

Revenue Enhancements and Cost Controls

How to Generate Transportation Funds Without Raising Taxes

Frederick Veinot, *SIRIT Corporation*
Geoffrey Yarema, *Nossaman, Guthner, Knox & Elliott*
Adeel Lari, *Minnesota Department of Transportation*
Gordon DesCombes, *Robert F. Driver Associates*

M-COMMERCE: COMARKETING TO LEVERAGE ELECTRONIC TOLL COLLECTION ASSETS

Frederick Veinot

I am excited to stand up and talk about a subject near and dear to our hearts lately: mobile e-commerce, or the m-commerce revolution, if you will. More specifically, I want to talk about how we can use our existing electronic toll collection (ETC) assets to create alternative revenue streams for toll agencies.

What is m-commerce? It involves three different areas. One is finding and buying goods over the Internet through wireless devices like cellular phones. The second is the provision of advertisements and promotions through some sort of a wireless device. The third area, which is where we are focused in this test, is the use of a wireless device as a digital wallet. Several technologies will come into play for m-commerce. They include transponders, wireless devices such as cellular phones and personal digital assistants (e.g., Palm Pilots), and, of course, ETC tags.

M-commerce is already being done today. ETC and transponders have been in use since 1986. We are just giving it a new name and expanding it to other applications. Already 300-odd facilities in the United States use transponders and wireless devices for parking access. The Mobil Speed Pass system has been in place for about 3 years and provides a good example of m-commerce. Under that system, you wave a little key fob in front of the gas pump, and the transaction is completed. I under-

stand that about 3 or 4 million people now are using the Mobil Speed Pass, so it is a highly successful program. You also have the Transportation Corridor Agencies (TCA) deal with McDonald's, which I will speak about later.

The common features of these programs are that they are cashless and convenient for the customer. They promote faster throughput through a facility, such as a toll lane, a parking facility, a gas station, or a drive-through restaurant. They also foster customer loyalty.

Turning to toll agencies in particular, above all we see the opportunity to create value for ETC patrons by offering them a variety of uses for their transponders, allowing this single piece of equipment to accommodate six or seven different types of payment transactions and thereby increasing its value. There are already some widely recognized brands out there, like FasTrack in California and E-Z Pass in the Northeast. The key is to solicit high-profile companies to accelerate the development of this payment network and participate in the overall payment system.

Where does ETC stand today? There are some 113 toll authorities in the United States, 238 individual toll facilities, and more than 5,000 toll lanes. I believe that ETC transactions are reaching a 50 percent market share of all toll transactions and are growing. We have started to achieve critical mass in the use of toll-based electronic devices, with about 6 million tags in circulation for toll collection purposes only throughout the country. That will probably reach 10 million or more by 2002.

When you look at ways to maximize the use of transponders—a highly underused asset—you begin to

sec new opportunities for toll agencies to generate revenues. One is to license the use of the toll brand and permit the use of transponders to pay for hamburgers, parking access, or other suitable goods and services. All of this widens the customer base, builds customer loyalty, and creates value for customers by offering multiple uses for their transponders. So not only can you, as a toll agency, maximize the use of transponders already in circulation, but perhaps also increase the number of transponders in circulation.

A couple more statistics and thoughts on applications. As I mentioned earlier, about 5,000 toll lanes exist, and they generate approximately 1.5 million ETC transactions each year. There are 12,500 McDonald's restaurants in the United States, not to mention the parking facilities, gas stations, drive-through drug stores, and other facilities that could leverage ETC assets. How big is the market? I am not exactly sure, but it is several times the existing ETC market. Interestingly enough, gated communities provide another great opportunity for this technology. There are about 30,000 gated communities in the United States, according to the Community Associations Institute, and it appears to me that using toll transponders as an access control device holds great promise.

