The Iris Company
923 E. 39th St.
Austin, TX 78751
512 452 2448
www.iriscompany.com

Telling the Compelling Story That Sells Your Products

Emily Sopensky

Emily Sopensky

Emily Sopensky is an Austin-based freelance writer who specializes in writing for and about high technology companies. Her clients include local and national technology firms, service providers as well as Fortune 500 firms. Through her Iris Company, she provides marketing and PR services to small and large firms as well as government and non-profit organizations.

Sopensky is Associate Editor of High Tech Austin Annual, the coffee table book with a focus on Austin's high technology companies.

As the Marketing / Publicity Chair for the Austin Software Council, she is guiding the Council and its many volunteers in a marketing campaign to reflect the Council's new status as an independent non-profit. She is also Supervising Coordinator of the First Tuesday Freelancer's group associated with Women in Communication.

Protein Marketing – Telling the Compelling Story That Sells Your Products

Success Stories Must-Haves

1. A success
2. Agreement with the client to do a story
3. A company point person
4. An approval process and rough timeline
5. In the story
   - At least one quote from the client
   - Measurables / quantifiables
   - A problem that your customer had that your product solved
   - Catchy title/lead that incorporate your product or company name
6. Reasons for why the customer is using your product

Success Stories Nice-to-Haves

- Pictures
- Reciprocity with client's marketing efforts
- A chance to highlight subsidiary products/services, like customer training and support
- Pending sales that resulted from the success
- Pitch points

Questions to be answered in the success story

1. Outline: Problem, Process, Criteria & Decision, Results
2. What was the problem that needed to be solved?
3. How were solutions identified? Web search, analyst service, consultant's suggestion?
4. What criteria did the client use in selecting your product? Price? Credibility? References? Experience?
5. What products were evaluated? Why did did they make your client's short list?
6. What were the compelling factors in deciding to go with your company?
7. What are the results for your client? Manhours saved? Dollars saved? What would have been the consequences to the client of not solving the problem?

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Success Story Process

1. *Story idea -- from AE, CEO, even the client.*
2. Marcom / client commit to the story idea approved; aninitial point of contacts and approval chain determined (both internally and at the client's).
3. Marcom assigns the story to an inhouse writer or outsources the project.
   Note: Obviously, you want someone who is an experienced writer used to getting quotes from corporate officers on down the chain to project managers and users.
4. Writer creates draft for Marcom, AE, and client review. This can be one simultaneous process or sequential. Review should be of quotes, metrics, flow, and supporting notes on trademarks and products, key message.
5. *Get internal/external approval.*
6. Distribute internally and externally (website; sales literature such as prospect kits, direct marketing, sales response; press, the wires, and trade journals contributions for articles). Send to customer with thank you note.

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TECHNOLOGY BRIEF

Customers use ETI•EXTRACT® to solve their complex data transformation problems

Ideal IT infrastructure product for enterprise-wide data and app integration management

ETI speeds up billing process for CableData

CableData, in Rancho Cordova, Calif., offers customer management and billing solutions to many cable providers in North America. Under the firm's subscription management service, after new customers provide data from their previous billing vendor, CableData converts it to run on its own software. This conversion process takes up to six weeks to do manually, since files can exceed millions of records.

With its competitors cutting this process to 7-10 days, CableData also had to shorten the conversion process. The company wanted to find an automated data conversion solution to streamline the process. But the situation was complicated by the fact that CableData also planned to move data from many different systems into one.

The speed of converting customers' data needed to be taken up a notch.

As the staff researched solutions to both challenges, technical expert Vince Chastain advised director of implementations Kim Pratt to look at ETI•EXTRACT. Says Chastain, "Not once have we run into anyone at ETI—consultants, training, implementation, sales—who didn't know the answer to our questions immediately."

CableData wanted a product that would work with multiple source and output databases and would provide metadata management. The staff knew that software with its own transformation engine would add too much complexity to the process. They wanted to go directly from the source to the target. These two criteria alone eliminated all other competitors.

In weeks, the multiple systems were reverted into one. ETI•EXTRACT is now a major software component in CableData's IT infrastructure.

ETI•EXTRACT helps Bank of Hawaii move data from 11 legacy applications

With Southeast Asia suffering economic woes and Hawaii's economy slowly regaining momentum, the Bank of Hawaii (BOH)—the state's largest commercial bank—wanted to be more agile in addressing customer needs. The bank knew it had to maximize the use of its data.

Kapolei, HI-based Bank of Hawaii decided to merge information from the 11 legacy applications that supported all its divisions into one data warehouse. Bank executives reasoned that building one data warehouse for all major BOH applications would be an intimidating task, but not an impossible one.

And they wanted the job done fast. The bank's data warehousing group had less than nine months to make it happen. David Lindsey, BOH assistant VP, signed on to the task with the provision that he could use an automated data conversion solution.

