

# Pieces, Pieces Everywhere – A Revenue Conundrum

BY PETER LANGE

“All the King’s Horses and All the King’s Men ...”

**P**ieces, pieces everywhere. Putting pieces together seamlessly is difficult. In fact, it’s outright impossible. Yet that’s what we’ve been trying to do in the parking industry for years. As technology grows, more is available to help us manage our parking access and revenue control hardware, management software, LPR, payroll deductions, Internet sales, account management, citation issuance, event parking, pay-by-cell, security cameras, signage, BMV data ... the list goes on and on.

We need all of these things, so we build interfaces trying to pull all of the pieces together. And despite our valiant efforts and expertise, it’s a messy and painful process.

My dream is to unify all of the pieces to simplify our work. Here are some of the complex subsystems that I want to unify:

- Revenue Control  
Dispenser tickets – card-in/card-out, in-lane cashier, central cashier, pay-on-foot, pay-by-cell...
- Access Control  
Credentials, transponders, manned booths, proximity cards, gates and lane equipment ...
- Permits  
Application, registration, wait-lists, hangtags, online sales, kiosk, decals ...
- Metering Devices  
Single-space, multi-space, pay-by-space, pay-and-display, in-car meters, mobile LPR ...
- Enforcement  
Warnings, tickets, citations, handhelds, appeals, processing, scofflaw, boot, tow ...
- Money  
Debits, credits, receivables, transfers, collections ...

This is the way it has always been, but the question is: Does it have to stay that way?

## Why can't we:

Have one system that pulls together all financial information to help us manage and report on revenue from multiple sources?

Allow our customers to pay for anything related to parking at any of our physical or virtual locations?

Have a complete view into our operation, rather than multiple separate views?

Manage all our spaces in a consistent unified manner?

Upgrade one piece without reconfiguring all of the other pieces?

Have one point of contact for questions and maintenance of the pieces?

These are the questions we have asked ourselves for a long time, and the answer has usually been “no,” to the point where we feel foolish asking them.

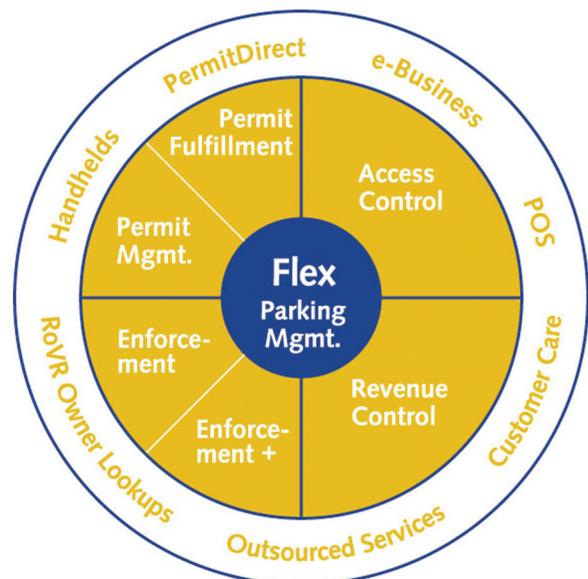
Some could argue that today’s parking technology has become too complicated. It now requires multiple systems to manage all of the different areas of your parking operation. It is not anyone’s fault - just the natural progression of technology. A new technology is available, put in the marketplace and accepted, then suddenly this innovation is a must-have, but unfortunately does not integrate well with your existing technology.

We, large users of parking technology, have asked the market for a simpler and more unified solution for managing our parking technology problems. Unifying disparate systems seems like the next logical step. From the access control perspective, having all of parking, citations, demographics, permits and access history in one database is a major step forward. The next logical step is to add the revenue control component to our existing permit and citation revenue functions.

## The Beginning of a Dream Come True

I’ve shared my dream with you, but it’s not just mine. For years, many of us have been dreaming about a system that will help us manage our parking operations the way we want to. That is, until two years ago, when a group of industry colleagues – frustrated with existing solutions and workarounds – decided to make it happen, rather than continue dreaming.