Let's talk about the McDonald's program. The key players involve McDonald's, of course, its customers, TCA, and my firm. TCA has taken a leadership position through provision of their transponders and thus access to their customers. They have also provided back-office support through processing McDonald's purchase transactions and integrating them onto the toll statement. My firm's role was to act as a prime contractor in developing the required hardware and software and managing the process as we moved through the operational test.

McDonald's key goals in looking at this program concerned drive-through performance in two primary areas. First, McDonald's wanted to speed up the time it takes to complete a drive-through transaction. Shaving even a few seconds off the average transaction is very important to such companies. Second, McDonald's was interested in the potential effect on both sales and customer loyalty. Will people come back more often if they can avoid the use of cash? Do average check amounts increase with a noncash transaction, as market studies show for other types of purchases?

As for the supporting technology, the system has three main components. The first is the in-store system, which involves a reader that scans the transponder and a computer that manages the transactions. Those are rough equivalents to the equipment you would see in a toll lane. Second, there is a host system that collects the transactions from all of the in-store systems and forwards them to TCA for processing against the cus-

tomers' account. The host system also receives data from TCA in terms of customers' account status—that is, whether they have sufficient funds to allow them to pay for purchases at McDonald's. The third component is the TCA piece, which involves statement integration and eventually a customer service center.

As for schedule, we kicked the project off in January 2000 and started a 90-day operational test at the beginning of April. In July, the three parties agreed to extend the test while McDonald's performed an evaluation of the results. The test will now extend until the middle of September. And from McDonald's perspective, the drive-through window may not be the end of the story, because as part of the evaluation, McDonald's is also looking at the potential for expanding this program to include in-store payment.

Finally, as Wally Kreutzen, head of TCA and moderator of this session, points out, this deal presents TCA with a good opportunity to reap real benefits as well. When you see those signs that say 100 billion sold, and if you assume that this program had been in business since Day 1, the numbers really start to rack up. Because just assume for the purposes of discussion that the toll agencies were getting 1 cent per transaction—that comes to \$1 billion. And that is before you even begin to consider gas stations, dry cleaners, and all the other services with drive-through or pass-by applications. There is opportunity here for a tremendous amount of revenue and for benefits on all sides.

PUBLIC-PRIVATE VENTURES: TOOLS FOR THE DOT FINANCE OFFICIAL

Geoffrey Yarema

Our industry offers many words and acronyms that are sometimes used in different ways by different people. Certainly, the term "public-private venture" is one of the prime examples. Today I would like to discuss categories of tools that make up the sum of public-private partnerships. Before starting, I want to stress that any views I express about projects are strictly my own and should not be attributed to any of my firm's clients.

Transportation finance officials are truly change agents in this environment. The need for greater customer satisfaction, the need to make limited dollars stretch farther, and the need to do more with less is causing both the private and the public sectors to rearrange their businesses. Finance officials from state departments of transportation and transit agencies find

themselves facing questions of how to avoid the time-honored tradition of returning again and again to the grant-making well as project costs escalate and construction delays accrue. These are the times when you reach into the toolbox.

With that, let's look at the range of possible institutional frameworks and financing strategies. They include special-purpose agencies; exclusive development agreements; design/build contracts, which are the basic building block for many of these things; long-term warranties; outsourced maintenance and asset preservation; start-up user fee-based project financings; federal credit; joint development; colocated telecommunications revenues; nonprofit corporations; specialized risk management tools and insurance techniques; and corporate branding and technology-based revenue enhancements. Today I would like to walk through some, though not all, of these possibilities.

I will start with special-purpose agencies. We see increasing interest in the creation of special-purpose entities whose mission is focused on a single project or a single set of projects. Obviously, the idea is to avoid distractions and establish an entity that can operate in a "lean and mean" way. This tool is being widely used in California in particular. TCA in Orange County, which was charged with the very singular mission of developing approximately 110 km (70 mi) of toll roads there, provides a prime example. The Alameda Corridor Transportation Authority was created to deliver the Alameda Corridor freight and rail project spanning between the Ports of Los Angeles and Long Beach and the Los Angeles rail yards. The Los Angeles-to-Pasadena Metro Blue Line Authority is another example of a special-purpose transit agency; it spun out of a regional transit agency in the interests of a single-focus approach to that project.