Merged 11 legacy applications into one data warehouse in less than nine months.

But which one? His team began looking into tools that could help BOH move from VSAM/flat files to a Sun Solaris-Oracle platform. Although some of them knew that ETI•EXTRACT had the reputation of being the premiere software product, they also looked at products from Oracle, Platinum, Informatica and Prism.

Bank of Hawaii's top criteria was that the solution be a code generator. "We were under a tight deadline to get the prototype up and running before the end of the year," said Lindsey. Looking at the overall timeframe, BOH believed it would be better to go with a software product that generated code than to rely on products using a transformation engine.

Not only would a code generator be a faster solution, but without proprietary code to deal with, BOH could easily modify code after its creation and retain comprehensive metadata about the conversion when modifying it within ETI•EXTRACT.

According to Lindsey, ETI gave his team members a comfort level they didn't find with other vendors. The ETI team observed that the bank has lots of code and lots of people who know how to write code, so, with this high level of in-house expertise, BOH staff would need little training to be up and running with ETI•EXTRACT.

Bank of Hawaii systems consultant Rita Kaku's initial impression was that ETI•EXTRACT was flexible and capable of handling the complexity and bulk of moving data from all 11 BOH applications into the data warehouse. The other contenders simply could not compare to ETI. Shortly after, BOH invested in ETI•EXTRACT with two data system libraries.

When all 11 applications are fully loaded and the data warehouse fully populated, Lindsey expects it to be about 500 GB in size. Currently, the prototype includes two applications that occupy 70-80 GB. With the prototype, BOH was able not only to experience ETI•EXTRACT's ease of use but also demonstrate the efficiency of the new data warehouse redesign.

For more information about ETI and ETI•EXTRACT, or to request a CD on Solving Data Integration Chaos, call 1-888-384-7546 or go to www.eti.com/cs.html.

EVOLUTIONARY TECHNOLOGIES INTERNATIONAL

Chicken producer plucks legacy data using ETI•EXTRACT

As the largest fridge producer of chicken products, Tyson Foods, of Springdale, AR, sells to supermarkets, restaurants, fast-food chains and even pet food makers in more than 60 countries. Because of this array of markets, the conglomerate was looking at ways to better support its customers.

Tyson Foods decided to implement a consolidated sales data warehouse to be populated from its new SAP R/3 financials system and its legacy logistics systems. The company wanted sales history, selling expenses and inventory available at the touch of a button. It also wanted to manage the customer relationship at all levels of customer service, sales and marketing. To attain these goals, Tyson decided to replace its legacy data warehouse with a web-based reporting system.

Completed and tested 200 interfaces in less than six months.

Bill Wade, director of sales information, assigned a team to find data conversion software. Says Wade, "Regarding transformation tools, ETI clearly had the mindshare of everyone, so we approached them first."

Tyson Foods had one hesitancy. Most of its legacy data sat in a VAX VMS relational database that was planned for a SAP system, and ETI did not have the VAX RDB interface product in hand. But once it assured Tyson that ETI•EXTRACT could be extended to accommodate such database structures, Tyson moved forward.

In combining the operational data store and the old data warehouse, 200 interfaces had to be completed and tested in six months. Tyson Foods did not have the staff for such a long, single-focus project. The only solution was to manage the data migration and transformation with the software. It was estimated that it would take 30 days to complete the data system library to read the RDB database, but it took only eight days to get it going.

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Austin, TX 78751
512-452-2448
512-452-8950 fax
esiris@aol.com

This is a press release prepared for Texas Instruments for international electronic distribution (June 1996). —Emily Sopensky

China's Foshan City Automates Toll Collection with Texas Instruments TIRIS™ Systems

China's booming population and go-go economy are stretching the capacity of existing infrastructures, especially bridges and highways. The evidence that increased commerce requires increased mobility is quite apparent when driving on existing highways in and around Foshan: Trucks, cars, motorcycles, bicycles, and even people vie for the use of the same roadways. And the many bridges in the city act as traffic bottlenecks.

Foshan City Chooses Texas Instruments TIRIS AVI Systems

To impose some sanity as well as increase vehicular throughput on well-used toll roads, Foshan city officials opted for installation of Texas Instruments TIRIS™ automatic vehicle identification (AVI) systems for electronic toll collection (ETC). Since February 1996, 23 ETC systems have been installed by TIRIS and partners MFS Network Technologies, the systems integrator.

E.Z. Tech (U.S.) International Ltd., an American-based international engineering firm, evaluated six systems for the Foshan Tongda Advanced Technical and Industry Co. and for Foshan officials. The 915 MHz radio frequency identification (RFID) AVI system was chosen only after extensive field testing with 3,000 subscribers. According to E.Z. Tech Marketing Manager John Tang, "Four of the six RFID systems simply had too many problems to warrant setting them up for even a trial period. Of the remaining two, the system from TIRIS and MFS Network Technologies was by far the best solution for providing reliable, dependable reads."