Together, parking directors from Indiana University Purdue University Indianapolis (IUPUI), Texas A&M and the University of Arizona set out to “unify” separate systems into a complete, singular solution that each can tailor to their specific needs. The goal was to simplify management of a large parking operation by bringing together all information regarding customers, vehicles, parking permits and other credentials, citations, parking capacity, facilities and finances into one system.



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So why is this project important for the industry? Because the system that was developed offers one unified solution for a complex parking operation that today is managed with multiple systems.

The first implementation of this system was at IUPUI in Indianapolis. Says Carol Pferer, Director of Parking and Transportation: “Having one system, one software application and one support contact has given us many efficiencies from the front to the back end of our parking operation. I’m very excited about the reality of a unified system. I see this as the beginning of a long-overdue change in the way we do business in the parking industry.”

Here at Texas A&M, we started with access-controlled lots in December, and plan to continue our rollout and add revenue-controlled facilities to our system early this year. We’ll then incorporate ungated facility permit management and parking enforcement by the end of the year. At that point, we will be using a single system to manage all of the elements of our parking operation.

The team that developed the system included parking professionals with many years of experience – and a vendor willing to listen to what customers want.

Why is this unified system groundbreaking? Here are just a few innovative things it does:

- Seeing and managing all customer activity and information from a single user interface, with no bouncing from one system to another.
- Managing all permits and access cards in one database with no duplication of data or data entry.
- Reporting on all sources of revenue from one system.
- Collecting ISF as part of overall invoicing and collection process, together with permits, citations, etc.
- Taking payment for any parking item at any outlet – ISF at the office or online; citations at the pay station in a garage, all online, etc.
- Unified inventory and management of all parking spaces, audited or access/revenue-controlled.
- Unified management of all waiting lists.
- Single point of online access to everything parking for our customers.
- Unified reporting and business-process configuration and tracking.
- Single organization for software support and consolidated training for software users.

While we were developing a new system, we decided to add wish-list features to the revenue control system, such as:

- No more forms. All data requirements are entered into the cashier station and stored in the database for reporting, letter and

**Access Control:** Credentials, transponders, manned booth, proximity cards, gates and lane equipment...

**Revenue Control:** Dispenser tickets, card-in-card-out, in-lane cashier, central cashier, pay-on-foot, pay-by-cell ...

**Metering Devices:** Single space, multi-space, pay-by-space, pay-and-display, in-car meters, mobile LPR...

**Permits:** Application, registration, waitlists, hangtags, online sales, kiosk, decals...

**Money:** Debits, Credits, Receivables, Transfers, Collections...

**Enforcement:** Warnings, tickets, citations, handhelds, appeals, processing, scofflaw, boot, tow...

invoice generation. Lost ticket information and ISF transactions are all handled in the system.

- Customized transaction-processing requirements. For each transaction type, you can select the processing requirements you want and don’t want – including customer information, customer history, supervisor approval, dual entry, reference fields and more. All of the information captured by these processing options is stored in the database and available for reports, customer letters and invoices.

- Configurable thresholds for transaction types and permit activity. Let’s say that your permit holder forgets his permit, enters with a ticket, and wants to exit without paying. You can set a threshold that allows this to happen up to a specified limit. For example, you can set a threshold that allows a permit parker to exit free with a ticket one time a month. Once the threshold is exceeded, the permit parker must pay to exit.

- Cashier performance trend reports – this replaces the Excel spreadsheets manually created to audit exception transaction and other high-risk activity.

- Easily configurable cashier stations with programmable hot keys, an unlimited number of validation accounts or miscellaneous fees, and replacement ticket functionality.

- Global functionality or for individual units from any computer with Internet access.

We have many more ideas to add to the unified system, and this is an incredible start to making the dream a reality. Come join us in this great adventure!

The University relied on the expertise of T2 systems in designing its systems.

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