An "exclusive development agreement" is the term I apply to what is known internationally as a concession and what some states term a franchise. The idea is that a public agency grants to a private consortium the right, but not necessarily the obligation, to develop a project. The developer assembles the pieces and puts them together, and when conditions are right closes the financing. At that point, the developer becomes obligated to build and operate the facility. This tool has been used extensively overseas; on the domestic front I think it holds promise for a number of large projects. We have a number of high-occupancy toll lane examples to date in the United States, including State Route 91 in California, the Pocahontas Parkway and Dulles Greenway in Virginia, the Southern Connector in South Carolina, and Camino Columbia in Texas. At this conference we have also heard about the State Route 125 project in San Diego County, California, and in Washington State we expect to see the Tacoma Narrows

Bridge, which also features an exclusive development agreement, close its financing around the end of the year. A new wave of projects is also emerging, including the Las Vegas monorail, which will be the first urban-grade standard transit system in the United States for which construction, operations, and maintenance will be completely financed privately without a single dollar of public money.

Next, design/build contracts. If we talk about nothing else today, let's focus here. I believe that as we mix and match various tools, in most cases the design/build contract will be the most basic building block. After several years of experimentation, I think we can say definitively that almost any significant surface transportation project in the United States should consider the option of a design/build contract. This method of procurement has now proved time and time again to solidify project costs early in the design phase and to reduce your contingency dramatically by shifting a substantial amount of risk to the private sector. That was not something we could say a number of years ago, but it is something we can say today. I think that the engineering and construction communities can take a great deal of credit for reinventing themselves and accepting risks that they were not traditionally used to taking. They are now accelerating project schedules, delivering projects on a budget, and in many cases substantially beating engineering estimates that would have attached to traditionally procured projects.

Where is this tool being used? There are a couple of pilot projects right here in Arizona. California has used design/build extensively. Colorado is becoming a big proponent, with the E-470 tollway as an example and I-25 as a next big step. Florida has been a pioneer of design/build for quite a few years. New Jersey has been a great proponent of design/build in the last 5 or 6 years and led the way on the first design/build/operate/maintain contract in the United States for a transit system. Minnesota expects to award a design/build contract for the Hiawatha light rail system in the first week of September. Some of you may have heard the presentation from South Carolina yesterday on its extensive use of design/build. Utah has certainly been a leader in design/build nationally, not only trying it on the I-15 reconstruction project, which will be completed ahead of schedule and under budget before the Winter Olympics in February 2002, but also on a light rail project and the new Legacy Highway.

Long-term warranties do not have a long history in the U.S. surface transportation business, but that is changing. The idea, of course, is to increase quality, lower life-cycle costs, encourage contractor innovation, and reduce the need for the owner to provide inspection and oversight services. This is a very controversial item in many cases, but I think you will see

a substantial change over the next 4 to 5 years. More than 17 states are now imposing some form of warranty on highway paving and other assets. They are experimenting with the length, type, and scope of the warranty, but there is no question that this is becoming something of significant interest.

The next step in the evolution of long-term warranties lies in the recognition that at some point they become asset management and maintenance contracts. Given research on life-cycle costs and growing experience with outsourced asset management, we are starting to see some blurring in the line between maintenance and preservation. Virginia and Texas are at the forefront here, since they are allowing contractors to make their own decisions about maintenance and capital replacement schedules and are judging them on the basis of the outcomes. This is a far cry from the traditional prescriptive approach that focuses on the process rather than the end result. It is also a new thing, and I hope that people standing at podiums like this in 5 or 10 years will be able to report on the same kind of mainstream success that we have seen since experiments began with design/build.