E.Z. Tech and city authorities chose the 900 spectrum range because of costs and concerns about spectrum allocation associated with higher ranges.

Toll Collection in China

Roads in China, primarily the responsibility of local jurisdictions, depend on funding for construction and maintenance from local investors and foreign corporations. Toll collection is the source of most return on investment in China for new road construction and some maintenance. Not surprisingly, the three banks that issue the vehicle tags for automatic toll collection in the Foshan area are also major investors in the Foshan project. Except for the new AVI systems, tolls in China are collected manually, since coins—and therefore automatic coin machines—are not used in China.

-more-

A major city in the densely populated southern province of Guangdong, Foshan is in the heart of the famed Pearl River Delta, and just a short boatride from Hong Kong. A few of the Foshan AVI system sites are actually in the neighboring cities of Nan Hai and Shunde.

The success of the Foshan AVI systems is apparent from the stepped up installation of them. While 18 systems were originally planned for installation in the Foshan area, 23 systems have already been installed with another 17 planned for the remainder of 1997. In addition to the existing 5,000 subscribers with installed vehicle transponder tags, an additional 20,000 transponders already have been ordered.

Successful Installations Despite the Odds

In the Foshan area, the potential for cross-reads and double reads is high. Traffic on existing tollroads is beyond capacity, with much of it competing for space at the toll booths. The ETC systems, installed in existing toll lanes, have a very narrow read area. At several sites, systems had to be hung beneath canopies that deflect and bounce RFID signals. Towers for transmitting cellular phone calls are relatively close, making them a potential source of signal interference.

Installation is complicated by the fact that the heavily traveled roadways and bridges cannot be closed even to test the installations. Early in the project, officials reluctantly shut down one road for two hours to test the system. Traffic quickly backed up three kilometers for several hours. After that incident, the authorities decreed that the system could no longer be shut down—not even for installation.

The systems also must endure constantly high temperatures and humidity. MFS lead technician Bill DiMartino explained, "My partner, senior engineer Derwin Bell, and I come from New Jersey where the weather is quite temperate. Until we had to work in the heat and humidity that is common to Foshan, we had no idea how taxing the environment could be on both people and systems alike."

How It Works

The TIRIS-based ETC systems use RFID transponders and antennas to identify vehicles and collect tolls. The transponders, programmed with data that includes a unique ID, are installed in each vehicle and read by an overhead antenna from a range of 20 or more feet. Because vehicles can be read in less than half a millisecond with an accuracy rate or 99.95 at 150 mph, this high frequency RFID application makes it ideal for the non-stop congested traffic flow characteristic of Foshan toll roads.

The toll charge is automatically deducted as the vehicle passes under the TIRIS antenna. The read/write transponders are reprogrammable so that a subscriber's account can be adjusted with new deposits. The system uses a simple traffic light to inform travelers of their account status: green for a healthy account balance, yellow for an account with a low balance, and red for a negative balance. If the traveler receives the red light signal, he will be stopped at the toll plaza. Currently, video cameras are not yet part of the enforcement system.

More Projects in China

China is just one of many countries that has long been faced with the problems of crowded highways. The country is experiencing a phenomenal 15% annual increase in the number of

vehicles. Many roads are already overwhelmed with the existing 1.8 billion vehicles estimated to be in China. The highway infrastructure, including its 2700 toll roads, is one of China's biggest problems.

Two of the biggest industrial cities in China are Guangzhou in the Quangdong (or Canton) Province and Shanghai. Two systems were recently installed in Shanghai and are currently undergoing extensive testing and evaluation. Three thousand transponders have already been issued.

During the first quarter of 1997, another two demo systems are being installed in Guangzhou city. These systems will be similar to those installed in California's SR91 automated toll collection highway. Unlike the Foshan and Shanghai projects, this trial will enable tolls to be collected on an open highway from vehicles traveling at high speed. The Guangzhou systems will use an overhead light curtain to scan high-speed vehicle profiles for classification purposes.

With the installation of these and other TIRIS-MFS Network Technologies systems, China has a firm grip on improving its highway infrastructure to allow its booming economy unheeded access to the marketplace.

For more information, please contact, Erin McGuire, MFS Network Technologies, 1200 Landmark Center, Suite 1300, Omaha, Nebraska, 68102-1841, voice: (402) 233-7648 fax: (402) 233-7650 email: mcguire.erin@mfst.com.

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Note: TIRIS (Texas Instruments Registration and Identification System) is an advanced radio frequency ID technology that includes both passive, low frequency transponders, active, high frequency transponders, reader equipment and software. Applications, include automotive antitheft systems, vehicle identification, security access, and automatic logistics management, and electronic toll collection systems.

