payment options
 - Increase in revenue



Wisconsin Parking Association

An Allied Association of the International Parking Institute

In Conclusion

- Consumers want technology for convenience
- Operators want technology for efficiencies
- Effective deployments and integrations can meet needs of both
- LEP example of all deliverables
- Exciting new innovations in the future



“Due to recent technological advances, everything I taught you about computers is no longer valid.”



Wisconsin Parking Association

An Allied Association of the International Parking Institute



THANK YOU
Q&A