Start-up project financings involve toll roads or fare box-based transit systems with a twist. Most turnpikes and transit systems around the United States were developed on a systems basis, financed by bonds backed by the full faith and credit of governments and sometimes revenues from existing segments of an existing system. A start-up, in contrast, involves borrowing against the future revenues of the project being built. When Wally Kreutzen closed the financing for the San Joaquin Hills toll road in 1993, that was the first major start-up toll road facility in the United States in about 30 years, because of some spectacular defaults. A few pioneers have really re-created this market. By virtue of the San Joaquin Hills project, State Route 91, and start-up projects in Virginia, South Carolina, and elsewhere, we now have a relatively mature market, and the rating agencies are now consistently willing to rate these roads—which was not the case before. The financial closing of the Las Vegas monorail will for the first time apply the start-up project financing concept to the fixed-guideway side of the equation. It will be interesting to see whether there are others that can follow that.

Next, a few words on joint development. This is another term that is used a lot without much precision. Most people use it to mean ancillary real-estate development, but you can also view it in the context of development fees, which are paid by developers of commercial, residential, and mixed-use projects that benefit from the proximity of toll facilities and other transportation projects. In Portland, Oregon, Bechtel and its partners have agreed to make a substantial contribution to the development of a new light rail facility

in exchange for a long-term lease of neighboring airport property.

What about technology, branding, and corporate partnering? Many people chuckle when I predict that within 5 to 7 years, we are going to see something like six to eight highways and a couple transit systems with corporate names on them, akin to stadiums and arenas. But there is a potential for significant money to come in for projects that would not otherwise be built, and I think it will happen. We are actually working on about four transactions of that type now.

Adeel Lari will speak about Minnesota's experience with technology-based partnering later in this session. These so-called shared-resources programs have a lot to offer, since they bring together right-of-way owned by state transportation agencies and the growing need for utilities and telecommunications firms to find a home for the necessary fiber-optic infrastructure. This creates the opportunity for some powerful access-for-service bartering, and at the same time it has the potential to yield larger socioeconomic goals by providing broadband service in rural areas and wiring institutions that would otherwise be too far off the beaten path.

SHARED RESOURCES: THE MINNESOTA EXPERIENCE

Adeel Lari

Shared resources rely on public-private partnerships to deploy telecommunications infrastructure through access to public right-of-way. Shared resources allow a state to leverage access to freeway right-of-way to provide new telecommunications infrastructure, gain some of that capacity to support ITS applications, and potentially secure some access to that capacity for other public agencies as well.

Whereas today's telecommunications technology is new, you might well ask why the shared-resources concept has not been used in the past for other kinds of utilities. One of the reasons is that historically, federal regulations and AASHTO guidelines did not permit utility access to freeway right-of-way. In fact, the state DOTs have spent hundreds of millions of dollars, if not billions, to relocate utilities. However, in the mid-1990s this changed—though only for fiber-optic utilities.

And thus the Connecting Minnesota plan. We at the Minnesota Department of Transportation (MNDOT) own 1600 km (1,000 mi) of freeway right-of-way. The state's Department of Administration has authority to procure public-sector telecommunications services. So we

got together with the shared objective of expanding telecommunications infrastructure statewide through public-private partnerships. We saw this as especially important given that members of the telecommunications industry focus increasingly on more populous areas at the expense of smaller towns and rural areas. Therefore, one of our public policy goals was to ensure that smaller communities not suffer from neglect. Other objectives and components of Connecting Minnesota were to ensure that MNDOT gained a portion of new fiber-optic capacity to support our own ITS efforts and that capacity would also be reserved for other state agencies.

I would now like to spend a few minutes on the RFP itself. It was very simple, open, and flexible, for several reasons. First, we were not sure what we were going to get in response. Second, we wanted to encourage private-sector creativity. Essentially, we said, "We have 1,000 miles of freeway right-of-way and we are willing to offer you one-time access: tell us what you can do."