More than 120,000 AVI transponders are already in use on MFS Network Technologies-equipped roadways throughout the U.S. on thoroughfares ranging from Boston's Third Harbor Tunnel to California's 91 Express Lanes and the Foothill, San Joaquin Hills and Eastern Transportation Corridors. MFS Network Technologies is a leader in the intelligent highway industry--working with state and federal agencies in the United States and internationally to use technology to help solve today's growing transportation problems. As highways across the country become more congested, MFS Network Technologies offers technology-based solutions to allow more efficient use of new and existing facilities. Across the United States, the Company is actively involved in major transportation projects in Arizona, California, Colorado, Delaware, Florida, Massachusetts, New Jersey, New York, and South Carolina. The company's objective is to establish its intelligent transportation systems as the standard across the country.

MFS Network Technologies is a leader in the development, design and integration of intelligent infrastructure solutions for advanced communications and intelligent transportation applications. The company's clients include federal, state and local government agencies, telecommunications services companies, regional and state transportation and transit agencies, public utilities and private industry in the U.S. and abroad.

Electronic future for Foshan

Texas Instruments has won a breakthrough order for its Tiris transponder system in China's Guangdong province. **Sean McManus** reports on progress

There are now 23 electronic tolling locations, in or around Foshan City with 36 electronic toll collection readers spread between them

With the number of vehicles on China's roads increasing by around 13-14% each year, and roads authorities keen to develop and revitalise the road network, China has much to gain from electronic tolling.

Now the Chinese Ministry of Transport Of Guangdong Province has endorsed transponder tolling technology for the first time in the city of Foshan.

Foshan is a major city in the densely populated southern province of Guangdong. Tolls are charged on roads entering and leaving the city, but traffic is densely packed and slow-moving at toll plazas, even though roads carry only 3,000 vehicles per lane per day. Electronic tolling will smooth the congestion and reduce pollution.

The solution uses in-vehicle transponders and radio frequency identification. The project began over two years ago, when US engineering company EZ Tech was invited by the Foshan Tongda Advanced Technical and Industry Company to evaluate electronic tolling systems. Six systems were evaluated, including those supplied by Amtech, Combitech, Mark IV and Texas Instruments.

The Texas Instruments system was chosen for the project and is now recommended by the Chinese Ministry of Transport Of Guangdong Province. One factor that contributed to the contract win by Texas Instruments, was the radio frequency used by its Tiris (Texas Instruments Registration and Identification System) transponders. Tiris operates at 915MHz, which is a comparatively congested frequency in China. Neighbouring frequencies are already allocated to other mobile communications users, such as the GSM cellular phone network. It was found in trials undertaken by EZ Tech (US), however, that there was no interference between Tiris and mobile communication devices using similar frequencies.

The transponder contains details of the vehicle's license plate and vehicle class and these are displayed on a gantry-mounted variable message sign as the vehicle passes

Transponders from other suppliers use the comparatively uncongested 5.8GHz frequency, which might later be affected by applications assigned to neighbouring frequencies. EZ Tech decided to use the more crowded frequency where the effects of interference could be tested before electronic tolling was installed.

Before Tiris was finally selected, pilot trials were carried out at two tolling sites in Foshan City involving 3,000 subscribers. The sites chosen for the test were Sai Hung Qi and Rong Qi District, about 30km apart and both severely congested. The trials were operated on a fully commercial basis and were conducted by Foshan City authorities, without any input either from EZ Tech or from MFS Network Technologies, the company chosen as system integrator.

In the trial each subscriber kept a record of his or her movements for comparison with the automatic tolling record. One million passes were recorded over four months and EZ Tech claims the system was proven to be reliable. After the trial period, the system continued operations and was opened up for full scale use in May 1994.

Expanding project

The project began in February 1996 and has been expanding with the addition of new tolling sites and extra lanes since then. To date the contract has been worth about US$2 million. There are now 23 tolling locations, with 36 electronic toll collection readers spread between them. This should rise to around 80 by the end of the year. There are now between 30,000 and 40,000 tags in use in the Guangdong province.

Where Tiris has been installed there is a lane set aside for electronic tolling, alongside two or three lanes for manual stop-and-pay cash tolling. The electronic toll collection systems are installed in the existing toll lanes, and the antennae are mounted on the top of gantries 5.5m above the ground. In some sites it is impossible to install a gantry, so in these installations antennae are hung beneath metal canopies.

Transponders are distributed from the customer service centres of the major banks. The banks are also responsible for programming the transponders and tracking the accounts. Most accounts are pre-paid, with drivers recharging their account through the bank, or paying by post or telephone.

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The Texas Instruments transponder functions in a passive seek mode. When it receives a signal from an antenna, the transponder identifies the account to the antenna and the account balance is deducted. A roadside traffic light shows green, for the driver to proceed; yellow/green to warn of a low account balance remaining and red/green if the balance is too low. Once the transponder has been detected by the antenna, the transponder enters a sleep mode for a minute so that it is not repeatedly detected by the same antenna. The sleep mode is particularly useful in heavy traffic, when traffic is moving slowly. The transponder can only be read on approach to an antenna, so there is no danger of a double charge if the vehicle becomes stuck in slow moving traffic on leaving the toll point.