So what did we get in response? ICS/UCN, our private partner, offered to install about 3200+ km (2,000+ mi) of a fiber-optic network backbone—significantly more than the 1600 km (1,000 mi) available alongside our freeways. In essence, ICS/UCN was offering to install additional fiber along state highways as well—to which they and other utilities already have access. They are providing access to network capacity for all 19 MNDOT district offices and to other public agencies at about another 11 hub locations. They will help facilitate the installation of ITS equipment in the network and invest \$200+ million into the system.

Here are some of the details. ICS/UCN gets one-time access to freeway right-of-way during a 10-year period. Throughout a 30-year term the utility operates and maintains the network. All infrastructure reverts to the state after 30 years. Network features include five interconnecting loops, with each loop having at least 48 strands of fiber.

As time has progressed, ICS/UCN's business plan has evolved as well. The network now proposed will span 3351 km (2,082 mi), with about 970 000 km (600,000 mi) of fiber. The investment has increased to about \$230 million, reflecting more than 1,000 network access points. The network will be available to all Minnesota Internet service providers by lease.

Just like any other good public-private partnership, Connecting Minnesota faced legislative, legal, and regulatory challenges. The moment we announced the selection of our partners, the Minnesota Telephone Association started lobbying against the project. Language to stop the project has been introduced in the legislature every year since January 1998, but always unsuccessfully.

In the absence of legislative action, the Minnesota Telephone Association filed a lawsuit against the state

of Minnesota challenging our authority to enter into a long-term contract. Several courts have now rejected that argument.

In anticipation of these challenges, the state of Minnesota took the preemptive measure of petitioning the Federal Communications Commission (FCC) for a declaratory ruling. Our petition centered on Section 253, Parts (a), (b), and (c) of the Telecommunications Act of 1996. The FCC ruling basically denied the Minnesota Telephone Association petition to preempt the Connecting Minnesota program. FCC also stopped short of endorsing our partnership agreement but applauded our efforts to save taxpayer dollars and bring advanced telecommunications services to rural areas.

OWNER-CONTROLLED INSURANCE PROGRAMS

Gordon DesCombes

Owner-controlled insurance programs are commonly referred to as wrap-ups, and I hope that before we are done you will understand why. Wrap-ups are basically all-in-one insurance programs that combine all the coverages typically in place for larger construction programs.

How do they work? The idea is not only to bundle together numerous types of coverage, but also to try to get all the parties covered under a single policy, including engineers, owners, architects, construction managers, general contractors, subcontractors, and lenders. As you know, this contrasts with the more traditional approach, under which each of these parties has to provide its own insurance coverage.

Now, that does not mean you use just one insurance carrier. In fact, I cannot imagine how you could accomplish it using one insurance carrier. Typically, you have a lead carrier that will help you on two major lines—workers' compensation and general liability. Other specialists cover such things as environmental risks and professional liability.

Wrap-ups date back to the 1940s. They were used for a few public works projects, but mostly for large housing projects, industrial plants, and commercial buildings. Buyers of wrap-ups today include those folks as well as many public entities. More and more, we are seeing policies assembled not by the owner but rather by the design/build contractor. We are also seeing wrap-ups used by groups that bundle together multiple small projects for the sake of economies of scale.

Things are changing and will continue to do so. Much of it has to do with the insurance market in general. The

last 10 to 12 years have seen what we call a soft insurance cycle, meaning that your rates have been going down in real terms during that period. Your broker may be taking credit for it, but it was probably motivated by the market itself. That is changing. Reinsurers are losing lots of money, so rates are beginning to go up. In the wrap-up arena this may be a good thing, because we saw that the soft market was causing a lot of carriers to start providing wrap-ups even when they were not that experienced at it. But most of them are now jumping out.

Loss control is another key area. Again, in a softer market, insurers may not have been so concerned about it, but now they are looking for the insurance buyer to have a solid loss control program from the start. Similarly, the insurer will be looking for solid construction expertise on the team—expertise like this is one sure way to limit losses.