The sensor detects vehicles from a range of between 610cm and 915cm. Texas Instruments claims that vehicles can be read in less than half a millisecond with an accuracy of 99.95%,.

Fees are based on the class of vehicle, with the vehicle class encoded in the transponder on issue by the bank. There are five vehicle classes: motorcycles, compact cars, mini-vans, buses, tanker trucks, dump trucks and container trucks. The definitions are based on the length, width and height of the vehicles. The transponder contains details of the vehicle's license plate and vehicle class and these are displayed on a gantry-mounted variable message sign as the vehicle passes. The toll operator monitors these signs and investigates any discrepancies. Because the transponders have unique identification numbers, stolen transponders can easily be identified by the system and the offending vehicle stopped. To prevent fraud, the licence plate of the vehicle is encoded in each transponder, so the transponder cannot be transferred between vehicles.

"Before Tiris was selected, pilot commercial trials were carried out at two tolling sites in Foshan City involving 3,000 subscribers"

There are plans to install a similar system in Shanghai. There is already one electronic toll reader and between 3,000 and 4,000 transponders in use there, with plans for a further two readers and 10,000 tags to be delivered in August. The Shanghai system will include automatic vehicle classification, using an overhead light curtain supplied by Mercedes Benz subsidiary MBB. The MBB system uses laser beams to scan vehicles. It provides figures for the length, width and height of each vehicle, so that the vehicle class in the transponder can be audited automatically. The system can identify gaps between vehicles as small as 5cm, which ensures that when two vehicles are travelling close to one another, the system can charge them separately and correctly.

Another two demonstration systems are to be installed in Guangzhou city. Unlike the Foshan and Shanghai systems, these will enable tolls to be collected on the open highway from vehicles travelling at speeds of up to 190 km/hr. Like Shanghai, an overhead light curtain will be used to scan high speed vehicle profiles for classification. The test is due to begin within the next few months. The system will allow vehicles to enter and exit the highway at different points and the toll will be charged according to the distance travelled using electronic toll collection readers installed at the entry and exit points to the highway. The system will be compatible with the Foshan and Shanghai systems.

7153 *EZ Tech*

7154 *Texas Instruments*

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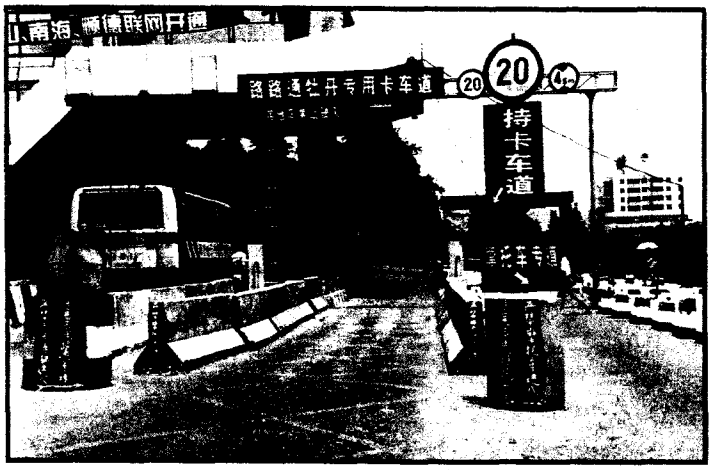
CHINA'S booming population and expanding economy are stretching the capacity of existing infrastructures, especially bridges and highways.

The evidence that increased commerce requires increased mobility is quite apparent when driving on existing highways in and around Foshan, near the city of Guangzhou in the prosperous Guangdong Province, southern China.

Foshan is itself a major city in the densely populated region, and is set in the heart of the famed Pearl River Delta, just a short boat ride from Hong Kong.

Trucks, cars, motorcycles, bicycles, and even people vie for the use of



A tolling booth in Foshan city: collection has been automated with the help of Texas Instruments

Identification parade

the same roadways, and the many bridges in the city act as traffic bottlenecks.

To impose some organisation, as well as increase vehicular throughput on well-used toll roads, Foshan city officials opted for installation of **Texas Instruments**' Tiris automatic vehicle identification (AVI) systems for electronic toll collection (ETC). Since February 1996, some 23 ETC systems have been installed by Tiris (Texas Instruments Registration and Identification System) and partners MFS Network Technologies, the systems integrator.

E Z Tech (US) International, an American-based international engineering company, evaluated six systems for the Foshan Tongda Advanced Technical and Industry Company and for Foshan officials. The 915 MHz radio frequency identification (RFID) AVI system was chosen only after extensive field testing with 3000 subscribers.

Texas Instruments say that roads in China, primarily the responsibility of local jurisdictions, depend on funding for construction and maintenance from local investors and foreign corporations. Toll collection is the source of most return on investment in China for new road construction and some maintenance.

It is therefore not surprising that the three banks in Foshan that issue the vehicle tags for automatic toll collection in the Foshan area are also major investors in the Foshan project.

Texas Instruments says that except for new AVI systems, tolls in China are collected manually, since coins, and therefore automatic coin machines, are not used in China.

The company says that the success of the Foshan AVI system is apparent from the stepped up installation of them. While 18 systems were originally planned for installation in the city area, 23 systems have already been installed with another 17 planned throughout the rest of 1997 (a few of the Foshan AVI system sites are actually in the neighbouring cities of Nan Hai and Shunde).

In addition to the existing 5000 subscribers with installed vehicle transponder tags, an additional 20,000 transponders have been ordered.

The Tiris-based ETC systems use RFID transponders and antennas to

Electronic toll collection in a major Chinese city is speeding up traffic

identify and collect tolls. Transponders, programmed with data that includes a unique identification, are installed in each vehicle and read by an overhead antenna from a range of 6m or more. Because vehicles can be read in less that half a millisecond with an accuracy rate said to be 99.95% at 240km/hr, this high frequency RFid application makes it ideal for the non-stop congested traffic flow characteristic of Foshan toll roads.

The toll charge is automatically deducted as the vehicle passes under the Tiris antenna with a simple traffic light informing travellers of their account status: green for a healthy balance, yellow for a low balance, and red for a negative balance.

China is just one of many countries that has long been faced with the problems of crowded highways. It is experiencing a phenomenal 15% annual increase in the number of vehicles and many roads are overwhelmed with the existing number of vehicles.

According to Texas Instruments, the highway infrastructure, including 2700 toll roads, is one of China's biggest problems.

Two of the biggest industrial cities in the country are Guangzhou in Guangdong (or Canton) Province and Shanghai. Two Tiris-based systems were recently installed in Shanghai and are currently undergoing extensive testing and evaluation, with 3000 transponders already issued.

During the first quarter of 1997, another two Tiris-based demonstration systems were installed in Guangzhou City. They are similar to those in use on California's SR91 automated toll highway.

Unlike the Foshan and Shanghai projects, the trial will allow tolls to be collected on an open highway from vehicles travelling at high speed.

The Guangzhou systems use an overhead light curtain to scan high-speed vehicle profiles for classification purposes.

The company says: "With the installation of these and other Tiris-MFS Network Technologies systems, China has a firm grip on improving its highway infrastructure to allow its booming economy unheeded access to the marketplace."

Contact:
Texas Instruments
Fax: +1 214 917 1440

Or Enter Enquiry Code 2495

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923 E. 39th St.
Austin, TX 78751
512-452-2448
512-452-8950 fax
esiris@aol.com

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Competitive Indoor Kart Racing Wins Big With Texas Instruments TIRIS™

Mechanics zip around the pit. Drivers slap on overalls, gloves, face protectors, and helmets. Tires squeal. The fans, impatient for the start of the race, cheer as the flags go down and the light turns green to signal the start of the qualification lap.

The race is on BUT in a qualification lap it's each driver against the clock—not driver against driver. Accurately establishing the best lap time for each driver is a tricky business. Distinguishing the cars and drivers as they pass the pole position and calibrating each competitor's lap to the hundredth second is difficult and almost impossible to get 100% accuracy by relying solely on the naked eye.

That's why Formula One Grand Prix Indoor Kart Racing started using Texas Instruments TIRIS™ technology to time each driver.

An underground antenna at the starting line registers the ID and time of each kart as it passes over the antenna. A transponder is mounted under the seat of each kart. Data stored in the transponder includes the number of the kart and the driver's name. This data is sent to a centralized computer. Because the system accurately records data immediately, each driver gets a complete performance report at the end of each race.

According to Antonio Ari Gomes, director of the Grand Prix Kart Indoor in São Caetano do Sul, São Paulo, two things are equally important to the drivers : the choice of the car and the final performance report. He adds, "Without a system like this, kart indoor racing would be dead."

At the Grand Prix Kart Indoor, the record on the 250m circuit is 19.5 seconds for drivers over 12 years old. Thanks to TIRIS' reliability, the racing director can make decisions more easily. Without delays from recording results and adjudicating contentions, the thrill of the race is not diluted. It's easy to understand why kart indoor racing is a quickly growing entertainment in Brazil.

For more information call TI Brazil, Phone: +55-11-535-5133,
FAX: +55-11-533-0544.

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Austin, TX 78751
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512-452-8950 fax
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Stolen Car Recovery Expected to Reach 65% in São Paulo, Brazil with the Help of Texas Instruments TIRIS™

Luiz Negrini, director of IDENTICAR, considers Texas Instruments TIRIS™ his essential partner in reducing the excessive number of car thefts that Brazilian motorists suffer annually. IDENTICAR is a new company established to reduce car thefts in Brazil and to collaborate with its sister company, the 12-year-old National Registry of Stolen Vehicles.