Why do a wrap-up? The top reason is lower insurance costs. Savings can be truly significant; in the case of the Foothill/Eastern toll road project in Orange County, California, a wrap-up my firm provided yielded estimated savings of about \$13 million. In the absence of a wrap-up, insurance costs would have likely been in the neighborhood of \$35 million, but it looks as if the wrap-up program we are currently finalizing will cost approximately \$22 million. That is quite a savings.

Wrap-ups also support site safety improvements, since the owner can demand that certain safeguards be written into the program. Litigation management is also a big reason to use a wrap-up. If something goes very wrong on a project that used traditional insurance coverages, you are more than likely to face years of litigation involving multiple parties and their multiple insurers. That does not occur with wrap-ups, because a single insurance company helps the entire group defend itself on behalf of all the parties that were involved.

Another positive for wrap-ups is that you gain access to a variety of contractors that you might not otherwise be able to employ. If you are trying to bring on disadvantaged-, minority-, or women-owned business enterprises, you can help them clear the insurance hurdle by supplying the necessary coverage through a wrap-up.

Let's now look at standard coverages. Workers' compensation, general liability, and excess liability are standard, and generally you can get far better coverage than you would from most smaller contractors or subcontractors. We recommend a minimum of \$50 million to \$100 million in limits; smaller subcontractors sometimes struggle to get to \$5 million. Standard coverages also encompass builders' risk, which is very important if you are in an area where you have catastrophic risks such as flood or earthquake.

Optional coverages include such things as asbestos abatement, environmental liability, and professional liability. Another coverage available through this process

is surety bonds. Typically, you do not save money with this product, but again you can entertain some contractors you might not otherwise have been able to include on the project.

What are some of the things to be careful of? As with anything else in this world that is worthwhile, wrap-ups require some careful decision making. First, you want to make sure that your project is large enough, and generally people do not even look at wrap-ups for projects costing less than \$50 million to \$100 million. Much time and effort go into this type of coverage, and you do not want to spend time if use of a wrap-up does not pencil out in the first place. You also need to make sure that wrap-ups are permitted in your state; some states do not even allow their use, and other states make you go through certain hoops. Third, you need to do the math to determine whether a wrap-up will lead to savings given your own circumstances. Fourth, you need to prepare a very strong loss control plan. This is not something you want to leave to the contractor's discretion. You must understand the construction process and make sure that the team of insurance companies you are working with have expertise in that area as well. You also need to make sure your timing is appropriate so that you have your coverages in place and ready to go when the work begins. And involve the contractors—it is very important to partner with them. I will warn you: contractors often do not like wrap-ups, because they speculate that the money you save would otherwise have been available to them.

Good documentation, of course, is always important. When you do a typical process where you ask the contractor to provide insurance, you outline certain things you require. The contractor then sends you a certificate or a policy, and somebody on your team theoretically checks it and identifies what is missing. With wrap-ups, that process is now in reverse: you provide the insurance coverage to the contractors and they are going to review it. I recommend that very early on both parties—the owner supplying the coverage and the contractors who will be covered—agree on the specifics of the coverage. I suggest that this be done in writing. Trust me—I have seen the arguments that ensue when it is done on a handshake.

Do wrap ups cause you more work? Generally I think the answer is yes, but to save that kind of money, it is probably worth it. I also think that most owners do not necessarily spend the kind of time that they should when dealing with old-fashioned coverage. If you have 200 contractors on a site, how well are you reviewing the coverages that are in place from those 200 contractors? Are you really spending the time it takes to look at those policies and make sure everything is done correctly? If you are, then probably a wrap-up will not take much more of your time.

Here is a summary of some of the things to remember. Procedures should be simple. Once you get the program put in place, you need to make sure that contractors can easily be enrolled in the program. You need to make sure that the insurance professionals working with you understand both the construction process and the needs unique to public entities.

Market changes can affect savings, so if you cost out insurance today for a project that will not begin for another year, the numbers can change dramatically for reasons completely unrelated to your project. And finally, create incentives for contractors to develop loss control programs—you want to have as safe a project as you possibly can.