"Using TIRIS, cars get a digital identity, which eliminates the problems encountered when using the car's color, its license tag number or its chassis number to identify a stolen car," he explains. After 18 months of research and implementation, vehicle owners, especially fleet owners, are buying IDENTICAR's service package.

The São Paulo Metroplex was targeted as the initial market because, with 20 million inhabitants, São Paulo is one of the biggest cities in the world. With over 4.5 million vehicles—roughly 25% of the national total—São Paulo is the mother lode for car thieves. Thefts are so high in the city that insurance companies were handing out car alarms to their customers as a way of preventing thefts and of stemming cash outflow for reimbursing customers for their losses. It's estimated that, based on the average car value alone, over $3.5 billion is lost due to car thefts in Brazil.

In São Paulo, the number of cars stolen monthly reaches 11,000. Annually, that means that 132,000 cars are stolen in the Metroplex. Using the national registry, authorities are able to recover 40% or 4400 cars a month. IDENTICAR's goal is to increase the recovery rate to 65% or 7150 cars per month. That's almost 87,000 vehicles that IDENTICAR hopes will be returned to their owners annually. An ambitious goal with TIRIS. Impossible without.

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How It Works

The TIRIS technology for automatic vehicle identification (AVI) includes an antenna and a transponder. The transponder, which includes unique identifying information, is attached to the vehicle. The antenna is placed in-ground under the roadway. Using radio frequency identification (RFID) electronics, the antenna recognizes and identifies an approaching vehicle that contains a transponder. This information is relayed to a central computer where reports are generated that include the ID number and the time the vehicle passed the antenna. Each ID number is stored in the massive LINCES database built from vehicle inspections required by insuring companies. The insurance companies and individuals contract with IDENTICAR to provide services for recovering stolen cars.

IDENTICAR directors are proposing to give each car an identity that would be encrypted in the TIRIS transponder attached to the car. That identity would be stored in the LINCES, which would be accessed if the car were stolen. LINCES in turn would quickly inform IDENTICAR, which would immediately begin a localization and tracking process. "At first, we will offer a system to control access to big condominiums," says Negrini.

The system implemented in São Paulo includes 450 fixed, in-ground antennas installed strategically throughout the city and in bus and truck weighing stations on the 16 roads and highways that lead into the Metroplex. Additionally, 10 mobile rug-antennas provide the police with the ability to find stolen cars containing transponders without having to stop innocent motorists. Each rug is a mat embedded with an antenna. By placing the mat on the road anywhere in the city where there is no in-ground antenna, the police can also use their portable traffic control units to catch car thieves.

Already 82 private companies with a total of 11,000 buses that service 1200 routes are taking advantage of the TIRIS system in order to provide customers with buses on schedule and on time.

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Executives Impressed

According to Marco Antonio de Lucca, a partner in IDENTICAR, the project was a total success *before* implementation. "Initially fleet owners, the first market to be explored, were skeptical of the new technology. But after we installed the transponders in some of their fleet cars on a test basis, it was not hard to convince them their operating and

capital costs could be greatly reduced by installing TIRIS in all their fleet vehicles." De Lucca remembers that "When these executives were given complete reports showing each vehicle's itinerary and the exact time it passed at each readpoint, they were speechless."

The insurance companies were also impressed because the system is basically maintenance-free. The transponders contain no battery that must be replaced, and the in-ground antennas are immune from the effects of the weather, dirt and noise.

With the support of the police, the IDENTICAR directors believe that the TIRIS-based system will result in a substantial increase in recovered vehicles and a decrease in losses to insurance companies and individual owners.

For more information call Aeroeletronica, Phone: +55-51-361-1222, FAX: +55-51-361-2773.

# # #

Car thefts in Brazil cost an estimated US$3.5 billion a year: a vehicle ID system being tried in the city of São Paulo hopes to reduce that figure. Another system from the United States has already proved a success

On the right track

SÃO PAULO, Brazil, one of the world's biggest cities, is at the centre of a trial scheme which aims to reduce the staggering number of annual car thefts.

With a population of 20 million, São Paulo has over 4.5 million vehicles or 25% of the Brazilian total, and it is a haven for car thieves. Each month about 11,000 cars are stolen: 132,000 each year.

Indeed, the problem is so bad that insurance companies have started to hand out car alarms to customers as a way of preventing thefts and thus stem cash paid to customers for losses.

It has been estimated that based on car value alone, an annual average of US$3.5 billion is lost due to car thefts in Brazil.

A new company, **Identicar**, has been established to reduce car thefts throughout the country and to collaborate with its sister company, the National Registry of Stolen Vehicles, set up 12 years ago.

An integral part of the new scheme is the use of Tiris transponders from **Texas Instruments**, which give cars a digital identity.

According to Luiz Negrini, a director of Identicar: "This eliminates the problems encountered when using the car's colour, its licence tag number or its chassis number to identify a stolen car."

At present using the national registry, authorities are able to recover 40% or 4400 cars a month in São Paulo alone, but Identicar is hoping it can increase this recovery rate to 65% or 7150 cars a month, or almost 86,000 vehicles a year.

Tiris (Texas Instruments Registration and Identification System) is a low-frequency radio frequency identification (RFID) system for automatic vehicle identification (AVI) and includes an antenna and transponder.

The transponder or ID tag, which includes unique identifying information, is attacned to the vehicle, while the antenna is placed in-ground under the roadway with cables that lead back to an RFID reader and host computer.

Tiris recognises and identifies an approaching vehicle via the ID tag. The information is relayed to a central computer where reports are generated that include the ID number and the time the vehicle passed the antenna. Each ID number is stored in the massive database built from vehicle inspections which are required by insurance companies. These companies and individuals contract with Identicar to provide services for recovering stolen vehicles.

Identicar in action in São Paulo: it is hoped stolen car recovery will reach 65% with the help of this system

Identicar directors are proposing to give each car an identity that would be encrypted in the Tiris transponder attached to the car. That identity would be stored in the database, which would be accessed if the car was stolen. The database in turn would quickly inform Identicar, which would immediately start a localisation and tracking process.

The system implemented in São Paulo includes 450 fixed, in-ground antennas installed strategically throughout the city, and in bus and truck weighing stations on the 16 roads and highways leading to the Metroplex.

Police are also able to use ten mobile 'rug-antennas' which allows them to find stolen cars containing transponders without having to stop innocent motorists. Each rug is a mat with an embedded antenna, and by placing the mat on a road anywhere in the city where there is no in-ground antenna, police can also use their portable traffic control units to catch car thieves.

According to Marco Antonio de Lucca, a partner in Identicar, the project was a "total success before implementation."

He said: "Initially, fleet owners, the first market to be explored, were sceptical of the new technology. But after we installed the transponders in some of their fleet cars on a test basis, it was not hard to convince them that their operating and capital costs could be greatly reduced by installing Tiris in all their fleet vehicles."

Insurance companies are also said to be impressed because the system is virtually maintenance-free. The transponders do not contain batteries, and the in-ground antenna are said to be immune from the effects of weather, dirt and noise.

In the UK, which has a higher rate of car theft than any other country in the European Union (EU), a system called Tracker is available to help recover stolen vehicles.

The system, which has been available in the United States for ten years as Lojack, works like a homing device. A small Tracker unit is hidden somewhere on a vehicle (even the owner does not know where), and if the vehicle is stolen the police and Tracker are informed.

The Tracker operations centre sends a unique coded signal to high powered transmitters which in turn broadcast a coded signal to activate the Tracker unit. This starts broadcasting a silent homing signal which is unique to an individual vehicle.

Police cars equipped with tracking computers are alerted, and the signal identifies the stolen car and leads police to it.

Tracking computers are also installed in helicopters and at fixed sites at motorways, ports and estuary crossings, and supplied to all 51 police forces throughout England, Scotland and Wales.

In the United States, it is claimed that of every 100 cars stolen fitted with the system, 94 are recovered, while in the UK in the two and a half years it has been operational, over 1100 stolen vehicles valued at £14 million (US$21 million) have been recovered. Police have made over 420 arrests.

Nearly 70 insurance companies are offering discounts of up to 20% for Tracker-fitted vehicles.

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Fax Contacts:
Texas Instruments
Fax: +44 1604 663099

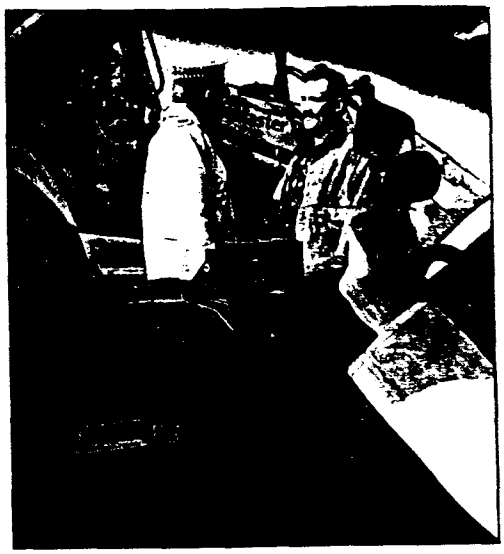
[illegible]

Aeroelectronica (Identicar installation)
Fax: +55 51 361 2773

[illegible]

Tracker
Fax: +44 1895 234117

[illegible]



Caught in the act: the Tracker system being tested here to recover stolen construction equipment